

The Effect of Percutaneous Coronary Revascularisation on Plasma N-terminal Pro-B-type Natriuretic Peptide Levels in Stable Coronary Artery Disease

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ABSTRACT

BACKGROUND: The role of cardiac hormone like N-terminal pro-B-type natriuretic peptide (NT- pro BNP) has been well established in diagnosis and prognosis of heart failure and prognosis in acute coronary syndrome. However, the effect of ischemia resolution on plasma NT- pro BNP is not well established.

OBJECTIVES: The effect of percutaneous coronary revascularization (PCR) on plasma NT-proBNP concentration in patients with chronic stable angina (CSA) was evaluated.

STUDY DESIGN: Non-randomised experimental design (Comparison between before and after intervention).

METHODS: 22 patients with symptoms of CSA on optimal medical treatment, normal left ventricular (LV) systolic functions, and single vessel disease who were to undergo PCR were enrolled over a period of 20 months from Jan 2011 to Oct 2012. Plasma NT-proBNP concentrations were measured before and 2 months after PCR.

RESULTS: After revacularisation, we documented a statistically significant decrease in plasma NT-proBNP levels (from 244.36 ± 218.99 pg/ml to 168.68 ± 161.61 pg/ml, $p = 0.016$). The mean decrease in log NT-proBNP after PCR was 0.49 ± 0.69 ($p = 0.003$) corresponding to a geometric mean decrease of NT-proBNP by 39.0%. The reduction in NT-proBNP was independent of change in LV systolic function. In patients with PCR done to left anterior descending artery (LAD) ($n = 12$), there was again a significant decrease in NT-proBNP levels (median 136.90 pg/ml vs 77.22 pg/ml, $p = 0.009$). For patients with PCR to non-LAD vessel, NT-proBNP levels also decreased, however this decrease was not statistically significant (median 231.05 pg/ml vs 192.40 pg/ml, $p = 0.432$).

CONCLUSIONS: Our study shows that removal of fixed coronary stenosis and thereby ischemia resolution in CSA decreases plasma NT-proBNP levels and this decrease was more in patients with LAD involvement reflecting its major contribution to LV blood supply.

Key words: NT-proBNP, chronic stable angina, percutaneous coronary revascularization.

Comparison of Gadolinium Enhanced Coronary CT Angiography with Conventional Invasive Coronary Angiography in Assessment of Coronary Artery Disease

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ABSTRACT

BACKGROUND: Invasive Coronary Angiography (ICA), though Gold Standard, for assessment of CAD, has inherent risks of an invasive procedure including that of death. Additionally use of Iodinated contrasts in ICA and Coronary CT Angiography is frequently contraindicated due to renal toxicity and hypersensitivity reactions. Hence there is a need to study safer contrast agents in Non-invasive modalities of assessment of CAD.

OBJECTIVES: To assess the feasibility of Gd-enhanced 64-slice cardiac CT (CCT) for the diagnosis of obstructive coronary artery disease in comparison to ICA

STUDY DESIGN: Hospital Based Prospective Comparative Study

METHODS: 25 patients of CAD were selected, who after informed consent, agreed to undergo Gadolinium Enhanced Coronary CT Angiography and Invasive Coronary Angiography. Patients who had previously undergone Revascularisation or those who had Creatinine Clearance less than 30 ml/min were excluded. Creatinine Clearance was measured before and 48 hours after Gd-Enhanced CTA. Analyses was done by comparing coronary segments with $\geq 50\%$ stenoses detected by ICA versus detection of the same by Gd-Enhanced CTA.

RESULTS : Mean age of patients was 53.52 years (range 41- 70 years). Total number of coronary segments evaluated by ICA was 379 of which 57 showed $\geq 50\%$ stenoses. Gd-Enhanced CTA detected 47 of these lesions. In comparison to ICA, on Per-segment basis, Gd- Enhanced CTA showed Sensitivity of 82.46%, Specificity of 97.50%, PPV of 85.45% and NPV of 96.95%. Weighted Kappa value was 1, suggestive of strong agreement between the two modalities, excluding agreement by chance. No adverse effects occurred after Gadolinium .

CONCLUSIONS : Gadolinium Enhanced Coronary CT angiography is safer alternative for assessment of CAD in patients who have a contraindication for ICA or Iodinated Contrasts.

Key words: CAD, angiography, coronary CT angiography, Gadolinium

Association of Vitamin D Status with Metabolic Abnormalities in PCOS and Effect of Vitamin D Supplementation on Metabolic Abnormalities in PCOS

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ABSTRACT

BACKGROUND: A positive correlation between vitamin D deficiency, glucose intolerance and impaired insulin secretion has been demonstrated in subjects with PCOS. Serum levels of 25-hydroxyvitamin D [25(OH) D] are inversely correlated with insulin resistance (IR) in subjects with PCOS.

OBJECTIVE: To determine the association between vitamin D status and components of Metabolic Syndrome (Met-S) in women with PCOS and the effects of vitamin D supplementation on IR parameters.

STUDY DESIGN: Randomized double-blind, placebo-controlled trial involving 123 subjects with PCOS comparing the effects of Vitamin D supplementation (2000 IU per day or 60000 IU per month) for 3 months on measures of IR.

METHODS: The fasting blood glucose, insulin, 25(OH) D, HOMA-IR and QUICKIE were measured at baseline and after treatment.

RESULTS: Hypovitaminosis D was present in 115 out of 123 PCOS women (93.4%). Using the IDF criteria Met-S was identified in 30 subjects (24.4%). Baseline 25(OH) D did not show any correlation with components of Met-S. The mean 25(OH) D levels increased from 13.76 ± 10.60 ng/dl to 25.71 ± 15.04 ng/dl after intervention (86.84% change). Post Vitamin D supplementation, 48(39%) subjects achieved vitamin D sufficiency as compared to 8(6.5%) at baseline. Similarly the number of subjects with severe, moderate and mild vitamin deficiency before intervention i.e. 55(44.7%), 43(35%) and 17(13.8%) respectively improved to 25(20.3%), 19(15.4%) and 31(25.2%) after intervention. The mean HOMAIR did not show any significant change overall (2.30 ± 4.13 vs. 3.96 ± 6.82), but in 53 subjects in whom Vitamin D levels increased by two-fold with a post-supplementation 25(OH)D level of ≥ 20 ng/ml, a statistically significant improvement in HOMA-IR was observed ($P = 0.025$).

CONCLUSIONS: Vitamin D3 supplementation equivalent to 2000 IU daily for 3 months normalises vitamin D status in around half of the predominantly Vitamin D deficient subjects with PCOS, but improves insulin resistance only in those in whom Vitamin D levels increase two-fold with a post-supplementation 25(OH)D level of 20 ng/ml or more.

Key words: 25-Hydroxyvitamin D, Insulin resistance, Metabolic Syndrome X, Polycystic Ovary Syndrome, Vitamin D Deficiency.

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Pattern of 25 Hydroxy Vitamin D Status in North Indian People with Newly Detected Type 2 Diabetes- A Prospective Case Control Study

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ABSTRACT

BACKGROUND: The most prevalent form of diabetes is type 2 diabetes, currently affects more than 300 million people worldwide. Vitamin D deficiency is common at all ages. Vitamin D deficiency has been linked to impaired glucose tolerance and type 2 diabetes in humans.

OBJECTIVE: In view of scarce data on vitamin D status in type 2 diabetes from India, the present study was undertaken to assess the vitamin D status in newly detected T2DM patients.

RESEARCH DESIGN: Prospective case control study.

METHODS: One hundred and two, newly detected type 2 diabetes patients and similar number of age, gender and body mass index matched healthy controls without diabetes mellitus were studied. In addition to basic information, metabolic parameters and serum 25 hydroxy vitamin D levels were measured in both the groups.

RESULTS: Overall serum 25 hydroxy vitamin D mean $\pm$ SD, was lower (18.81 ± 15.18 20 ng/mL) in patients with type 2 diabetes as compared to healthy controls (28.46 ± 18.89 20 ng/mL) ($p = 0.00$). Taking a cut of 30ng/ml, 81 % of type 2 diabetes patients had either vitamin D deficiency or insufficiency compared with 67% of healthy control subject. Severe vitamin D deficiency (i.e. 25 hydroxy vitamin D of <5 ng/ml) was seen in 16.2% of patients with diabetes and 2.5 % of control subjects. Levels of 25 hydroxy vitamin D had a negative correlation with HBA1C, fasting plasma glucose and calcium intake but did not correlate with age, sex, and body mass index.

CONCLUSIONS: Vitamin D deficiency is common in people with new onset T2DM than healthy subjects.

Key words: T2DM, 25 hydroxy vitamin D, vitamin D deficiency.

Predictors of Rebleeding in Patients with Peptic Ulcer Bleeding

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ABSTRACT

BACKGROUND: Upper gastrointestinal bleed (UGIB) represents a substantial clinical and economic burden. As rebleeding is one of the most important predictor of morbidity and mortality of UGIB; identifying patients who are likely to rebleed is a critical component of effectively managing patients with bleeding peptic ulcer.

AIMS AND OBJECTIVES: To look for predictors of rebleeding in patients with bleeding peptic ulcer and try to find a new scoring system for Asian patients.

MATERIAL AND METHODS: This was a prospective hospital based study. All patients admitted in our hospital as non variceal UGIB were enrolled and 480 consecutive patients of endoscopically proven peptic ulcer bleed were taken for study between November 2010 to November 2012.

RESULTS: Men predominated the studied population [406/480 (85%)] with mean age of 40.9 ± 15.9 years. Majority (71%) presented with malena. Major co-morbidities were hypertension, Diabetes mellitus (DM), coronary artery disease and chronic kidney disease (CKD) with mean No. of 1.7 ± 0.8 co-morbidities. DM and CKD were significantly associated with risk of rebleeding. Among 480 patients 267 required endotherapy (55.6%); 14 out of 480 patients rebled (2.9%); 13 in the endotherapy group. Six patients needed emergency surgery. Overall 2 patients (0.41%) died. Important parameters in univariate analysis associated with rebleeding were degree of smoking, presence of comorbid illnesses (DM,CKD), presence of shock at presentation, number of blood transfusions, mean ulcer size and Forrest class

CONCLUSION: Rebleeding rate and mortality in UGIB of peptic ulcer etiology is low in our population. The major predictors of rebleeding in our study were: degree of smoking, co-morbid illnesses, shock at presentation, ulcer size, Forrest class, and number of blood transfusions.

Key words: Upper gastrointestinal bleeding, rebleed, peptic ulcer, predictors, morbidity and mortality.

Pancreatic Duct Stents versus Rectal Diclofenac Sodium for Prevention of Post-ERCP Pancreatitis in High Risk Patients

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ABSTRACT

BACKGROUND: Acute pancreatitis is the most common and feared complication of endoscopic retrograde cholangio-pancreatography (ERCP). Post-ERCP pancreatitis (PEP) is associated with substantial morbidity and occasional mortality. The incidence of PEP in high risk patients is as high as 25%. The risk of PEP is a strong reminder to remain diligent about establishing a clear indication for performing ERCP.

OBJECTIVE: To compare the efficacy (incidence and severity of post-ERCP pancreatitis), safety and cost-effectiveness of pancreatic duct stents versus rectal diclofenac sodium suppository in prevention of post-ERCP pancreatitis in high risk patients.

STUDY DESIGN: Prospective Randomized Interventional Comparative Study.

METHODS: All consecutive 100 high risk patients above 18 years of age admitted for ERCP were randomized to receive either PD stent or rectal diclofenac sodium suppository at the time of ERCP. Patients were classified as high risk if they had more than three risk factors.

RESULTS: The incidence of PEP in the diclofenac group was 16% ($p=0.003$, OR 8.6035 CI 2.0431 to 36.229) and 0% in the PD stent group ($p=0.003$). No mortality was seen in two groups. In terms of severity, the RR of developing mild PEP was 17.83 (OR 17.83 CI 0.9889-321.2464) and severe PEP was 3.123 (OR 3.1237 CI 0.1242-78.55591) in the diclofenac group. The duration of hospital stay due to PEP was more in the diclofenac group ($p=0.004$)

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than in the PD stent group. No interventional related complications were seen in either group. However, diclofenac being cheap, cost analysis favors use of diclofenac sodium for prophylaxis of PEP.

CONCLUSIONS: PD stents are more effective in preventing the dreadful complication of post-ERCP pancreatitis than diclofenac suppositories ($p=0.003$). PD stents must be used in all high risk patients.

Key Words: ERCP, Post ERCP pancreatitis, PD Stents, Diclofenac Suppository.

Comparison of Beating Heart Mitral Valve Replacement with Arrested Heart

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ABSTRACT

BACKGROUND: There is growing interest in beating heart cardiac surgery without aortic cross-clamping and, if possible, without the use of a cardiopulmonary bypass (CPB) pump, since better results can be obtained with this procedure than with conventional myocardial protection techniques using cardioplegic solutions. This led us to consider mitral valve replacement (MVR) with beating Heart.

OBJECTIVES: To see the Safety and efficacy of beating heart mitral valve replacement without cross clamp.

STUDY DESIGN: Prospective randomized study comparing beating heart mitral valve replacement with conventional arrested heart mitral valve replacement.

MATERIAL AND METHODS: Prospective study of patients with isolated mitral valve disease requiring Mitral Valve Replacement (MVR) as per the ACC/AHA guidelines. Fifteen patients underwent Mitral valve replacement using beating heart technique (Group A) and 15 patients underwent mitral valve replacement using arrested heart technique (Group B). Patients were randomized to either group by Computer Generated Numbers.

RESULTS: Preoperative parameters in both the groups were comparable. Most of the patients in both the groups were in NYHA Class III or IV. Post Operatively most of the patients in both the groups were either in NYHA Class I or Class II. There was no mortality in beating heart group. There was one mortality in arrested heart group. There was a significant difference in mean bypass time, mean operating time; ICU stay and Hospital stay in two groups.

CONCLUSION: Beating heart continuous coronary perfusion surgery proved to be an equally safe myocardial protection technique as the cardioplegic arrested heart procedure for MVR. The beating heart technique is recommended as an appropriate alternative for patients of isolated MVR.

Profile of Posterior Fossa Tumors - A 10 Year Hospital Based Study

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ABSTRACT

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OBJECTIVE: To assess the incidence of posterior fossa tumors in Kashmir from Jan 2003 to Dec 2012. To assess the variations in the mode of presentation in relation to type and location of the lesion. To study the demographic pattern of posterior fossa tumors.

METHODS: This study was conducted on all patients of posterior fossa tumors admitted in the Department of neurosurgery, Sher-i-Kashmir Institute of Medical Sciences (SKIMS). It was a retrospective as well as a prospective, hospital based study. Records of all the patients of posterior fossa tumors, admitted in SKIMS from Jan2003 to Dec2010 (8 years) were reviewed from files in medical record department, SKIMS. Prospectively the concerned patients were analyzed from Jan 2011 to Dec2012 (2 years). A study proforma was used to collect information about the patient. Bio-data, history and examination of all the concerned patients were recorded.

RESULTS: CP angle schwannomas were the most common posterior fossa tumor in adults whereas ependymomas, medulloblastomas and pilocytic astrocytomas were common in paediatric age group. Headache was the most common symptom in posterior fossa tumors followed by vomiting, and more than 50% patients presented with features of hydrocephalus that most often needed a VP shunt before they were taken for a definitive procedure. Most malignant tumors required postoperative chemoradiotherapy for further management.

Key words: Posterior fossa, tumors, CP angle tumors.

Perfusion Weighted MRI of Intra-axial Brain Tumours: Correlation with Histopathology

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ABSTRACT

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BACKGROUND: Contrast enhancement on MRI has long being used as a marker for high grade among brain tumours. However, enhancement is a marker of blood brain barrier disruption and may not be an accurate measure of grade. We have used advanced MRI techniques like diffusion and perfusion weighted MRI for the pre-op assessment of brain tumour grade.

OBJECTIVE: To determine the sensitivity, specificity and predictive value of diffusion and perfusion weighted MRI in determining grade of brain tumours.

METHOD: A total of 40 intra-axial brain tumours were included in the study. All the patients underwent conventional MRI and were also evaluated by diffusion and perfusion weighted MRI. After surgery or stereotactic biopsy, the histopathological grade was determined as per the WHO 2007 classification of brain tumours. The pathologist was blinded to the results of the MRI. The sensitivity, specificity, predictive values and accuracy of the advanced MRI techniques in predicting tumour grade were determined. The statistical analysis was done by SPSS and Receiver Operator Characteristic(ROC) curves.

RESULTS: The sensitivity of Diffusion Weighted Imaging for determining brain tumour grade was 69.57%, the specificity was 75%, the positive and negative predictive values were 88.8% and 46.15% respectively. The overall accuracy was 70.97%. The overall sensitivity of Perfusion Weighted Imaging was 82.6%, specificity was 75%, the positive predictive value was 90.48% and the negative predictive value was 60%. The overall accuracy was 80.65%.

Key words: Diffusion, perfusion, MRI

Role of Pro Inflammatory genes in the etiopathogenesis of Lung cancer patients of Kashmir Valley

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ABSTRACT

BACKGROUND: Inflammation may play a role in the etiology of lung cancer. Chronic inflammation, characterized in part by altered cytokine levels, is believed to play a role in tumor initiation and promotion.

OBJECTIVE: The aim of the study was to determine whether SNP's in the promoter region responsible for the increased expression of IL-1B (-31C/T, -511 T/C), IL-6 (-174 G/C, -634 C/G), IL 8 (-251 T/A, -845 T/C), TNF (-308 G/A) and COX (-8473 T/C) and expression of IL1B and Cox 2 have any role in the pathogenesis in NSCLC.

MATERIAL AND METHODS: 190 NSCLC patients and 200 (age, sex, smoking and dwelling matched) controls were selected for polymorphic study. Genotyping was done by PCR-RFLP method followed by direct sequencing. 48 tissue samples along with their adjacent normals were selected for mRNA expression. Real Time PCR was used for mRNA expression analysis.

RESULTS: IL1B -31T allele was found to be more than 2 fold higher risk of developing lung cancer as compared to IL1B C allele (OR=2.39). IL1B -31T was significantly associated with increased expression of IL1B mRNA ($p < 0.05$) while IL1B -511T/C did not show any significant association with NSCLC. IL-6 -174C allele showed 2 fold higher risk of developing NSCLC as compared to IL-6 -174 G allele while IL-6 -634 G was found to have a protective role in lung cancer (OR=0.42). IL-8 -251 did not show significant association with the lung cancer ($p > 0.05$) while IL-8 -845 SNP was not found in our population. TNF -308 was found significantly associated with the NSCLC. The -8473 C/A polymorphism was not significant in our population, however, the mRNA expression was significantly associated with the lung cancer in general and particularly in patients with the advanced stage of the disease.

CONCLUSION: our results indicate that polymorphisms in the promoter region of pro inflammatory cytokines IL1B, IL 6, TNF are significantly associated with lung cancer, however we could not find any significant association between polymorphisms of IL 8 and COX2 polymorphism with the lung cancer. Our expression analysis revealed significant association of IL1B and Cox2 expression with the pathogenesis of lung cancer.

Genetic Alteration in Thyroid Cancer

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ABSTRACT

BACKGROUND: Thyroid Cancer is the most common malignancy of the endocrine system. It accounts for approximately 2% of all newly diagnosed cancer cases. Thyroid cancer sites among top 10 cancers in Kashmir (North India) and its frequency has doubled in a decade here. Recent molecular studies have described a number of abnormalities particularly in RAS/RAF/RET associated pathway that leads to the progression and differentiation of thyroid carcinoma.

OBJECTIVES: The main objective of the study was to elucidate the involvement of RAS and BRAF genes in thyroid cancer.

STUDY DESIGN: Total of 60 confirmed thyroid cancer tissue samples along with adjacent normal tissues were taken for mutational and expression study. For polymorphic study, blood samples of 140 thyroid cancer Patient and 180 normal controls were taken.

METHODS: Mutational analysis of RAS and BRAF gene was performed by polymerase chain reaction (PCR) followed by DNA sequencing while as protein expression of BRAF gene was done by western blotting. Mutant allele specific PCR (MASA) was designed to analyse codon 600 (valine to glutamine) mutation of BRAF Gene. HRAS T81C polymorphic study was carried out by PCR restriction fragment length polymorphism (PCR - RFLP)

RESULTS: Overall mutation in exon 15 of BRAF identified in this study aggregated to 25% and all of them affecting codon 600. 90% of thyroid cancer cases showed increased expression of BraF protein. The sensitivity and specificity for detecting of codon 600 mutation in RAF by MASA were 93.3 and 96.5% respectively. No mutations were observed in any exon of RAS gene family. In polymorphic analysis of HRAS T81C SNP the cases had a higher frequency of the rate allele (TC + CC) (58.6%) than the controls (15.9%), and this pattern of distribution of rate alleles among two groups showed statistical significance ($p < 0.05$).

CONCLUSION: We conclude that both mutational events as well as over expression of BRAF gene are highly implicated in pathogenesis of thyroid cancer.

Key words: Positive predictive value, negative predictive value, mutant allele specific PCR

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Clinical Relevance of Genetic Polymorphism in CYP2C9 Gene to PD and PK of Phenytoin in Epileptic Patients: Potential for Personalized Treatment

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ABSTRACT

This is the first study investigating genetic polymorphism of CYP2C9 in Kashmiri population.

BACKGROUND AND OBJECTIVE: 1) Genotyping of the normal and epileptic patient cohorts of Kashmir valley for CYP2C9 gene and allBackground: Variations in genotypes of drug metabolizing genes like CYP2C9 are known to have a clinical impact on AED therapy. elic polymorphism. 2) Investigation of effect of this genetic polymorphism on the Pharmacokinetics and Therapeutic and/or Adverse Pharmacodynamic responses to phenytoin in the patients.

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METHODS: Of 213 participants, PCR-RFLP methods were used for CYP2C9 genotyping of 121 normal controls and 92 idiopathic epilepsy patients. The results of genotyping were validated by direct sequencing. Pharmacokinetic (PK) analysis was done using a validated EMIT assay technique. Pharmacodynamic analysis was done by assessing clinical response to phenytoin therapy and ADR monitoring. ADR causality categorization was done by WHO-UMC causality assessment.

RESULTS: The respective frequencies of CYP2C9 *1, *2 and *3 alleles were 64%, 6.6%, 29.3% and 58%, 9.8%, 32.6% in controls and idiopathic epilepsy patients from Kashmir valley. The frequency of CYP2C9*2 and CYP2C9*3 alleles with reference to CYP2C9*1 was statistically higher in cases than in control group, OR=1.64, 95% CI= 0.8029-3.3706 and OR= 1.23, 95% CI= 0.8093-1.8869 respectively. The distribution of CYP2C9*2 and *3 alleles did not differ ($\chi^2 = 1.88$, $p = 0.17$ and $\chi^2 = 0.96$, $p = 0.32$) across case and control groups. This indicates that there may be an association of alleles with Idiopathic Epilepsy that is uniformly distributed between *2 and *3 without any preference for either allele (OR=0.75, 95% CI=0.3527-1.5999). Comparison of mean serum phenytoin C₄, C₀ and AUC₀₋₄ across age, weight and phenytoin dose matched four CYP2C9 genotypic groups viz., *1/*1, *1/*2, *1/*3, *2/*3 revealed significant difference at 10%. Post Hoc multiple comparisons done by least significant difference (LSD) test revealed that AUC₀₋₄ was a better surrogate biomarker of CYP2C9 metaboliser status as compared to C₄ and C₀ concentrations. A comparison of “phenytoin response categories” among CYP2C9 Wild and Heterozygous groups did not reveal any significant difference between the groups ($P=0.3800$). A comparison of incidence of Adverse effects reported by patients in Wild and Heterozygous groups and falling in WHO-UMC causality categories “Certain”, “Probable/Likely” or “Possible” revealed differences in distribution of adverse effects among Wild and Heterozygous groups.

CONCLUSION: CYP2C9*3 was the most frequent mutant allele found in healthy controls and idiopathic epilepsy patients of ethnic Kashmiri population. CYP2C9 genotype based phenytoin therapy is highly relevant in Kashmiri population due to a high incidence of genetic variations associated with therapeutic and adverse responses to phenytoin. AUC tends to correlate better with genetic polymorphism of CYP2C9.

Crystalloid Preload Versus Rapid Crystalloid Administration after Induction of Spinal Anaesthesia (Coload) for Elective Caesarean Section

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ABSTRACT

OBJECTIVES: To compare the hemodynamic changes, need for vasopressor therapy in post spinal hypotension and assess the neonatal Apgar score after spinal anaesthesia using crystalloid as preload or coload.

METHODS: 100 patients of ASA grade 1 & 2 with a singleton pregnancy presenting for elective caesarean section under spinal anaesthesia were randomly allocated to two groups of 50 each to receive either crystalloid preload or coload. The patients of preload received (Group P) 20ml/kg of Ringers lactate over a period of 20 mins before spinal anaesthesia. The coload group (group C) at the time of identification of CSF, received identical fluid load of 20ml/kg via a pressurized giving set to administer the fluid at the maximum possible rate.

RESULTS: The differences in heart rate, mean arterial pressure, systolic and diastolic blood pressure between the group P and group C was statistically insignificant at all measured intervals

($p > 0.005$). About 70% parturients developed hypotension in the preloaded group (35 out of 50 parturients) while as only 44% parturients in coload group developed hypotension (22 out of 50 parturients), with statistically significant differences in the incidence of hypotension between the two groups ($p = 0.0081$). The Vasopressor dose needed among the two groups were statistically significant ($p = 0.008$). The differences in the Apgar score at birth, 1min, and 5 mins between the group P and group C was statistically insignificant (p 0.563, 1.000 and 0.69 respectively). The different block height levels between the two groups showed statistically insignificant difference.

CONCLUSION: It was concluded that a combined approach using crystalloid co-load, vasopressor and left lateral uterine displacement with leg compression is probably best option to prevent spinal induced hypotension in participants.

Comparison of Ramosetron with Granisetron for Prevention of Nausea and Vomiting in Female Patients undergoing Laparoscopic Cholecystectomy

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ABSTRACT

OBJECTIVE: To compare the efficacy of Ramosetron with Granisetron for the prevention of postoperative nausea and vomiting (PONV) after laparoscopic cholecystectomy.

METHODS: In this randomized, double blind study, 100 female inpatients received 2 mg Granisetron or 0.3 mg Ramosetron i.v (n=50 of each) at the completion of surgery. The standardized anesthetic included halothane and nitrous oxide in oxygen.

RESULTS: The difference in the incidence of nausea, vomiting and requirement of rescue antiemetic immediately after extubation, 0-6 hours and 6-12 hours after extubation was statistically insignificant ($p > 0.005$), while as the difference in the incidence of nausea, vomiting and requirement of rescue antiemetic 12-18 hours and 18-24 hours after extubation was statistically significant ($p < 0.005$). No clinically important adverse events due to the study drug were observed in any of the groups.

CONCLUSION: Ramosetron was more effective than Granisetron for prevention of PONV during 12 - 24 hours after anesthesia for laparoscopic cholecystectomy.

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Postoperative Beneficial Effects of Esmolol in Normotensive and Treated Hypertensive Patients Undergoing Laparoscopic Cholecystectomy

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ABSTRACT

BACKGROUND: Advances in recent technology, anaesthesia and perioperative care have made it possible to perform laparoscopic cholecystectomy on an outpatient basis. Esmolol has

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been found to be effective in decreasing the incidence of pain and postoperative nausea and vomiting (PONV) after surgical procedures.

OBJECTIVE: To study the effect of esmolol on heart rate & blood pressure intraoperatively and its effect on incidence of post operative nausea and vomiting.

STUDY DESIGN: This randomized, prospective, double blind study was conducted in the Department of Anaesthesiology and Critical Care, SKIMS between December 2010- January 2012. Sixty patients of either gender, aged 18 or above ASA 1 & 2, normotensive or with treated hypertension undergoing laparoscopic cholecystectomy were included in the study.

METHODS: Patients were randomized into two groups viz Group E- Esmolol group and Group P - Placebo group. Group E patients received 1mg/kg Inj Esmolol bolus dose immediately before induction and group P received same volume of Inj RL as placebo. Immediately after induction, esmolol infusion was started @ 5-10 microgram/kg/min to maintain heart rate between 65-75 beats per minute. Intraoperatively patients heart rate and BP (systolic, diastolic & mean) were recorded.

RESULTS: Esmolol was effective in controlling intra operative pain which occurs due to CO₂ pneumoperitoneum. Post operative analgesic consumption and antiemetic consumption over first 24 hours was found to be more in group P as compared to group E.

CONCLUSION: Esmolol provides an effective control of intra-operative haemodynamics and reduces intra-operative opioid consumption as compared to placebo. In addition esmolol offers an additional benefit post-operatively in terms of analgesia and protection against postoperative nausea and vomiting.

Key words : Laparoscopic cholecystectomy, Esmolol, PONV

Randomized Controlled, Double-blind Study to Evaluate Oral Clonidine to Prevent Post-subarachnoid Block Shivering in Patients Undergoing Elective Urological Surgeries

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ABSTRACT

BACKGROUND: Spinal anesthesia impairs thermoregulatory control, increasing the sweating threshold and decreasing the vasoconstriction and shivering threshold. Since shivering is an accompanying part of general and regional anesthesia and it leads to various consequences and discomfort to the patient.

OBJECTIVE: To evaluate the efficacy of oral clonidine in preventing post-subarachnoid block shivering while comparing with placebo group.

STUDY DESIGN: Prospective randomized double blind study

METHODS: A prospective randomized double blind study involved 120 patients of ASA class I and class II. Patients were undergoing subarachnoid block. Patients were randomly allocated to receive either oral tablet clonidine or tablet placebo 90 minutes before procedure. Tympanic temperature was measured at entry in operation theatre and after subarachnoid block up to the end of the procedure and in the PACU for a period of one hour an investigator blinded to the treatment groups graded shivering using a four point scale.

RESULTS: Shivering was present in only 5% of cases in patients who were given Clonidine where as in placebo group shivering was present in 16.6%. The difference was statistically significant ($p < 0.05$) at 15 minutes after subarachnoid block. It was more common in group-B patients at 30min, 45min and 90 min after block ($p < 0.05$). At 60 minutes after block 4 (6.7%) in group B developed shivering compared to two patients in group A, however the difference was statistically insignificant ($p > 0.05$). All other variable were comparable between the groups.

CONCLUSION: As a prophylaxis clonidine given orally in a dose of 150 microgram seems to be effective to prevent post subarachnoid block shivering in patients undergoing elective urological surgery.

Key words: Clonidine, spinal anesthesia, shivering

Evaluation of the Effects of Intrathecal Dexmedetomidine on Bupivacaine in Spinal Anaesthesia

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ABSTRACT

BACKGROUND: Transurethral resection of prostate and bladder tumour are routinely performed procedures in daily practice. These patients are different in a sense that they are usually elderly having co-morbid conditions. An Anaesthetist thus aims for an anaesthesia technique that is simple and effective while producing minimal side effects.

OBJECTIVE: To study any change in the onset of sensory and motor blockade by addition of dexmedetomidine to intrathecal bupivacaine, to determine the duration and quality of analgesia and any side effects during intra and postoperative period.

STUDY DESIGN: Prospective randomized double blind study.

METHODS: The study was conducted on 60 patients randomly allocated in two groups, scheduled for TURP or TURBT under spinal anesthesia. The time from injection to onset of sensory block (in minutes), highest sensory level achieved (thoracic dermatome), duration of sensory block (in minutes), time of onset of Grade-III motor block, duration of Grade-III motor block (in minutes) and time from intrathecal injection to first complain of pain (in minutes) was noted. Side effects if any were also observed and recorded.

RESULTS: The duration of sensory block was 311 ± 36 minutes in study group and 230 ± 19.3 minutes in control group. The duration of motor block was 286.3 ± 34 minutes in study group and 197 ± 17.5 minutes in control group. The duration of analgesia in study group was 339 ± 47 minutes in study group and 272.1 ± 39 minutes in control group. The results on comparing came statistically significant.

CONCLUSION: The spinal-dexmedetomidine-bupivacaine mixture produces a significant prolongation of sensory as well as motor blockade, but no effect on the onset of sensory and motor blockade and level of block.

Key words: TURP, dexmedetomidine, intrathecal bupivacaine.

Mehmooda Akhter
Showkat Nengroo

Role of Intravenous Clonidine Hydrochloride in Attenuating Hemodynamic Response to Laryngoscopy, Endotracheal Intubation and Pneumoperitoneum in Patients undergoing Elective Laparoscopic Cholecystectomy

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Sheikh Sadat Ali
Abdul Qayoom Lone

ABSTRACT

BACKGROUND: Laparoscopic cholecystectomy is regarded as gold standard of care in treatment of benign gall bladder disease. Although providing many benefits it has its own short comings. The pneumoperitoneum with carbondioxide and patient position associated with laparoscopic cholecystectomy induces pathophysiological changes that complicate anesthetic management. A proper understanding of the pathophysiological changes associated with laparoscopy is very important for the anesthetist who must anticipate and prevent, or promptly respond to these adverse changes.

OBJECTIVE: To evaluate the type and extent of hemodynamic changes associated with Laryngoscopy, Endotracheal intubation and Pneumoperitoneum in patients undergoing elective laparoscopic cholecystectomy, and to study the role of intravenous Clonidine Hydrochloride in attenuating hemodynamic response in these patients.

STUDY DESIGN: Prospective randomized and double blind.

METHODS: 100 young adult patients of either sex, with ASA physical status 1, and age 20 – 50 years were randomly allocated to receive clonidine hydrochloride, $3\mu\text{g/kg}$ diluted in 10 ml Normal saline (group 1) or 10 ml Normal saline as placebo (group 2) fifteen minutes prior to induction of general anesthesia. Study parameters including heart rate, blood pressure (systolic, diastolic, mean arterial pressure) and rate pressure product were monitored and recorded at various intervals during the procedure.

RESULTS: Inter group comparison showed a highly significant rise ($p < 0.001$) in heart rate in group 2 (placebo) during various interval compared to group 1 (clonidine group). Blood pressure (systolic, diastolic, mean arterial pressure) and rate pressure product followed a similar trend like heart rate in both groups and premedication with intravenous clonidine hydrochloride ($3\mu\text{g/kg}$) definitely attenuated the rise in these hemodynamic parameters during laryngoscopy and endotracheal intubation and pneumoperitoneum.

CONCLUSIONS: Clonidine premedication, unless contraindicated, may be made as a routine practice to attenuate hyperdynamic response to laryngoscopy, endotracheal intubation and pneumoperitoneum, particularly in patients where such changes are undesirable (ASA III & IV).

Effectiveness of Pralidoxime in the treatment of Organophosphorus poisoning - A Randomized, Double Blind, Placebo Controlled Trial

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ABSTRACT

OBJECTIVES: To evaluate the role of pralidoxime in the management, primary outcome and secondary outcome in organophosphorus poisoning.

METHODS: A Randomized, prospective, double blind, placebo controlled trial was aimed to compare the effectiveness of WHO recommended regimen of Pralidoxime i.e; 30mg/kg bolus over 30 min followed by 8 mg/kg/hr infusion add-on therapy to Atropine monotherapy in Organophosphorus poisoning. A total of 100 adult otherwise healthy patients were included in the study. The patients were randomly recruited into the treatment group (AP) and placebo group (A), each group comprising 50 patients.

RESULTS: There was no statistically significant difference in the hemodynamic parameters between the two groups during treatment (p value > 0.05), the Pseudocholinesterase levels on various days were comparable in the two groups (p value > 0.05), there was no statistically significant difference in the Atropine requirement in milligrams between the two groups (p value > 0.05), mean duration of ventilation and ICU stay in treatment group days was comparable. There was significant correlation between serum sodium concentration and mortality.

CONCLUSION: The study suggests that add-on pralidoxime therapy did not offer any advantage over atropine monotherapy in management of Organophosphorus poisoning. This study validates the questions raised by former studies regarding the justification for inclusion of pralidoxime in the management of Organophosphorus poisoning.

Sumaya Syed
Showkat Ahmad Gurcoo

A Prospective, Randomized, Double Blind Study to Evaluate and Compare the effects of 3% Hypertonic Saline with 20% Mannitol on Reduction of Brain Bulk during Elective Craniotomy for Supratentorial Brain Tumor Resection

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ABSTRACT

BACKGROUND: Cerebral edema and elevated intracranial pressure are important and frequent problems in the neurosurgical patients. The present study was conducted to compare the effects of equiosmolar bolus of hypertonic saline solution with those of mannitol on intraoperative brain relaxation in patients undergoing elective craniotomy for supratentorial brain surgery.

OBJECTIVE: To evaluate the efficacy of 3% hypertonic saline on brain relaxation in

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Imtiaz Naqash

patients undergoing elective craniotomy for supratentorial brain tumors and to compare it with 20% mannitol.

STUDY DESIGN: Prospective randomized double blind study

METHODS: 114 patients scheduled to undergo elective craniotomy for various intracranial pathologies were divided into two groups. Group I received 5ml per kg of 3% hypertonic saline & Group II received 5ml per kg of 20% mannitol. Brain relaxation was scored by the surgeon immediately after opening the dura on a 4 point scale i.e; Adequately relaxed, Satisfactorily relaxed, Firm brain & Bulging brain. All the variables (i.e; Total amount of study drug administered, Hemodynamic parameters including arterial blood pressure and central venous pressure, Perioperative fluid balance, Urine output & blood gases and electrolytes) were measured and recorded at different study intervals. Urine output was recorded every hour.

RESULTS: In group II, 20 patients required additional dose of drug as compared to 8 patients in group I, which was found statistically significant. Urine output after 6 hours was 4.38 ± 0.72 litres and 5.50 ± 0.75 litres in group I and group II respectively, which was found statistically significant ($p < 0.05$). The number of patients with status of brain relaxation Score, classified as adequately relaxed, satisfactorily relaxed, firm and bulging in group I were 28, 20, 5, 3, respectively, while it was 17, 21, 11, 9 in group II with p value of 0.006.

CONCLUSION: Hypertonic saline provides better brain relaxation than mannitol.

Key words: Cerebral edema, hypertonic saline, mannitol

A Prospective Double Blind Study to Evaluate the Effects of Caudal Dexmedetomidine and Clonidine as an Adjunct to Caudal Bupivacaine for Postoperative Analgesia in Paediatric Patients Undergoing Subumbilical Surgeries

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Ishrat Rashid
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ABSTRACT

AIMS & OBJECTIVES

1. To compare the analgesic efficacy of bupivacaine when used as single agent and in combination with either dexmedetomidine or Clonidine for caudal analgesia in children aged 1-8 years undergoing Infraumbilical surgeries.
2. To study the quality and duration of analgesia, incidence of hemodynamic changes or side effects after addition of either dexmedetomidine or clonidine.

MATERIAL & METHODS: This prospective randomized double blind study was conducted from year 2010 to 2012. 90 patients of physical status ASA I and II of either sex, aged 1 to 8 years scheduled for subumbilical surgeries (hernia repair, hydrocele, phimosis, orchidopexy, hypospadias and circumcision) were prospectively enrolled

in this study. Group A received 1ml/kg of local anesthetic agent i.e. 0.25% bupivacaine with dexmedetomidine 2µg/Kg in normal saline 1 ml, Group B received bupivacaine 0.25% (1ml/Kg body weight) with clonidine 2µg/Kg in normal saline 1 ml, and Group C received bupivacaine 0.25% (1ml/Kg body weight) with normal saline 1ml. pain assessment in postoperative period was done by FLACC scoring at various intervals.

RESULTS:

- The patients in three groups did not differ significantly with respect to haemodynamic parameters. ($p > 0.05$).
- The patients in the three groups did not differ significantly upto 4 hours postoperatively with respect to FLACC scoring. After that there was a significant difference when group C was compared to groups A and B with group C achieving significantly higher scores compared to groups A and B.
- The difference in postoperative analgesia time and no. of rescue analgesic doses between group A and C; B and C was found statistically significant ($p < 0.05$), with no such difference between group A and B ($p > 0.05$) with groups A and B achieving prolonged postoperative analgesia with less need of rescue analgesics compared to group C.
- The difference in postoperative complications was statistically insignificant between the groups ($p > 0.05$).

CONCLUSION: Our observations concluded that addition of either dexmedetomidine or clonidine to caudal bupivacaine offer better quality of analgesia compared to bupivacaine alone.

Key words: Cerebral edema, hypertonic saline, mannitol

Coxsackie Virus Implicated in Acute Myocarditis, Pericarditis and Myopericarditis at SKIMS

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ABSTRACT

BACKGROUND: Role of coxsackie virus in myocarditis, pericarditis and myopericarditis has been studied previously and our study was conducted to see the coxsackie virus as etiological factor in acute myocarditis and pericarditis.

MATERIAL AND METHODS: Our study was a prospective study done over a period of two years and included a total of 40 patients admitted with features of myocarditis, pericarditis and myopericarditis in Department of Cardiology. Blood samples of the patients were taken at admission and then after six weeks. Serum was separated and stored at -70 degree celcius. IgM anti bodies to coxsackie virus were found by ELISA method.

OBJECTIVES: The aims and objectives of our study were to demonstrate coxsackie virus as causal factor in myocarditis, pericarditis and myopericarditis.

RESULTS: out of 40 patients included in our study 15(37.5%) were seropositive for coxsackie virus. Out of 15 patients, 3 patients had very high titres of IgM antibodies to coxsackie virus in acute phase where as 12 patients showed fourfold rise of IgM anti bodies during acute and convalescent phase among the pericarditis group seropositivity was 27%, 40%

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among the myopericarditis and 42.5% among the myocarditis group. Clinical presentation and severity was not significantly different between serology positive and serology negative patients.

CONCLUSION: Coxsackie virus was demonstrated in 37.5% of patients with acute myocarditis, pericarditis and myopericarditis by either a very high IgM antibodies to coxsackie virus in acute phase or rise of antibodies by fourfold in acute and convalescent phase. The clinical parameters and severity was similar in serology positive and negative patients.

Key words: Coxsackie virus, myocarditis, pericarditis, myopericarditis.

Clinical Profile of the Patients of the Atrial Fibrillation- A Hospital Based Study

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Mukesh Kumar Sharma
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ABSTRACT

BACKGROUND: Atrial fibrillation (AF) is the most common cardiac rhythm disturbance. Attention must also be directed to antithrombotic therapy for prevention of thromboembolism. Chronic oral anticoagulation attenuates the risk of stroke associated with atrial fibrillation. CHADS2 score is one of the validated risk stratification tools involving congestive cardiac failure, hypertension, age > 75 yrs, diabetes and history of stroke or transient ischemic attack. The present study was undertaken with this background to assess various aspects of atrial fibrillation in our patient population.

OBJECTIVE: To assess the etiology, risk factors and to verify cardiology practices against guidelines in the patients of atrial fibrillation.

STUDY DESIGN AND METHODS: From 2010 to 2012, 446 patients presenting to outpatient department or admitted in cardiology or medical wards of the Sher-i-Kashmir Institute of Medical Sciences, Soura and found to have atrial fibrillation were studied. It was an observational study. CHADS2 score was used for risk stratifying and prescribing oral anticoagulants. The compliance and effectiveness of oral anticoagulant was assessed by International normalized ratio (INR).

RESULT: Of total 446 patients who had atrial fibrillation, 48% (214) were males and 52% (232) were females. In our study 403 (90.35%) out of 446 patients had underlying cardiac disorder. Out of 446 patients, 409 (91.7%) patients were found to have indication for prescription of OAC as per guidelines, of which 70.9% (290) actually received OAC and out of these 290 patients only 102 patients were optimally anti-coagulated. So effectively only 24.93% i.e., 1/4th (102 out of total 409) of OAC requiring patients were ultimately therapeutically anti-coagulated.

CONCLUSIONS: Discordance between guidelines and practice was found regarding several issues on stroke prevention with use of oral anticoagulants. Optimal anticoagulation needs to be emphasized on both patients as well as physicians to prevent strokes and achieve better outcomes.

Key words: Oral Anticoagulants (OAC), International normalized ratio (INR), CHADS2 score

Association of Carotid Artery Stenosis with Coronary Artery Disease in Kashmiri Population

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ABSTRACT

BACKGROUND AND PURPOSE: Carotid artery stenosis causes significant mortality in patients with coronary artery disease (CAD) and patients who undergo coronary artery bypass surgery. So this study was conducted to see association between coronary artery disease and significant carotid artery stenosis in Kashmiri population.

METHODS: The study populations consisted of 100 patients who underwent coronary angiography because of suspicion of CAD. All patients underwent carotid Doppler to screen carotid artery stenosis. We defined echographic carotid stenosis as area stenosis of $\geq 50\%$.

RESULTS: Presence of carotid artery stenosis was evaluated by carotid Doppler in 100 patients with coronary artery disease. There were 75 males and 25 females (M: F = 3:1). Mean age of the study population was 59.89 ± 11.2 (range 30-80 years). Carotid artery stenosis was present in 19 (19%) patients with coronary artery disease. This was statistically significant with p value < 0.003 . We also found statistically significant association with age with p value < 0.001 , smoking with p value < 0.004 , diabetes with p value < 0.0001 , hypertension with p value < 0.001 and past history of myocardial infarction p value < 0.0001 . We found no relation with gender, azotemia.

CONCLUSIONS: Prevalence of carotid stenosis in patients with CAD is high in Kashmiri population. Screening of carotid artery stenosis is recommended especially in older patients with multivessel CAD.

Zafar Ali Wani
Nisar Ahmad Trambo

Comparison Between Iohexal and Iodhexnol in Patients under going PCT

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ABSTRACT

BACKGROUND: The use of iodinated contrast medium can result in nephropathy. Whether iso-osmolar contrast medium is less nephrotoxic than low-osmolar contrast medium is uncertain.

METHODS: We conducted a randomized, prospective, study comparing the nephrotoxic effects of an iso-osmolar, dimeric, nonionic contrast medium, iodixanol, with those of a low-osmolar, nonionic, monomeric contrast medium, iohexol. The study involved 194 non azotemic patients who underwent percutaneous diagnostic and therapeutic coronary interventions. Out of 194 patients 97 received Iohexol and 97 received Iodixanol randomly. The two groups appeared to be clinically similar with regards to demographic and other baseline characteristics. In each group the number of diabetic patients was 20. These patients were assessed for change in serum creatinine concentration from the baseline after 24, 48, 72 hours after contrast administration.

Rayees Noor Khan
Vicar Jan

RESULTS: The creatinine concentration increased significantly less in patients who received iodixanol. From day 0 to day 3, the mean serum creatinine at 72 hours was 1.250 (mg/dl) compared to the mean baseline serum creatinine of 1.0433 (mg/dl) in the Iohexol group while the mean serum creatinine at 72 hours in Iodixanol group was 1.1834 (mg/dl) from the mean baseline serum creatinine of 1.094 (mg/dl). This difference in rise in mean serum creatinine at 72 hours after contrast exposure between Iohexol and Iodixanol was statistically significant (p value (0.030)). In our study the percentage of patients who had serum creatinine increase > 25% from the baseline (definition of contrast induced nephropathy) was 2.06% (n2) in Iodixanol group while it was 5.15% (n5) in Iohexol group.

CONCLUSIONS: Nephropathy induced by contrast medium may be less likely to develop when iodixanol is used rather than a low-osmolar, nonionic contrast medium Iohexol.

Comparison of Right Anterolateral Thoracotomy with Standard Median Sternotomy for Aortic Valve Replacement

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Aakib Hamid Charag
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ABSTRACT

BACKGROUND: Since cosmetic results have been an important issue, Right Anterolateral Thoracotomy (RALT) approach was used for aortic valve replacement (AVR).

OBJECTIVE: To compare the results of RALT approach with median sternotomy incision for AVR.

STUDY DESIGN: Prospective comparative study.

METHOD: This study was carried out in the Department of Cardiovascular and Thoracic Surgery at Sher-i-Kashmir Institute of Medical Sciences. We studied 29 patients who underwent AVR from September 2010 to August 2012. An equal number of patients were allocated randomly into each group by systematic random sampling. Fifteen patients underwent AVR via RALT (study group) and fourteen patients via median sternotomy (control group). Statistical analysis was done using Mann Whitney U test and Fischer's Exact test. Statistical Package SPSS -17 was used for data analysis.

RESULTS: Mean length of incision for median sternotomy approach was 18.7 cm vs 7.8 cm for RALT approach (p value < 0.001). No significant difference was observed between the two approaches with respect to the mean bypass time, aortic cross clamp time, operating time and duration of ICU stay. The difference in the average pain score was statistically significant between the two groups, with RALT being a less painful approach. Average postoperative hospital stay was 8.0 days for median sternotomy group vs 6.9 days for RALT group (p value = 0.013). The difference in the rate of wound infection was statistically insignificant. Scar complications were seen in 42.9% of the patients in median sternotomy group vs 6.7% in the RALT group (p value = 0.035). A greater number of patients were satisfied with cosmesis in the RALT group, however, the difference was statistically insignificant.

CONCLUSION: RALT is a safe and effective alternative approach to median sternotomy for AVR, besides being cosmetically more acceptable.

Key words: Aortic valve replacement, right anterolateral thoracotomy, median sternotomy

Role of Computed Tomography in Staging Carcinoma of Esophagus

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ABSTRACT

Mohd. Amin Rather
Ab. Majeed Dar
Irfan Robbani

BACKGROUND: Carcinoma of esophagus is an aggressive tumor difficult to cure because of late presentation. Cancer of esophagus is most frequent type of malignancy in Kashmir Valley accounting for 42.9% of all malignancies. A total of 336 patients were included in our study. Most common age group involved is between 60-70 years. Squamous cell carcinoma is more common. Lower esophagus is more commonly involved. Most common in smokers.

STUDY DESIGN: Prospective study hospital based.

OBJECTIVES: To correlate the CT findings with per operative and histopathological findings and up to what extent CT is specific, sensitive and accurate for staging carcinoma of esophagus.

MATERIALS AND METHODS: A total of 336 patients were included in our study. Patients were preoperatively assessed by Computed Tomography(CT) for staging and emphasizing on such factors as the extent of growth, local spread, lymph node status and distant metastasis. CT findings were then correlated with subsequent surgical and pathological findings.

RESULTS: For local nodes CT has sensitivity of 60%, specificity of 75% and accuracy of 67%. For distant lymph nodes it was 88%, 98% and 96% respectively. The size of the node greater than 5 mm above the diaphragm and 10 mm below the diaphragm was taken as criteria for malignancy. For Aortic invasion it was 62.5%, 94.5% and 92% respectively. For tracheobronchial tree(TBtree), CT has got sensitivity, specificity and accuracy of 85.5% 95.8% and 94.6% respectively. CT is having accuracy of 97% for pericardial invasion. CT has sensitivity, specificity and accuracy of 93.3%, 99.6% and 99.4% for diaphragmatic involvement.

CONCLUSION: Preoperative staging is of paramount importance for a patient with esophageal cancer. Because the outcome of esophageal carcinoma is strongly related to stage, and institution of appropriate therapy for esophageal carcinoma depends in part on accurate diagnosis and staging.

Key words: Carcinoma oesophagus, Computed Tomography)

Intrapleural Therapy for the Prevention of Recurrent Spontaneous Pneumothorax

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Mudassir Ahmed Khan
AG Ahanger
Abdul Majeed

ABSTRACT

BACKGROUND: The study entitled, “Intrapleural therapy for the prevention of recurrent spontaneous pneumothorax - A Randomized Comparative Evaluation of Bleomycin Pleurodesis and Autologous Blood Pleurodesis” was carried out in the department of CVTS, SKIMS Srinagar Kashmir from May 2010 to Oct 2012.

OBJECTIVE: Our objectives in this study were to evaluate the efficacy of autologous blood pleurodesis in the management of persistent air leak in primary spontaneous pneumothorax and to compare the efficiency, side effects, cost and complications of autologous blood pleurodesis vis a vis bleomycin pleurodesis.

STUDY DESIGN: Ours was a prospective randomized comparative evaluation of autologous blood & bleomycin pleurodesis involving patients with persistent air leak resulting due to primary spontaneous pneumothorax. We followed the patients for a period of 1-22 months with average follow up of 11.766 months.

METHODS: Total of sixty (60) patients with primary spontaneous pneumothorax were included in the study; 32 patients in Study Group (receiving autologous blood) and 28 patients in Control Group (receiving bleomycin). On an average 54.7ml (1ml/kg body weight) of peripheral venous blood taken from the patient's arm vein was immediately injected into the pleural cavity via the chest tube & chest tube was clamped for 1-2hrs. In bleomycin pleurodesis at 15 min after instillation of 20 ml of lidocaine 1%, about 55.7 units (1 iu/kg body wt.) of bleomycin in 100 ml of normal saline was instilled into the pleural cavity via the chest tube and the tube clamped for 1-2hrs.

RESULTS: Two (6.3%) patients in the Study group had failure of cessation of air leak after blood patch pleurodesis. Hence the success rate of cessation of air leak in Control group was 100% while as it is 93.4% in Study group (p -value=0.178). In Study group 6(18.8%) patients had post-procedure pain but none had fever; while as in Control group 26(92.9%) patients had post-procedure pain & 12(42.9%) patients had fever. None of the patients from Study as well as Control groups had post-procedure empyema, tension pneumothorax, anaphylaxis, chest tube clogging or progressive respiratory failure. Per patient average cost of the procedure in Study group was Rs 53.13, while the average cost of procedure per patient in Control group was Rs1925.00 (p -value ≤ 0.0001). After 1-22 months (average 11.76) follow up, in Study group 6(20%) out of 30 patients had recurrence, and also in Control group 6(19.4%) out of 28 patients.

Transhiatal Oesophagectomy for Carcinoma Oesophagus - A Single Surgeon Experience

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ABSTRACT

BACKGROUND: Esophageal cancers are typically carcinomas which arise from the epithelium or surface lining of the esophagus. These cancers are among the least studied and deadliest cancers worldwide. Recent advances in the diagnosis, staging and treatment of this neoplastic condition have led to small but significant improvement in survival. This study was conducted in the Department of CVTS at SKIMS and is a detailed account of transhiatal oesophagectomies being done here. Study design : It was both retrospective including patients operated from November 2005 to October 2010 as well as prospective study including patients operated from November 2010 to October 2012 by the same surgeon.

OBJECTIVES: To study perioperative events, complications and surgical outcome and long term results of transhiatal oesophagectomies performed by a single surgeon.

RESULTS: The study involved 154 patients, male female ratio being 2.08, mostly from rural areas (79.87%), aged between 51 and 60 (51.94%). Dysphagia (96.10%) and significant weight loss (42.85%) were the major symptoms. Mid oesophagus was involved in 46.75% cases, followed by distal oesophagus (35.71%). Most of the operated patients had TNM stage III and II disease (49.35 % and 44.15 %). Biopsy revealed squamous cell carcinoma in most cases (59.74%) followed by adenocarcinoma (34.41%). Esophageal reconstruction was done by gastric tube and esophagogastric anastomosis was done in all patients. Mean operating time from skin incision to closure of wound was 160+/-10 minutes and the average blood loss was 500±20 ml. The anastomotic leakage in our study was 7.14%, vocal cord paralysis in 3.49%, cardiovascular complications in 3.89%, wound infection in 4.54%, chylothorax in 2.59%. The in-hospital mortality was 3.89%. The mean postoperative hospital stay was 13±3 days. The estimated 3-year disease free survival rate was 30.27% whereas 3-year overall survival rate was 40.24%. Also estimated 5-year disease free survival rate was 20.60% whereas 5-year overall survival rate was 28.42%.

CONCLUSION: This study has revealed that there is an effective operative approach for tumours of the infra-carinal esophagus and esophagogastric junction, can be associated with a low morbidity & mortality of less than 4%.

Key words : Esophageal cancer, transhiatal oesophagectomy, esophagogastric anastomosis.

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Radiological, Functional and Clinical Outcome after Surgical Treatment of Bullous Lung Disease

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ABSTRACT

BACKGROUND AND OBJECTIVE: To study the clinical profile of Bullous Lung disease in our community and evaluate the outcome after surgery by comparing the preoperative versus postoperative clinical features.

STUDY DESIGN AND METHODS: A prospective study was conducted from May

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Abdul Majeed Dar

2009 to October 2011, consisting of 54 patients. Follow-up at 3-6 months consisted of a comprehensive work-up, including specifically changes in subjective dyspnea score, arterial blood gas analysis (ABG) and pulmonary function test (PFT). After comparison with preoperative values, the student's paired T-test was used to calculate the statistical significance.

RESULTS: In contrast to available literature, the most common underlying lung pathology was Primary Idiopathic Bullous Lung Disease instead of COPD. The most common presenting complaint was in the form of complication of spontaneous pneumothorax. Bullectomy, with or without decortication, was done in all cases. Improvement in mean PaO_2 , SaO_2 and PaCO_2 was seen in most cases but was statistically insignificant. Improvement in mean FEV_1 , FVC, $\text{FEV}_1 / \text{FVC}$ and subjective dyspnea score was statistically significant, with FEV_1 being the most reliable indicator of postoperative progress and showing an inverse correlation with subjective dyspnea score. Those with diffuse lung parenchymal involvement had poor postoperative improvement and more complications.

CONCLUSIONS: We conclude that surgery for Bullous Lung Disease is needed more frequently in our community since we have a high number of patients of Primary Bullous Lung Disease. These patients are young without diffuse pulmonary parenchymal disease and thus have a good outcome after bullectomy. A timely surgical intervention can save them from potentially fatal complications like pneumothorax and prevent our community from a huge socio-economic loss because Primary Bullous lung Disease inflicts these patients at the prime of their life (20 to 40 years).

Key words: Bulla, bullectomy, pneumothorax

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Epidemiological Study of Road Traffic Accidents in Kashmir Valley

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ABSTRACT

BACKGROUND: Road traffic accidents (RTAs) have emerged as a major global public health problem of this century and are now recognized as “veritable neglected pandemic”.

OBJECTIVE: To assess the magnitude of RTAs, various epidemiological factors associated with them and to assess the risk of RTA mortality associated with these factors in Kashmir Valley.

STUDY DESIGN: Prospective observational study.

METHODS: Study was conducted at District police head quarters and three major referral institutions of Kashmir valley during the year 2011. 779 RTA victims were studied in detail at three referral institutions for various epidemiological factors associated with RTAs.

RESULTS: Police records reveal that valley has witnessed 2164 RTAs during 2011 in which 3113 victims were injured and 326 got killed with accident risk of 31.3, fatality risk of 4.7 and severity index of 15.1. Out of 779 RTA victims studied, majority (82.7%) were

males, 82% were aged fifty years or less. 40.3% were pedestrians while 21.7% were passengers. 76% were injured during day time (6am to 6pm) on straight (82.5%), familiar (98.3%), smooth (97%), wide (94%) and plain roads (92%) under sunny weather conditions (85%). 36.1% drivers and 7.4% passengers reported use of seat belt and 33.3% motorcyclists and 9.2% pillion riders reported use of helmets. In 52.2% accidents were due to four wheelers and in 40% due to 2-wheelers. Traffic regulations were almost nonexistent. Head on collision (63%) was the commonest type of accident with head injury as most common injury (60%). Fatal outcome was seen in 11.7% with male gender, pedestrian/cyclist, low conscious level, mode of transportation to referral care and need of blood transfusion as significant predictors of RTA mortality.

CONCLUSION: Human, vehicular and environmental factors play important role in RTAs. These are partially predictable and hence preventable.

Key words: Road traffic accident, epidemiological factors, Kashmir valley

Epidemiological Analysis of Different Cancers at Regional Cancer Centre (SKIMS) with Special Reference to Gastrointestinal Cancers

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ABSTRACT

BACKGROUND: The valley of Kashmir presents a strikingly different picture of cancer distribution. Although some limited epidemiological data on individual cancers has been published from this part of the country but there is lack of data on overall epidemiological profile, pattern and determinants of various GI cancers in Kashmir valley.

AIMS & OBJECTIVES: To find magnitude of various cancers registered at RCC SKIMS and to study socio-demographic profile of various GI cancers and their association with various factors.

MATERIAL & METHODS: Study was conducted both retrospectively as well as prospectively. For retrospective component records of all cancer patients registered from 1st January 2008 to 31st December 2011 were retrieved from RCC database and individual patient files. For prospective component, data was collected from RCC SKIMS for a period of one year (1 Jan 2011 to 31 Dec 2011). All newly diagnosed GI cancer patients were taken up as study subjects and were interviewed once using a semi-structured questionnaire.

RESULTS: Total of 11213 patients were registered from 2008 to 2011 (59.6% males and 40.4% females). When both sexes are combined, Oesophageal cancer was found to be the commonest (14.7%). Among males, Lung was the leading site (17%) while it was cancer oesophagus (15.31%) among females. A total of 537 GI cancer patients were studied in prospective component (64.4% males and 35.6% females). 74.1% of patients were illiterates, 63.5% smokers and 77.6% patients were exposed to passive smoking. Almost all patients (99.6%) were consuming salt tea. Multiple regression analysis showed significant association of some variables with GI cancers.

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Abdul Majid Ganai
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CONCLUSION: GI cancers form about one third of total cancers seen at RCC, SKIMS, oesophageal cancer being the commonest. Such pattern of cancers may be ascribed to the peculiar dietary habits, smoking and other socio-cultural factors seen among people of the Kashmir valley.

Key words: Cancer, hospital registry.

Clinical profile and Outcome of Acute Metabolic Complications of Diabetes mellitus in a Tertiary Care Centre

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ABSTRACT

BACKGROUND: Scanty data exist on acute metabolic complications of diabetes like diabetic ketoacidosis (DKA), hyperglycemic hyperosmolar state (HHS) and hypoglycaemic coma in India, particularly in Kashmir.

OBJECTIVE: To study the clinical Profile and outcome of acute metabolic complications of diabetes mellitus (DM) in a tertiary care centre in Kashmir Valley.

METHODS: This prospective study was carried out on 102 diabetic patients who presented to SKIMS with an acute metabolic emergency (DKA, HHS or Hypo) between December 2010 and July 2012. The information extracted included biodata, duration and type of diabetes (in known diabetic patients), previous treatment (if any), plasma glucose, electrolytes and blood gas analysis at presentation, hospitalization outcome, and mortality data. Analysis of the data was done using standard statistical and analysis techniques.

RESULTS: 65 (63.7%) of recruited subjects had DKA, 20 (19.6%) had HHS, and remaining 17 (16.7%) were admitted because of hypoglycaemia. Age of subjects ranged from one year to 76 years with a median age of 17 (DKA), 60 (HHS) and 60 (hypo) years. Mean age (years) was 19.5 ± 12.5 in T1DM and 58.3 ± 10.9 in T2DM patients. Majority (86%) but not all patients with DKA were having type 1 DM while majority (80%) of HSS patients had type 2 DM. Electrolyte abnormalities (in DKA) included hypernatremia (45%) hyperkalemia (31%), hypernatremia (29%) and hypokalemia (18.5%). Precipitating factors for hospitalization were first presentation (46%), missing of insulin (45%), infections (38.5%), and high-altitude yatra (11%) in patients with DKA, and missing a meal (88%) in hypo patients. Hospital stay ranged from one to 18 days with a mean of 6.0 ± 3.3 . The mortality rate in hyperglycaemic emergencies was 3.5% (1.5% in DKA and 10% in HHS); significant predictive factors for mortality being sepsis, type 2DM, and old age..

CONCLUSIONS: Both hypo and hyperglycemic emergencies are common diabetic patients in Kashmir but DKA is the most common medical emergency with majority being children. Apart from patient education, the healthcare team must stay informed about the recent developments in diabetes care and have the necessary clinical skills to prevent and manage DKA episodes.

Key words: Diabetic Ketoacidosis, hyperosmolar hyperglycemic state, hypoglycemic coma, precipitating factors, prospective studies, risk factors, treatment outcome

Endoscopic Septoplasty- A Prospective Analysis

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ABSTRACT

BACKGROUND: The advent of endoscopes has revolutionized rhinology. Endoscopic septoplasty is a fast developing concept and gaining popularity because of its potentially insignificant subjective and objective morbidity.

OBJECTIVES: This study was aimed to analyze patients undergoing septoplasty defining its indication, procedure, benefits and follow up.

METHODS: From march 2011 to may 2012, 40 patients underwent endoscopic septoplasty at the postgraduate deptt. Of ENT, S.M.H.S hospital. Patients who presented with signs and symptoms attributed to posterior septal deviation, septal spurs and limited septal deviation directly opposite the surgical area for endoscopic sinus surgery and endoscopic Dacrocystorhinostomy were selected.

RESULTS: Nasal obstruction was the most common presenting symptom recorded in 39 (97.2%) patients. Endoscopic septoplasty alone or with turbinoplasty was done in 22 (55%) patients. In rest 18 patients, endoscopic septoplasty was done with FESS in 9 (22.50%), with DCR in 5 (12.50%), with decompression/marsupialization of sinonasal mucocele in 3 (7.50%) and with CSF leak repair in 1 (2.50%) patients. Preoperative nasal endoscopy revealed broad based septal deformity in 12 (45%) patients, isolated spur in 10 (35%) patients and combined septal deformity in 18 (20%) patients. Majority of patients (n=38, 95%) were discharged within 48 hours. On analysis of septal deviation angles, on NCCT PNS, preoperative and postoperative mean $\pm$ S.D angle was 141 ± 11.89 and 167 ± 7.36 with p value < 0.0001 . On subjective analysis of nasal obstruction symptom evaluation (NOSE) score of patients at baseline, at postoperative 3 and 6 months follow up mean $\pm$ S.D was 61.88 ± 11.53 , 9.50 ± 5.75 and 8.75 ± 3.86 .

CONCLUSION: Endoscopic septoplasty is an effective technique that can be performed safely alone or in combination with endoscopic sinus surgery with minimal additional morbidity. The endoscopic approach to septoplasty facilitates accurate identification of pathology due to better illumination, improved accessibility to remote areas and magnification.

Key words: Septoplasty, endoscope, mucocele

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Results of Extracorporeal Septoplasty Vs Conventional Maxilla-Premaxilla Approach to Septoplasty in Kashmiri Population

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ABSTRACT

BACKGROUND: Severe septal deformities have been inadequately treated with conventional septoplasty and significantly successful results have been achieved with Extracorporeal Septoplasty (ECSP).

STUDY DESIGN: Prospective Study Design.

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OBJECTIVES:

1. To evaluate various septal deformities and their functional parameters.
2. To evaluate complications due to various surgical techniques used in correcting septal deviations in this study.
3. To evaluate the results of extracorporeal septoplasty and compare these with the results of Conventional Septoplasty.

MATERIALS AND METHODS: This study was conducted in Department of Otorhinolaryngology of S.M.H.S Hospital, from January 2011 to September 2012. Fifty patients were operated upon using conventional septoplasty and fifty using ECSP. Patient benefit was assessed using NOSE scores, Nasal Symptom score, 5 point likert scale and GBI questionnaire.

RESULTS: Postoperatively, mean NOSE score (Nasal Obstruction Symptom Evaluation) in conventional septoplasty at 6 months was 5.20 ± 6.85 as against 5.20 ± 6.85 in Extracorporeal SP (ECSP) group.

Postoperatively, mean NSS (Nasal Symptom Score) at 6 months in conventional septoplasty was 10.68 ± 2.70 as against 12.80 ± 2.56 at 6 months in ECSP group.

Using 5 point likert scale, 47 patients (94%) reported their status as 'Better or Much Better' in ECSP group as against 38 patients (76%) in conventional SP group.

In Glasgow Benefit Inventory, patients of ECSP score high with a mean score of 46.94 ± 28.28 as against 62.89 ± 22.72 in conventional SP.

CONCLUSIONS:

1. Extracorporeal Septoplasty (ECSP) is the procedure of choice for markedly deviated nasal septum.
2. Complication rates in ECSP are similar to those observed with conventional septoplasty, though dorsal irregularity and columellar retraction are insignificantly seen in ECSP.
3. Mero-cell packing seems to be the best packing material.
4. In cases of tip deformity and minor dorsal deformities clinically attributable to gross septal deviation, ECSP should be favored against conventional septoplasty.

Keywords: Extracorporeal septoplasty, Deviated nasal septum, Conventional septoplasty.

Chronic Cholestatic Disorders (non Viral / non Alcoholic): Clinical, Biochemical and Radiological Profile

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Shah Ahtisham
Ghulam Nabi Yattoo

ABSTRACT

BACKGROUND AND OBJECTIVES: Chronic intrahepatic cholestasis includes disorders of the hepatic ductal system of varied etiologies; autoimmune, genetic, infiltrative, drugs etc. The spectrum of these disorders has not been reported previously from the state of Jammu & Kashmir. We attempted at studying the profile of all patients of chronic intrahepatic cholestasis (excluding neonatal, viral, alcoholic, pregnancy associated), presenting to us during a period of four years i.e., 2008 to 2012.

METHODS: Patients aged above two years with clinical and/or biochemical features of

cholestasis for more than six months with a normal hepatic ductal system on ultrasonography were evaluated on the basis of clinical, biochemical, imaging, serological and histological characteristics and assessed at three monthly intervals for response to treatment and disease progression.

RESULTS: A total of 36 patients (22 males, 24 females) were enrolled. Primary sclerosing cholangitis(PSC) was the commonest etiological cause(33.3%), Primary biliary cirrhosis(PBC) was next (22.2%), followed by overlap syndromes of AIH with PSC & PBC (11.1% and 8.3% respectively). Drugs and Sarcoidosis were the etiology in 5.6% cases. One case each of Amyloidosis, Benign Recurrent cholestasis(BRIC), Langerhans' cell histiocytosis(LCH), AIDS cholangiopathy and Eosinophilic cholangitis were detected, accounting for 2.8% cases each. PBC showed a marked (75%) female preponderance(6 females: 2 males), AMA positivity in 75% cases and a high prevalence of portal hypertension. Patients of PSC were predominantly middle aged males(8males vs.4females) in their 40s (42.0 ± 15.85).p-ANCA was the most common autoantibody in these. Three(37.5%) patients had concomitant Inflammatory bowel disease. Among the two patients of drug induced cholestasis Rifampicin was incriminated in one and Amoxycillin-clavulanate in the other. Cholestasis was the first manifestation of Sarcoidosis, Amyloidosis, AIDS, LCH and Eosinophilic cholangitis.Both patients of sarcoidosis initially erroneously labeled as tuberculosis, showed marked improvement in symptomatology and laboratory parameters on steroids.

CONCLUSIONS: Chronic cholestatic disorders may be rare but not non-existent. Our patients were diagnosed late with portal hypertension, reflecting a lack of clinical awareness and paucity of literature about these rare conditions. Cholestasis was the initial presentation of a number of larger systemic syndromes.

Comparison of CT Enterography and Capsule Endoscopy in Patients of Obscure Gastrointestinal Bleeding

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ABSTRACT

BACKGROUND: In patients with obscure gastrointestinal bleeding(OGIB) capsule endoscopy(CE) is the investigation of choice for flat mucosal lesions like ulcers and angiodysplasias where as Computed tomographic (CT) enterography is the investigation for mass lesions.

OBJECTIVES: To compare the efficacy of multiphase (64 Slice) computed tomographic enterography with that of capsule endoscopy in patients of obscure gastrointestinal bleed.

STUDY DESIGN: It is a prospective study.

METHODS: We prospectively included 25 patients with OGIB who first underwent CT enterography followed by capsule endoscopy. The time duration between CT enterography and capsule endoscopy was 4 - 6 weeks. The median age of the patients was 56 years, and 56% of patients were female. Overt bleeding was 56%, and occult bleeding was 44%.

RESULTS: CT enterography was normal in all 25 patients in comparison to Capsule endoscopy which detected positive findings in 12(48%)patients. Angiodysplasia

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in 6 (24%) patients, ulcers in 5 (20%) patients and NSAID induced lesion in 1 (4%) patients. Two patients with jejunal and ileal ulcers were diagnosed with Crohn's disease. Patients with overt and ongoing bleeding were more likely to show positive capsule endoscopy.

CONCLUSION: Capsule endoscopy showed high diagnostic yields in patients of OGIB with normal CT enterography. A normal CT enterography result does not guarantee that there is no bleeding source in the small bowel. Capsule endoscopy showed highest sensitivity in detecting flat lesions like angiodysplasia and ulcers.

Key words: Computed tomographic enterography, capsule endoscopy, obscure gastrointestinal bleeding, angiodysplasia.

Endoscopic versus Medical Therapy for Bleeding Peptic Ulcers with Adherent Clot: A Randomized Comparative Trial

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Gul Javid

ABSTRACT

AIMS & OBJECTIVE: Compare endoscopic treatment with medical treatment for patients with bleeding peptic ulcer with adherent clot.

MATERIALS & METHODS: Patients of UGI bleed after initial resuscitation were subjected to early endoscopy. Patients with adherent clot on EGD were randomized into two groups. One group received medical therapy only (Omeprazole infusion). Other group received endoscopic therapy (injections of epinephrine into the pedicle of the adherent clot, followed by removal of the clot by polypectomy snare. Any underlying stigmata after the clot removal if present were treated by multipolar electrocoagulation) plus medical therapy.

Two groups were compared for recurrent bleeding, length of hospital stay, units of red blood cells transfused, need for repeat endoscopy, need for surgery and mortality.

OBSERVATION & RESULTS:

Primary outcomes:

Recurrence of bleeding with seven days of endoscopy was lower in endoscopic therapy group compared with the medical therapy group (4% vs. 26.9%) *p* value 0.024.

Secondary Outcomes:

Units of RBCs needed, length of hospital stay. Need for repeat endoscopy and recurrent bleeding with 30 days were less in endoscopic group compared to medical group. All of these were statistically significant. Ulcer surgery and mortality within 30 days were less in endoscopic group compared to medical group but these were not statistically significant.

CONCLUSION: Combination therapy is better than medical therapy alone.

Incidence of UGI Bleeding in Patients taking Low Dose Aspirin: A Prospective Study

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ABSTRACT

BACKGROUND: Aspirin increases the risk of upper gastro-intestinal bleeding by a factor of 1.5-2. Because of increase in the global burden of atherosclerotic disease, aspirin use has increased manifold over the last few decades.

OBJECTIVES: To estimate the incidence of UGI bleeding in patients taking low dose aspirin.

STUDY DESIGN: It was a prospective study involving patients on low dose aspirin who were followed for a period of 1 year.

METHODS: Patients who were taking low dose aspirin (75-325mg/d) for various cardiovascular and cerebrovascular indications were enrolled in the study after determining the inclusion and exclusion criteria. All patients were followed every 2 monthly with history and physical examination pertaining to UGI bleed. and those with positive history and examination underwent endoscopy.

RESULTS: A total of 350 patients were enrolled out of which 5 patients(1.4%) presented with UGI bleed. 3 of them were having gastric ulcer and 2 were having duodenal ulcer. The estimated incidence of UGI bleeding was 1.4%/year.

CONCLUSION: Incidence of UGI bleeding in patients taking low dose aspirin in absence of other major risk factors, remains low at a rate of 1.4%/year.

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Enhanced Recovery after Surgery (ERAS) in Patients Undergoing Colorectal Surgery

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ABSTRACT

BACKGROUND AND AIMS: Enhanced Recovery After Surgery (ERAS) is a relatively new method of patient management. It is a collection of strategies that combine in a structured pathway to decrease the physical insult and aid recovery enabling earlier discharge. The aim of this study was to introduce the principles of ERAS in our hospital in elective colo-rectal surgery and to evaluate its effect on hospital stay, morbidity and mortality when compared to carefully matched prospective controls.

STUDY DESIGN: Prospective case - control study

MATERIAL AND METHODS: 222 patients – 106 cases and 116 controls were included in the study. Patients were matched for age, gender, co-morbidity, type of disease, American Society of Anesthesiologists (ASA) grade, type of surgery and stoma formation. Primary outcome measures were length of hospital stay, mortality and morbidity. Secondary outcome

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measures were early oral feeding, return of bowel functions and number of readmissions within 30 days.

RESULTS: Post-operative hospital stay was 4 days (mean) for patients in ERAS group Vs 8.7 days (mean) for the control group. There was no significant difference between the ERAS and control group for morbidity (22.6% Vs 31.1%; $p = 0.16$) and mortality (0% Vs 0.86%; $p > 0.05$). Readmission within 30 days of discharge was higher for ERAS group (6.6% Vs 0%; $p = 0.05$). Regular feeding was tolerated much earlier in ERAS group than control group (3 days Vs 7 days; $p = 0.00$). Bowel functions returned earlier in ERAS group (2.9 days Vs 5.3 days; $p = 0.00$).

CONCLUSION: Treatment of colorectal surgery patients according to an enhanced recovery after surgery programme leads to faster recovery and shorter hospital stay. Additionally, the implementation of the enhanced recovery after surgery programme resulted in significant improvements of perioperative care. Principles of ERAS programme are applicable in our set-up and will be most beneficial in view of heavy patient load and dearth of hospital space for such patients available in developing world.

Key words: ERAS, colorectal surgery, co-morbidity

Metabolic Syndrome in Patients with Gall Bladder Stone Disease (GBSD) in Kashmir

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ABSTRACT

BACKGROUND: The entity of metabolic syndrome has emerged as a growing health problem and a major clinical challenge globally. As metabolic syndrome is closely associated to cardiovascular disease and non-alcoholic fatty liver disease, we tried to determine the association of gallbladder stone disease (GBSD) with metabolic syndrome and its components.

STUDY DESIGN: Prospective descriptive analysis

OBJECTIVES: To assess prospectively prevalence of Metabolic Syndrome in gallbladder stone disease patients in Kashmir Valley.

METHODS: The present study was carried out in the department of General and Minimal Invasive Surgery SKIMS, Srinagar. Evaluation for metabolic syndrome (following ATP III criteria) like; weight, height, body mass index, waist circumference, blood pressure, lipid profile, fasting blood glucose level, post-prandial blood glucose level, ultrasonography of abdomen was performed. Data was described as mean $\pm$ standard deviation and percentages. Inter-group comparison for least significant difference metric at 95% confidence interval was measured by student's t- test for the metric data, whereas Mann-Whitney U test and Chi square test were applied for categorical (para-metric) data.

RESULTS: Out of 150 patients of gallbladder stone disease, 61(40.7%) filled the criteria for metabolic syndrome (including 43 female and 18 male patients). The difference in the percentage of patients with metabolic syndrome, between the two

sexes was nonsignificant ($p=0.800$). Single variable analysis of the metabolic phenotypic characters, comparing effect of individual character on the gallbladder stone formation revealed that obesity is the most important factor for gallstone formation.

CONCLUSIONS: In conclusion, as in cardiovascular disease and non-alcoholic fatty liver disease, gallstone disease has been proved to be associated with metabolic syndrome and its components. Of all the phenotypic characteristics of Metabolic Syndrome, the presence of obesity is the most important factor associated with the risk of having gallstone disease.

Key words: Obesity, metabolic syndrome, gallbladder stone disease.

Comparative Study of Esophagogastrectomy with Pyloric Drainage with Esophagogastrectomy without Pyloroplasty

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ABSTRACT

BACKGROUND: There is no consensus on the need for pyloroplasty after proximal gastrectomy with an esophagogastrostomy and vagotomy. Arguments for routine pyloroplasty include prevention of postoperative delayed gastric emptying. Arguments against include prevention of postoperative dumping syndrome and bile reflux esophagitis.

OBJECTIVE: The aim of this prospective study was to investigate the effects of the pyloric drainage procedures (pyloroplasty and intraoperative balloon dilatation of pylorus) and no pyloric drainage procedure on postoperative delay of gastric emptying and bile reflux oesophagitis in patients undergoing esophagogastrectomy.

METHODS: 104 patients were studied over a period of three years. Patients were randomly allocated to different surgical procedures viz esophagogastrectomy without a pyloric drainage procedure (Group I: $n=35$) esophagogastrectomy with pyloroplasty (Group II: $n=34$) and esophagogastrectomy with intraoperative balloon dilatation of the pylorus (Group III: $n=35$). Six months postoperatively the surviving patients were subjected to Tc99 gastric emptying scan. Delayed gastric emptying was defined as per the guidelines of the American Society of Nuclear Medicine (2008). At 8 months after surgery patients were subjected to endoscopy to look for bile reflux esophagitis. At timely intervals (2 weeks and 8 months after surgery) patients were assessed by careful history and clinical examination for complaints like epigastric fullness, early satiety, dysphagia, heartburn and development of features of gastric outlet obstruction. Patients were also observed for the features of early and late dumping.

RESULTS: There was no statistically significant difference in hospital mortality, anastomotic leakage rate pulmonary complications and postoperative hospital stay between the three groups. Gastric emptying was delayed in 59.3% of our patients without significant difference among the groups studied. There was also higher incidence of dumping and bile reflux esophagitis in patients who received pyloric drainage procedures. Pyloroplasty group had highest incidence of bile reflux esophagitis (28.6%) followed by intraoperative balloon

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dilatation group (26.7%) and no drainage group (3.6%). There was statistical significance ($p < 0.05$) with more patients in pyloroplasty and intraoperative balloon dilatation groups suffering from bile reflux esophagitis.

CONCLUSION: pyloric drainage procedure may be omitted in patients undergoing esophagogastrectomy

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Prospective Randomized Controlled Trial Comparing Coloplasty versus Straight Anastomosis after Low Anterior Resection in Carcinoma Rectum Patients

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ABSTRACT

BACKGROUND: Colorectal cancer is the third most commonly diagnosed cancer in the world, Cancers that are confined within the wall of the colon are often curable with surgery by utilising different surgical approaches. The present study was conducted in the Department of General Surgery Sher-i- Kashmir Institute of Medical Sciences, Srinagar(India) from June 2009 to October 2011.

OBJECTIVE: To study the functional outcome, complications and overall impact on quality of life following transverse coloplasty pouch(TCP) vs straight anastomosis (SA) in carcinoma rectum patients.

METHOD: The study was conducted in the department of General Surgery Sher-i-Kashmir Institute of Medical Sciences, Srinagar(India) from June 2009 to October 2011. Forty two patients with cancer rectum were included in the study and were randomly allocated to two groups to undergo either straight anastomosis or transverse coloplasty pouch anastomosis following low anterior resection with total mesorectal resection(TME).Patients were followed regularly for assessment of the results of the treatment, quality of life & development of any complications.

RESULTS: A total of 42 patients were enrolled in our study with mean age in the TCP group (53.6 years) and in the SA group (49.5years). Anastomotic leak rates was similar in both the groups (18.2% vs 20%).The frequency of bowel movements per 24hours and nocturnal bowel movements at six months in the TCP was significantly less as compared to SA group. Use of retarding medications and ability to defer defecation was better in the TCP group than SA group. TCP group patients were found to be more continent to pass liquids, stools at 2 and 6 months duration. Quality of life remained same in both the groups so far as bladder and sexual function is concerned but TCP patients showed significant improvement in anal incontinence with time as compared to SA patients.

CONCLUSION: We conclude from our study that the TCP neorectum has certain advantages over the SA in terms of less post-operative complications, frequency of bowel movements, nocturnal bowel movements.

Keywords: carcinoma rectum, straight anastomosis, tranverse coloplasty pouch

A Prospective Evaluation of Bladder and Sexual Function after Total Mesorectal Excision in Carcinoma Rectum in Males

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ABSTRACT

BACKGROUND: Bladder and sexual dysfunctions are common complications after rectal cancer surgery. However, with the development of Total Mesorectal Excision (TME) and nerve sparing dissection has resulted in decreased incidence of bladder and sexual dysfunction rates.

OBJECTIVES: 1. Frequency of bladder voiding and sexual dysfunction after open TME. 2. Frequency of identification of pelvic autonomic nerves (PAN) and subsequent preservation of same during open TME.

STUDY DESIGN: This study was prospective observational study and each patient was control for himself that is bladder and sexual function detected before surgery was compared with same patient after 1 and 3 months of surgery.

METHODS: Sexual function was assessed with International Index of Erectile Function questionnaires (IIEF) and bladder function was assessed with Urodynamics, transabdominal Ultrasound and International Prostate Symptom Score (IPSS).

RESULTS: IIEF score decreased at 1 month post operation with significant change in p-value and at 3 months with an insignificant change in p-value. After 3 months sexual dysfunction was reported in 30.23% patients. Erectile function was also significantly decreased at 1 month and at 3 months it was seen in 37.20% of patients. Change in IPSS was significant at 1 month and resultant bladder function was present in 89.7% of patients and at 3 months present in 27.65% of patients. Resultant bladder dysfunction with USG was 82.3% and 29.7% after 1 and 3 months of surgery respectively. With urodynamics resultant bladder dysfunction was present in 77.45% and 28.7% of patients respectively after 1 and 3 months of surgery. Pelvic autonomic nerves were identified in 95.6% patients and complete preservation (PANP) was achieved in 89.3% patients and partial-PANP was achieved in 6.3% and in 4.25% PAN were not identified.

CONCLUSION: Bladder and sexual dysfunction decreased after nerve sparing TME. IIEF and IPSS are all well suited to evaluate bladder and sexual dysfunction after rectal surgery.

Keywords: PAN, PANP, IIEF, TME

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Colorectal Cancers in Kashmir Valley : Clinical and Genetic Aspects

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ABSTRACT

BACKGROUND: The role of prohibitin has been studied in various human cancers like breast, stomach, thyroid and bladder but very little is known about the role of prohibitin in colorectal cancers.

OBJECTIVE: To study the clinico-pathologic features of colorectal cancers, expression of prohibitin in colorectal cancers and its correlation with clinico-pathologic features.

STUDY DESIGN: It was a prospective study from October 2009-September 2011. Colorectal Cancer patients were studied for the clinico-pathological features and the

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expression of Prohibitin. Patients were asked thorough history and subjected to complete examination and investigations before undertaking surgery. Tissue samples were taken from normal and cancerous lesions.

METHODS: The clinico-pathologic features of colorectal cancer were studied. Lysis buffers were used for extraction of total protein from tissue samples(normal and colorectal cancer tissue). Bradford assay was used to determine protein concentration. The proteins were separated by SDS-PAGE and Prohibitin was identified using the technique of Western blotting.

RESULTS: The mean age of colorectal cancer patients in our study was 49.94 years with males constituting 60% of cases. Prohibitin was expressed in 31% cases of colorectal cancer. The expression of prohibitin was more in younger age (Mean age=45.58 yrs). The expression of prohibitin was more in rectal cancer (42%) followed by descending colon (25%) and sigmoid colon (25%). 37% of the Infiltrative tumors had expression of prohibitin as compared to Ulcerative tumors (32%) and Proliferative tumors (22%). Poorly differentiated tumors have expression of Prohibitin in 93% of cases.

CONCLUSIONS: Prohibitin can be used as a potential diagnostic and differentiation biomarker of colorectal cancer for tissue-based detection by immunohistochemistry.

Key words : Colorectal cancer, prohibitin, immunohistochemistry.

Comparison of Stapled and Handsewn Methods of Anastomosis in Ileocolic Surgery

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ABSTRACT

BACKGROUND: Ileocolicsurgery for various indications can be performed using staplers or sutures, and evidence based inference shows definite advantages with staplers over suturing in most of the studies.

OBJECTIVES: To compare handsewn & stapled techniques of ileocolonic surgery in terms of outcome with respect to various variables and indications (malignancy or benign disorders), outcome to compare the effect of mechanical bowel preparation on wound infection & anastomotic leak rate, mean operating time, mean blood loss, post-operative pain by VAS, post-operative return of bowel sounds, passage of first flatus postoperatively, resumption of oral feeding, wound infection rate, as disease free survival, anastomotic stricture, local tumor recurrence, utility in fast track surgical approach etc.

DESIGN: A prospective case control randomized study carried out over a period of 3 years.

METHODS: The study included a total of 113 patients, distributed randomly into handsewn (53) & stapled (60) group, and compared in terms of the studied parameters.

RESULTS: The mean operating time (123.3 ± 20.3 vs 161.5 ± 28.7 min), return of bowel sounds (44.6 ± 8.3 vs 52.7 ± 10.6 hours), passage of first flatus postoperatively (49.5 ± 8.7 vs 58.1 ± 10.3 hours) & resumption of oral feeding (4.1 ± 1 vs 5.0 ± 0.9 days) were observed significantly less in stapled group as compared to hand sewn group. There was no significant difference observed in terms of rate of anastomotic leak, wound infection, intraoperative blood loss, post-operative pain, hospital stay, long term outcome in diseases like carcinoma, including variables like disease free survival, anastomotic stricture & local tumor recurrence;

and effect of mechanical bowel preparation on wound infection & anastomotic leak rate between hand sewn and stapled groups.

CONCLUSION: Anastomosis by stapling devices in ileocolic surgery has definite advantage over hand sewn anastomosis in terms of less operative time, early return of bowel sounds, passage of first flatus, resumption of oral feeding, and easy applicability in fast-track surgeries of ileum and colon.

Key words: Anastomosis, stapled, hand sewn, ileocolic

Human Resource Planning at a Large Teaching Hospital, with Special Reference to Determine the Actual Requirements in Clinical, Para-clinical, Administrative and Supportive Services

Department of Hospital Administration, Sher-i-Kashmir Institute of Medical Sciences, J&K, India

ABSTRACT

BACKGROUND: The expanding health needs and expectations of a growing and changing population are placing new pressures on the health system. Changes in the health system worldwide have created new challenges for Health Human Resource Planning. Human Resource planning(HRP) is a strategy for the acquisition, utilization, improvement and preservation of the human resources of an enterprise. HRP is aimed at having the right number of people with the right skills in the right place at the right time to provide the right services to the right people.

OBJECTIVES: To study the existing Human Resources at SKIMS, Faculty time utilization and determine the actual manpower requirement for 700 bedded teaching hospital.

STUDY DESIGN: Prospective study.

METHODOLOGY: Study was conducted over a period of one year at SKIMS. The study included review of relevant records, questionnaire for faculty time utilization and National guidelines regarding actual manpower requirement.

RESULTS: Only 60% of sanctioned faculty, 45% technical staff, 33% academic posts were occupied. The existing staff nurses were approximately 41% of the actual number of staff nurses required. The existing staff in CSSD was about 60% of the actual staff required, where as the existing staff in dietetics was 30% less than the actual requirement in the department. Over 36% pharmacists had formal qualification in pharmacy. The teaching medical faculty spent most of the time 50-70% for patient care activities.

CONCLUSION: A significant shortage of faculty, academic, nursing and supportive staff is seen according to its sanctioned strength. Each organization needs human resources with required qualification, skills, knowledge, experience and aptitude for their professional responsibilities as competent human resource can work miracles even with limited resources.

Key words: Health human resource planning, Time utilization, Existing human resource, Actual Human resource requirement, Human Resource development

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Patient's Perceptions of the Quality of Care at A Large Teaching Hospital of Kashmir

Department of Hospital Administration, Sher-i-Kashmir Institute of Medical Sciences, Soura, J&K, India

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ABSTRACT

BACKGROUND: The range of perceptions of Quality is limitless. Quality in Healthcare should include as assessment of Structure, Process and Outcome. In recent years, the emphasis of Quality assurance and Quality improvement efforts has shifted from a Structure and Process orientation to an Outcome.

OBJECTIVE: To study Inpatients' Profile and Opinion about Quality Care with special reference to the Factors influencing their Satisfaction or Dissatisfaction with Hospital Services.

STUDY DESIGN: The Prospective Observational study of 1 Year Duration at Inpatient Departments of SKIMS.

METHODS: 1 year study on the basis of 'Exit Interviews' carried out by Simple Random Sampling in the Inpatient Wards of SKIMS w.e.f. 1 Jan.2011 to 31 Dec.2011. The Standard Questionnaire used to determine Inpatients opinion was based on Likert Scale. Test-Retest Reliability Test of the Interview Schedule was performed. However, Patients of Chemotherapy on Day Care basis, Children below the Age of 12 years, and Semiconscious or Unconscious patients in ICU were excluded from the study.

RESULTS: A Total of 4800 Patients were included in the study during year 2011 taking the Sample Size as 10%. Initially, the Profile of Inpatients including Gender, Dwelling, Literacy, Socioeconomic status, Clinical specialty, Age and Length of Stay were studied among these sampled inpatients. The Average Percentage of Total Satisfaction Score among patients was 71.87% whereas 28.13% patients were found out to be dissatisfied with the Hospital Services. Using Chi-Square Test, *p*-value of each aspect of Hospital Services in view of Satisfied or Dissatisfied patients was evaluated by depicting their Significant or Insignificant values. Overall Ranking of 45 different Hospital Services among Questionnaire was done based on the Degree of Satisfaction in Descending order indicating Satisfied patients on the Top and gradually shifting to mildly Satisfied with Dissatisfied patients occupying the last positions at the bottom with least Mean values.

CONCLUSION: Vital suggestions given by the patients and their attendants were tabulated. Major Recommendations for overcoming the shortcomings and improving the Hospital Staff and Supportive Services functioning were devised with an aim to take the Quality Services at SKIMS to new heights of Perfection.

Key words: Quality, perception, satisfaction

Detection of Chromosomal Abnormalities in An Ethnic Population of Kashmir Valley

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ABSTRACT

BACKGROUND: A routine chromosome analysis is being used as a starting point for the diagnosis of cytogenetic investigation by conventional Karyotyping of congenital malformations and developmental delay or mental retardation in children, reproductive delays and failures in adults. Accurate diagnosis of the affected member is of importance for genetic counseling.

OBJECTIVES: This study was taken up with an aim to evaluate the patients living with different chromosomal aberrations by standardizing the procedure for Karyotyping.

METHOD: A total of 773 suspected cases for different genetic abnormalities were included and screened by conventional karyotyping in this study between 2004 and 2011 from the different regions of Kashmir (North India).

RESULTS: Out of the 773 patients, abnormal chromosomes as trisomies or monosomies were found in 127 (16.42%) of the cases, while as 646 (83.6%) were found to be of normal karyotype.

Down's syndrome (Trisomy 21) were found in 82 (27.4%) of 100 suspected cases, Turner's syndrome (XO) in 39 (19.5%) of 200 suspected cases, Klinefelter's (XXY) in 4 (2.85%) of 140 suspected cases and 02 (1.5%) cases with translocations in chromosomes were observed in 133 suspected cases of women who had one or more missed abortions.

Among down syndromes we found 39 of 82 (47.5%) as females, 43 of 82 (52.5%) as males and frequency of mosaic down was observed to be 14.6% (12 of 82). Further we found that most of the Down's cases belonged to the mothers with middle age of the conception (age >35). Thus the cases with maternal age > 35 were found to be 61 of 82 (74.5%). In turner cases, 07 of 39 (18%) cases were found to be mosaic (45 XO/46XX) and most of these cases showed abnormal anatomical features of the reproductive organs especially Uterus and Ovaries (33 of 39: 84.6%). Two robertsonian translocations t(13:14) were found in females who had recurrent missed abortions.

CONCLUSION: In conclusion we found that people with different genetic disorders particularly chromosomal abnormalities do exist in our population. Among these disorders, Down's syndrome seems to be occurring at a higher frequency which is possibly due to late marriages with higher maternal age. We also found that interrelation marriages (consanguineous marriages) play an important role in the prevalence of these genetic disorders. Thus karyotyping plays an important role for the conformation of the clinical diagnosis and the determination of the risk of genetic aberrations.

Key words: Turner, consanguineous, karyotyping

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Bone Marrow Density in Chronic Obstructive Pulmonary Disease Patients

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ABSTRACT

OBJECTIVE: Comparison between Bone Marrow Density (BMD) in patients of chronic obstructive pulmonary disease (COPD) and age and sex related healthy controls.

STUDY DESIGN: This study was a prospective observational hospital based study conducted in department of pulmonary medicine at Sher-i-Kashmir Institute of medical sciences.

MATERIAL & METHODS: Clinically stable patient with a history of COPD were recruited at the outpatient pulmonary department.

1. Diagnosis of COPD was made according to the American Thoracic Society (ATS) (93) and categorized in accordance with the GOLD guidelines
2. Questionnaire that included information on smoking history, type of living, and medication used by patients.
3. Body weight, height, body mass index and lung function test using spirometry were measured.
4. The study was conducted in a case control design. Sixty Patients of COPD were enrolled in the study and were compared with one hundred and twenty age and sex matched controls.
5. All Patients underwent BMD; BMD was estimated by dual energy absorptionmetry in the lumbar spine (L2 and L4) and femoral neck and whole body.
6. Diagnosis of osteoporosis was based on the lowest T- score of measured locations and defined according to world Health organization (WHO). Osteoporosis: t- score < -2.5; osteopenia: t-scope between -2.5 to -1; and normal t-score > -1.
7. The Stastical analysis was done using Univariate linear regression analysis

RESULTS: This study revealed osteoporosis in 65% of patients with COPD when bone density at lumbar spine was taken into consideration and a prevalence of 27% when whole body bone density was considered. The prevalence was 31% and 35% once density at left femur and right femur respectively was taken into consideration. The strength of our study was that we compared our patients with age and sex matched healthy controls to arrive at a definite association of osteoporosis in COPD. We found a prevalence of 26.5 % osteoporosis in patient's comparison to controls where it was only 7.5% with respect to the whole body. This observation proved to be highly significant. This difference in prevalence of osteoporosis between cases and controls was true across all sites being 65% in cases versus 29.1% in controls at lumbar spine, 31% in patients versus 15.1% in controls at left femur neck and 35% in patients versus 5% in controls at right femur neck.

Key words: COPD (chronic obstructive pulmonary disease), BMD (bone marrow density), ATS(American Thoracic Society)

Microalbuminuria and Hypoxemia in Patients with Chronic Obstructive Pulmonary Disease

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ABSTRACT

BACKGROUND: Microalbuminuria (MAB), a marker of endovascular dysfunction, is a predictor of cardiovascular events and all-cause mortality in the general population. There is evidence of vascular dysfunction in patients with chronic obstructive pulmonary disease (COPD).

OBJECTIVES:

1. To evaluate the practical role of microalbuminuria in patients with COPD.
2. To establish relationship between degree of Microalbuminuria and Hypoxemia in COPD.
3. To study the frequency of microalbuminuria in stable COPD patients.

STUDY DESIGN: The study was prospective, conducted jointly in the Department of Internal medicine and Department of Immunology & Molecular Medicine at SKIMS, over a period of two years from December 2010 to November 2012. Stable COPD patients without any comorbidity, with wide range of airflow obstruction were taken in study. Age matched smokers of more than 10 pack-years without airflow obstruction served as controls.

METHODS: We measured spot urinary albumin, smoking history, arterial blood pressure, body mass index, lung function, kidney function tests and BODE index in 97 patients with stable COPD and 94 age matched smokers with normal spirometry without known cardiovascular disease. Microalbuminuria (MAB) levels were compared between groups. A multivariate analysis was performed to determine the best determinants of MAB levels.

RESULTS: Microalbuminuria was more frequent in COPD patients compared to smokers without obstruction (20.6 % versus 7.4 % respectively); $p = 0.007$. There was an inverse association of the PO₂ and MAB in patients with COPD ($r = -0.35$, $p < 0.0001$).

Multivariate analysis with MAB as the dependent variable Showed that PO₂ (odds ratio: 1.003; 95%CI, 0.767-0.974; $p = 0.021$) was only independent and significant predictor of MAB.

CONCLUSIONS: MAB is frequent in patients with COPD and is associated with hypoxemia independent of other cardiovascular risk factors.

Key words: Chronic obstructive pulmonary disease (COPD); microalbuminuria (MAB), hypoxemia

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Pulmonary Embolism as a Cause of Acute Exacerbation of Chronic Obstructive Pulmonary Disease in Patients with Exacerbation of Unknown Etiology

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ABSTRACT

BACKGROUND: Patients suffering from chronic obstructive pulmonary disease (COPD) are often admitted to hospital with an exacerbation of the disease that manifests itself with an increase in cough and/or sputum, increased dyspnoea and sometimes chest pain. These episodes are more often attributed to an acute exacerbation of bronchial infection but the real cause is often unknown. COPD is considered as a risk factor for pulmonary embolism (PE) and PE is a part of the differential diagnosis of an acute exacerbation of COPD (AECOPD). However, the symptoms of these two conditions overlap to a considerable extent and the investigation of PE is often ignored in these patients, therefore, the true prevalence of PE in this situation is unknown.

OBJECTIVE:

1. To evaluate pulmonary embolism in patients with AECOPD of unknown etiology.
2. Develop a prediction guide for PE in patients with AECOPD.

STUDY DESIGN: Prospective study.

METHODS: 100 consecutive patients with AECOPD of unknown etiology were included in our study. All these patients were examined within 48 hrs of admission to hospital and underwent full medical history, clinical examination, chest x-ray, venous blood samples to measure CBC including Hb, TLC, Hct, Platelet count, ABG analysis, D-dimer, USG leg, application of simplified Geneva score, and CT pulmonary angiography (CTPA).

RESULTS: Of the total 100 patients 57 (57%) were males and 43 (43%) were females. Mean age was 66.3 yrs. 14.0% of the patients had documented PE with AECOPD of unknown etiology. History of VTE, Pleuritic chest pain, haemoptysis, increased respiratory rate (p -value < 0.001 , RR-1.378 (CI, 1.164-1.632), Increased heart rate (p -value < 0.001 , RR-0.032 (CI, 0.004-0.254), Low BP (p -value < 0.001). Decreased platelet count (Fisher's exact test-0.001, RR-0.094 (CI, 0.020-0.447), Increased PH (p -value < 0.001), Decreased PCO₂ (p -value < 0.001), Increased serum Sodium and Urea levels (p -value-0.004) (which requires further prospective studies for evaluation), High Simplified Geneva scores are predictors of PE in patients with AECOPD.

CONCLUSION: 14.0% of the patients had documented PE with AECOPD of unknown etiology and has been found as an important cause of exacerbation. Proper medical history, clinical examination, lab and simplified Geneva scores assessment are important tools in predicting and increasing pretest probability.

Key words: COPD, PE, CTPA, AECOPD, VTE.

Interferon-gamma as a Diagnostic Marker in Tuberculous Pleural Effusion.

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ABSTRACT

BACKGROUND: Tuberculous pleuritis and malignancy are among the most common causes of pleural exudates in many Countries. The diagnosis of pleural tuberculosis still remains elusive as the conventional methods (Histopathology and Culture) used have a poor diagnostic yield. A reliable clinical marker providing physicians with rapid and accurate diagnosis of tuberculous pleuritis is greatly needed. Pleural levels of a number of biomarkers have been proposed as aids in the diagnosis of tuberculous pleural effusion (TPE), including those of INF- γ , adenosine deaminase, interleukin-12p40, interleukin-18, immunosuppressive acidic protein, and soluble interleukin-2 receptor.

METHODS: This study was done to evaluate the diagnostic efficacy of pleural fluid interferon-gamma (INF- γ) as a diagnostic marker of tuberculous pleural effusion and identify the best cut off value of INF- γ for diagnosis of PTE.

RESULTS: In this study patients suspected of PTE were evaluated. A single specimen of pleural fluid was subjected to analysis including, ZN staining, cytological examination, ADA activity determination, PCR detection for mTB, and for interferon-gamma levels using a commercially available INF- γ ELISA kit.

Cases of PTE were defined as those patients with clinical manifestations suggestive of tuberculosis with identification of Mycobacterium tuberculosis (culture positive or ZN staining positive) or histopathological findings on pleural biopsy (granulomatous inflammation). Patients with clinical and radiological findings suggestive of PTE that lacked microbiological/histopathologic confirmation but had either had both ADA > 40U/L and pfPCR positive or ADA > 70U/L in case of a negative pfPCR result were also taken as PTE cases.

CONCLUSION: In this study it was concluded that Interferon- γ levels in pleural fluid are very efficient in differentiating TB from non-tuberculous pleural effusions. Assuming 218pg/ml as a cutoff, the assay has sensitivity of 93.3%, specificity of 100%, and diagnostic accuracy of 96%.

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Frequency of Metabolic Syndrome in Patients of COPD in Kashmiri Population and Association /Consequenses of Systemic Inflammation in them

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ABSTRACT

BACKGROUND: Chronic obstructive pulmonary disease (COPD) is characterized by an incompletely reversible limitation of airflow. It is increasingly being recognized that COPD is associated with various important comorbidities like cardiovascular diseases, osteoporosis, diabetes mellitus and metabolic syndrome. The mechanism linking COPD to systemic manifestations and comorbidities is not yet certain, but a potential mechanism is systemic inflammation. The aim of this study was to determine the frequency of coexisting metabolic

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syndrome in patients of COPD and to study the status of systemic inflammation in these patients using serum high sensitivity C-reactive protein (hs-CRP) and tumor necrosis factor-alpha (TNF- α) as the biomarkers of systemic inflammation.

METHODS: Seventy nine stable COPD patients with different severity of airflow obstruction (GOLD stages I-IV) of both genders were investigated and accessed for the presence of metabolic syndrome as per IDF criteria. Systemic inflammation was accessed by measuring the serum hs-CRP and TNF-alpha levels in fifty five stable COPD patients and compared with the levels of these inflammatory markers in equal number of age and sex matched healthy controls.

RESULTS: The frequencies of associated metabolic syndrome in patients of COPD in our study was 27.8% and this association was higher in females as compared to males (45.8% and 20% respectively). The levels of both the inflammatory markers i.e. hs-CRP & TNF- α were significantly higher in COPD patients as compared to age and sex matched healthy controls and the severity of systemic inflammation increased significantly with increase in the severity of COPD. The presence of metabolic syndrome within each GOLD stage of COPD resulted in significant increase in the systemic inflammation.

CONCLUSION: The present study revealed that a significant proportion of COPD patients have a coexistent metabolic syndrome and confirmed the presence of systemic inflammation in stable COPD

Metabolic Syndrome and Breast Cancer Risk

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ABSTRACT

OBJECTIVE: This study was aimed to assess the prevalence of metabolic syndrome in patients with breast cancer and the independent effect of metabolic syndrome on breast cancer risk.

METHODS: Fifty aged 40–80 years with breast cancer and 50 controls of similar age were screened for metabolic syndrome prevalence and breast cancer risk factors, including age at diagnosis, age at menarche, reproductive status, live births, breastfeeding, family history of breast cancer, physical activity, cigarette smoking, body mass index, and metabolic syndrome parameters. Each variable was first assessed for baseline comparisons using the univariate model, and significant variables were then added to the multivariate conditional logistic regression model.

RESULTS: Prevalence of metabolic syndrome was 40% in breast cancer patients, and 18% in the control group ($p < 0.02$). A positive and independent association was observed between metabolic syndrome and breast cancer risk (odds ratio = 3.037; 95% confidence interval 1.214–7.597)

CONCLUSION: Metabolic syndrome is more prevalent in breast cancer patients and is an independent risk factor for breast cancer.

Key words: Metabolic syndrome, breast cancer, risk factor, hyperinsulinemia, insulin resistance

An Epidemiological Study of Onychomycosis in Kashmir Valley - A Prospective Study

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ABSTRACT

BACKGROUND: Onychomycosis, a fungal infection of one or more nail units, per se is asymptomatic but poses a serious concern to the clinician as it often becomes a chronic source of recurrent superficial skin infections. Besides this, the destruction and disfigurement of nail plate can lead to self-consciousness and impairment in doing fine work.

OBJECTIVE: To study the magnitude of onychomycosis, risk factors associated with the disease, culture and identify the organisms causing onychomycosis.

STUDY DESIGN: The study was conducted in the Department of Microbiology, SKIMS, Soura in collaboration with the Department of Dermatology, SKIMS Medical College, Bemina from August 2010 till September 2012. It included 300 patients attending the OPD with nail complaints suggestive of onychomycosis. Detailed history was taken, examination of nails done and proforma with written consent separately filled for each patient.

METHODS: Nail scrapings collected in pill packets were subjected to direct microscopy and culture in the Mycology laboratory of SKIMS. Direct microscopy was done using 20% KOH and culture was done on Sabouraud dextrose agar with chloramphenicol and Sabouraud dextrose agar with chloramphenicol and cycloheximide. Tubes were incubated at 37°C and 25°C, for 4-6 weeks and were examined on biweekly basis for growth characteristics.

RESULTS: Age ranged from 3 months - 85 years with female preponderance. Distal and lateral subungual onychomycosis (DLSO) was the most common clinical type. Overall, positivity on microscopy was 73.52% and on culture was 29%. Sensitivity and specificity of KOH as compared to culture was 83.87% and 30.26% respectively. Out of 321 samples, 71% were sterile on culture, 28% were positive for dermatophytes while 1% were positive for non-dermatophytes. Among the fungi isolated, 98% were dermatophytes and 2% were non-dermatophytic fungi (*Fusarium spp.*). Commonest dermatophytes isolated was *T. rubrum* followed by *T. violaceum*, *E. floccosum*, *T. tonsurans*, and *T. verrucosum*.

CONCLUSIONS: KOH of nail scrapings is a better diagnostic tool than culture. As KOH and culture are complementary to each other they should be included in the diagnostic evaluation of onychomycosis.

Key words: Onychomycosis, KOH, culture.

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Carbapenem Resistant Klebsiella Pneumoniae in A Tertiary Care Hospital- SKIMS

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ABSTRACT

BACKGROUND: Antibiotic resistance is a global public health problem. The foundation of modern medicine is built on the availability of effective antibiotics, especially in economically deprived areas of the world where the disease burden remains high. Identification of carbapenem-resistant *K. pneumoniae* infection may assist in the empiric therapeutic

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decision-making process and may allow for early implementation of appropriate infection-control measures.

AIMS & OBJECTIVES: To find out the prevalence of *Klebsiella pneumoniae* strains resistant to carbapenems and to formulate an advisory for control and treatment of infections.

MATERIAL & METHODS: The study was conducted in the department of Microbiology, SKIMS. Patients attending the OPD or admitted during one year period were taken for the study. Different samples were processed according to the standard microbiological techniques. Antimicrobial sensitivity of *Klebsiella* isolates was performed on Mueller Hinton agar plates by Kirby-Bauer disk diffusion method according to CLSI guidelines. The minimum inhibitory concentration of imipenem for isolates that were resistant to imipenem was done by microbroth dilution method. Carbapenemase production was then confirmed by Modified Hodge test. Detailed information of the patients and isolates was recorded in a separate proforma.

RESULTS: Overall prevalence of Carbapenem resistant *Klebsiella pneumoniae* was 27.9%. Majority (84.2%) of the imipenem resistant *Klebsiella* isolates were found to be carbapenemase producers. The predominant source of both imipenem resistant and Modified Hodge test positive isolates were urine, pus and blood. The recovery of *Klebsiella* isolates from urine and blood was found to be statistically significant ($p < 0.05$). Antibigram showed a high degree of resistance to cephalosporins (>90%) with maximum sensitivity to tigecycline and polymyxin B (100%).

CONCLUSION: Carbapenem resistant *Klebsiella* is a major problem in our hospital. Early detection of carbapenemase producing *Klebsiella* spp. may avoid future spread of these isolates and ensure better patient care and timely introduction of appropriate infection control measures.

Key words: Antibiotic, K. Pneumonia, Carbapenem

Clinical Course of Idiopathic Focal Segmental Glomerulosclerosis(FSGS)

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ABSTRACT

BACKGROUND: Focal segmental glomerulosclerosis(FSGS) is a leading cause of adult Nephrotic syndrome. It is a histologic diagnosis in which there is scarring of a portion of some glomeruli. It can be Idiopathic (no cause found) or secondary (diabetes, hypertension, HIV, HBV). Idiopathic FSGS patients present as Nephrotic syndrome or subnephrotic proteinuria. Most patients of primary FSGS progress to ESRD within 5-20 years.

OBJECTIVE: The objective of the study was to describe the clinical course of idiopathic FSGS with emphasis on response to steroids and progression to end state renal disease(ESRD).

STUDY DESIGN/METHODS: The study included all the biopsy-proven cases of FSGS. Cases of secondary FSGS were excluded(HIV/HBsAg-positive, Diabetes Mellitus, Hypertension).

RESULTS: A total of 35 adult cases (20 males, 15 females) of biopsy proven FSGS were studied. Hypertension, hematuria, mild renal insufficiency were seen in 6, 14, 6 cases, respectively. Mean 24-hour urinary protein, serum protein & serum cholesterol level were

7.518 $\pm$ 4.0 gm, 5.1 $\pm$ 1.2 gm/dl & 378 $\pm$ 198 mg/dl, respectively. 28 cases could be followed for a mean duration of 30 months. 24 cases had Nephrotic syndrome & were treated with prednisolone; 14 (58%) cases showed a response (8 (33%) CR & 6 (25%)). At the end of the follow up, 2 patients of the 14 responders & 4 of the 10 non-responders had ESRD. The presence of Hypertension, Hematuria or Azotemia at presentation, degree of proteinuria, Hypercholesterolemia & mesangial proliferation had no statistically significant effect on the response to steroids in our study. 24-hour urinary protein has a statistically significant relation with the progression of FSGS to ESRD.

CONCLUSION: We conclude all the FSGS patients with nephrotic syndrome be treated with steroids for at least 3 months to achieve a remission before embarking upon other immunosuppressants.

Spectrum and Outcome of Infectious Complications in Chronic Kidney Disease Patients not on Maintenance Dialysis

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ABSTRACT

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BACKGROUND: Although infection remains among the most common causes of morbidity and mortality in patients with chronic kidney disease (CKD), data on spectrum and outcome of infectious complications in patients with chronic kidney disease who are not receiving maintenance dialysis is scarce.

METHODS: Observational analysis of a prospective cohort of hospitalized stage 4 and stage 5 CKD patients, who were not on any maintenance dialysis and who were admitted with various infectious complications, between December 2010 and September 2012, in a tertiary teaching hospital.

RESULTS: 154 patients were included in the study, with a mean age of 54.84 ± 12.12 years, out of which 61.7% of the patients were male with 21.4% in stage 4. 44.2% of the study patients had Diabetic Nephropathy as the etiology of CKD, followed by CKD with undetermined etiology (25.3%) and Hypertensive Nephropathy (18.8%). 37.7% of the study patients had pulmonary infection, 28.6% were having urinary tract infection, while as sepsis was reported in thirty two patients (21.8%). Pulmonary infection was more common in elderly patients (p value 0.003) in stage 5 of CKD (p value <0.001). Mortality rate in pulmonary infections was 27.2%. Sepsis was more common in elderly patients (p value 0.003) in stage 5 disease (p value <0.001) with an underlying heart disease (p value <0.001). Mortality rate among sepsis patients was 84%. Overall mortality in our study group was 27.9%. Mortality was more in elderly patients with a p value of <0.001 . Shock and respiratory failure were associated with mortality in 94.4% and 87.5% of patients respectively with a p value of <0.001 . Mortality was highest in patients with sepsis 84.3% followed by pneumonia 27%.

CONCLUSIONS: Infectious complications are an important cause of mortality and morbidity in stage 4/5 CKD patients who are not on maintenance dialysis.

Key words: Infection, CKD , dialysis

Prevalence of CKD and its Risk Factors among First Degree Relatives of Patients of Chronic Kidney Disease(CKD)

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ABSTRACT

BACKGROUND: First Degree Relatives (FDRs) of CKD Patients have a high prevalence of CKD and its risk factors. We evaluated adult FDRs of CKD patients for the prevalence of CKD and its risk factors.

OBJECTIVE: The objective of this study was to find out the prevalence of CKD and its risk factors among FDRs of patients of CKD.

STUDY-DESIGN: This was a prospective cross-sectional study carried out in the department of Nephrology, SKIMS-Soura Srinagar. First Degree Relatives of CKD patients who accompanied these patients during OPD visits or ward admissions constituted the study population.

METHODS: Adult FDRs of CKD patients were screened. FDRs <18 years of age, FDR with CKD due to Polycystic Kidney disease or urological disease were excluded. Age, sex, smoking habit, history of drug intake for hypertension, relationship with index patient were asked and weight, height, BMI, Urine analysis, fasting blood glucose, serum creatinine and cholesterol were measured.

RESULTS: 600 FDRs were screened. Mean age was 43.56 years and 63.3% were male, 17.5% were obese and 22.0% were overweight. 23.3% had hypertension and 11.6% had diabetes mellitus. Screening identified 46 new cases of DM (7.6%). Impaired Fasting Glucose was found in 15.7%, hypercholesterolemia in 15.5% and smoking habit in 33.34%. 8.0% had proteinuria (>1+). 52.2% FDRs had eGFR in stage 1, 38.2% in stage 2, 9.0% in stage 3, 0.67% in stage 4-5. 9.7% had CKD. Older age, Female sex, uncontrolled blood pressure, DM had significant association with eGFR <60ml/min/1.73m².

CONCLUSION: In India CKD and its risk factors show a familial clustering and screening of FDRs of CKD patients will be a viable option for a CKD preventive programme.

Prevalence of Chronic Kidney Disease in Adults in Kashmir

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ABSTRACT

BACKGROUND: Incidence of chronic kidney disease (CKD) has increased dramatically in recent years all over the world. One lakh new patients of end state renal disease (ESRD) enter into renal replacement therapy (RRT) annually in India. Diabetes and hypertension are two leading causes of CKD. India has the largest number of diabetics in the world. Only 3-5% of ESRD patients get some form of RRT.

OBJECTIVES: To know prevalence of CKD in adults ≥ 18 years in Kashmir division.

STUDY DESIGN: Population based cross-sectional study, conducted in 4 districts of Kashmir.

METHODS: Questionnaire for risk factors of disease was used in each subject. General physical examination was done and BP checked. Urine was examined on spot for albumin by dipstick. Serum creatinine measured. Any person with creatinine > 1.5 mg/dl was called back after 12 weeks to confirm chronicity of raised serum creatinine, and defining criterion of CKD.

Hypertension was classified as per JNC 7 guidelines. Obesity was classified as per WHO 2000 guidelines. GFR was calculated by MDRD Equation.

RESULTS: 2222 persons were screened, 58% were females, mean age 44.5 years. 26.3% population had hypertension, 22.5% had prehypertension, 8.6% were detected new hypertension.

48 person's were diagnosed with CKD with prevalence of 2.2%. GFR was < 60 ml/min in 8% of population (178 person's). Stage 3, 2 and 1 CKD was present in 85.2%, 14.3% and 0.5% respectively. 15.6% of population aged > 70 years had CKD whereas none aged ≤ 30 years had CKD. Hypertensive had also significantly raised creatinine. Prevalence of low GFR was 9.4% in females as compared to 6.1% in males. 8% population had albuminuria.

CONCLUSION: Our study shows high prevalence of CKD in adults in Kashmir. Because of this scenario we expect increased burden of ESRD on health care system and thus an urgent need to expand dialysis and renal transplant facilities.

Keywords: Chronoc kidney disease , end stage renal disease, replacement therapy, hypertension

Single Nucleotide Polymorphisms (SNPs) in CACNA1A Gene and its association with Migraine

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ABSTRACT

BACKGROUND: Migraine is a chronic, neurovascular polygenic disease where genetic and environmental factors are involved in its etiology. Dysfunction of neuronal ion transportation can provide a model for predisposition for common forms of migraine. Mutations in genes encoding ion channels disturb the rhythmic function of exposed tissue that may also explain the episodic nature of migraine.

OBJECTIVE: To study the Single Nucleotide polymorphisms (SNPs) of CACNA1A Gene in Migraine patients.

STUDY DESIGN: Case control study

MATERIAL AND METHODS: The Subjects were the patients of Migraine, in the age range of 18-80 years, diagnosed by a Neurologist, as per the diagnostic criteria of International Headache Society Classification 2004, with age and sex matched healthy persons from the same population excluding the relatives of patients after taking consent from both patients and controls. Blood samples were taken and DNA extraction was performed according to the manufacturer's protocol for Qiagen DNA extraction kits (Qiagen, Hilden, NRW, Germany).

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RESULTS: The study included a total of 25 patients of migraine and age and sex matched 25 healthy controls. The polymorphic analysis of CACNA1A gene revealed the presence of only the wild form of the gene for the codon E993V in both case and control groups.

CONCLUSION: We could not find any polymorphism of CACNA1A gene in the selected patients. This negative result presented here, implies that if the CACNA1A gene is involved in typical migraine, its contribution is very modest and therefore difficult to discern. Nevertheless, there are other genes that could be considered potential candidates for typical migraine susceptibility for which further research is needed.

Key words: Migraine, CACNA1A gene, Single Nucleotide Polymorphisms (SNPs)

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Role of Insulin Resistance in Essential Hypertension

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ABSTRACT

BACKGROUND: Hypertension is a major health problem with widespread and sometimes devastating consequences. To confirm the role of insulin resistance and hyperinsulinemia in the pathogenesis of essential hypertension, a lot of studies have been conducted. As no data in this regard is available from our part of world, so our study focuses to establish the role of insulin resistance and compensatory hyperinsulinemia in hypertensive Kashmiri population.

MATERIAL AND METHODS: The prospective study was done at a tertiary care hospital from December 2010 to October 2012. A total of 100 subjects aged >18 years were recruited wherein 50 were newly detected cases of Essential Hypertension and 50 age & gender matched normal healthy persons. Serum insulin concentration was measured using an insulin electrochemiluminescence immunoassay. Insulin resistance was determined by HOMA-IR (Homeostasis Model Assessment of Insulin Resistance). A comparison and contrast analysis of data was done through standard statistical methods.

RESULTS: Statistically the difference in mean fasting blood glucose between two study groups was significant ($p=0.0001$). The mean fasting serum insulin level was $15.32 \pm 13.76 \mu\text{U/ml}$ in cases and $8.01 \pm 4.08 \mu\text{U/ml}$ in controls (Reference range 2.6-24.9 $\mu\text{U/ml}$). The difference was statistically significant ($p=0.001$). The mean value of HOMA-IR in cases was 3.81 ± 3.42 as compared to controls with a mean HOMA-IR value of 1.76 ± 0.93 . This difference is statistically significant ($p=0.0001$).

CONCLUSION: Essential hypertension is significantly associated with higher mean fasting insulin levels and insulin resistance. Hyperinsulinemia has a possible role in pathophysiology of essential hypertension with Insulin resistance being the likely predominant mechanism.

Clinical Profile of Acute Flaccid Paralysis

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ABSTRACT

BACKGROUND: Acute flaccid paralysis (AFP) can be caused by a number of conditions. With poliomyelitis nearing its elimination in the world the other causes of acute flaccid paralysis in children and adults has gained significance. Guillain Barre Syndrome (GBS), also known as Acute Inflammatory Demyelinating Polyneuropathy, is the most common cause of acute flaccid paralysis.

OBJECTIVE: The objectives of this study are to describe the clinical characteristics, and differential diagnosis of causes of acute flaccid paralysis, including distribution by age, gender & time.

STUDY DESIGN: Descriptive/observational prospective study.

METHODS: Acute flaccid paralysis was diagnosed clinically through history and clinical examination. The underlying cause of acute flaccid paralysis was investigated by appropriate laboratory tests, such as serum electrolytes, cerebrospinal fluid analysis, electromyogram, nerve conduction study, neuroimaging and stool examination.

RESULTS: A total of 106 cases of AFP were reported from July 2010 to Sept. 2012. None of the cases were acute poliomyelitis or polio-compatible. The mean age in males was 40.2 years (SD 17.1) with a range of 13 years to 75 years and the mean age in females was 33.4 years (SD 14.1) with a range of 14 years to 65 years and 57.5% were males. Most cases, 39.6%, were admitted during spring season. The most common cause of AFP was Guillain-Barré syndrome in 58 (54.7%) patients. Other diagnoses included hypokalemic paralysis (14.2%), myasthenia gravis (7.5%), thiamine deficiency (7.5%), transverse myelitis (4.7%), acute motor axonal neuropathy (2.8%), cord compression (1.9%), acute disseminated encephalomyelitis (1.9%), meningoencephalitis (1.9%), diabetic polyneuropathy (1.9%), and chemotherapy induced neuropathy (0.9%).

CONCLUSION: The study confirms GBS as the most common cause of AFP across all age groups.

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Profile of Intracranial Meningiomas in Kashmir - Hospital Based

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ABSTRACT

BACKGROUND: Meningiomas are the second most common primary neoplasm of the central nervous system, arising from the arachnoid "cap" cells of the arachnoid villi in the meninges. These tumors are usually benign in nature; however, they can be malignant.

AIMS AND OBJECTIVES:

- 1) To study the hospital based incidence and prevalence of intracranial meningiomas in Kashmir.
- 2) To know about the age and sex variations of intracranial meningiomas as seen at SKIMS, Kashmir.
- 3) To define the most sensitive diagnostic tool in evaluation of intracranial meningiomas.

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- 4) To ascertain the histological types, postoperative survival/ mortality and outcome of intracranial meningioma patients in Kashmir.

MATERIALS AND METHODS: The study, "Profile of Intracranial Meningiomas in Kashmir" -Hospital based was conducted in the Department of Neurosurgery, SKIMS, Srinagar for a period of 10 years. All the patients of intracranial meningiomas admitted in Hospital during the period were studied. Retrospectively from July 2002 to July 2010 in MRD Section SKIMS Srinagar and prospectively from August 2010 to July 2012 on admission, preoperatively, intraoperatively and postoperatively in Hospital.

OBSERVATIONS AND RESULTS: This study comprised retrospectively of 138 patients from July 2002 to July 2010 and a prospectively of 45 patients from August 2010 to July 2012. The observations were, Intracranial meningiomas comprised of 15% of all brain tumors. Incidence and prevalence was 0.32/lac population per year and 2.61/lac population over a period of 10 years respectively.

Mean age of patients was 43.4 years. 61% patients were females. Headache was the most symptom. MRI brain was more sensitive than CT brain in suggesting the diagnosis. All patients were managed surgically. Skull bone involvement was rare.

CONCLUSION: Meningothelial meningioma was most common variant found in 60.3% patients. Survival in operated patients was 90.2% and mortality 9.8%.

Malignant & Metastatic Spinal Cord Compression- Analysis at SKIMS

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ABSTRACT

BACKGROUND: The need for carrying out this study was felt in view of it being likely that the incidence of MSCC will increase in the future with improving cancer treatments resulting in better survival and outcomes.

OBJECTIVES:

1. To know the hospital based incidence of Malignant and Metastatic Spinal Cord Compression in Kashmir.
2. To know the age group and sex most commonly involved by the disease in Kashmir.
3. To ascertain the sensitivity and specificity of the investigative tools like MRI/CT scan in relation to clinical findings.
4. To find the commonest organ with primary disease to metastasize to spine causing cord compression.
5. To know the commonest primary malignancy of spinal column to cause cord compression.

STUDY DESIGN: We undertook a retro-prospective hospital based study from July 2002 to June 2012.

METHODS: All cases of Malignant and Metastatic Spinal Cord Compression admitted in the Department of Neurosurgery were taken up for study in SKIMS, Srinagar. The patients were evaluated during hospitalization and were subjected to routine and specialized work up.

RESULTS: Of all the malignant lesions of the spine, metastatic tumours were nearly 3 times more common than primary malignant spinal lesions. By far, the commonest primary

malignant spinal lesion was multiple myeloma. The commonest malignancy to metastasize to the spine in our study was Non-Hodgkin's lymphoma. It was followed in turn by lung malignancy, breast malignancy and prostatic malignancy. Dorsal spinal column was the commonest region of spine to be involved by both primary malignant spinal lesions and metastatic spinal lesions. Cervical spine involvement was the next commonest.

CONCLUSIONS: Malignant & Metastatic Spinal Cord Compression is going to come up in a big way. We should be prepared to meet the challenge head on before it hits us hard.

Key words: Spinal cord, cord compression, metastasis

Analysis and Management of Brain Abscess: A Ten Year Hospital based study

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ABSTRACT

OBJECTIVE: To study clinical, microbiological and radiological profile of pyogenic brain abscess patients along with modes of treatment and their outcome.

METHODS: This retrospective as well as prospective study was conducted at Sher-i-Kashmir Institute of Medical Sciences (SKIMS) and included one hundred and fourteen patients with brain abscess who were admitted and evaluated in the Department of Neurosurgery over a period of ten years. This study had a retrospective component from Oct 2001 to May 2009 in which eighty six patients were included and a prospective component from June 2009 to Oct 2011 which included twenty eight patients. Patients were managed medically including intravenous antibiotics and surgical management including single burr hole and total resection with open craniotomy or craniectomy. To evaluate abscess size after aspiration, CT or MR imaging was performed [~ 24 hours after aspiration.] and as and when demanded by worsening of the clinical condition or no response to medical and surgical treatment.

RESULTS: It was observed that majority of the patients in our study were males numbering 83(72.8%) where as there were only 31 females (27.2%). It was observed that among the underlying factors chronic suppurative otitis media(CSOM) predominated with 57 patients ie (50%) and the commonest organism isolated was Streptococcus Pneumoniae (39.2%) followed by Streptococcus Milleri(23.5%). The initial neurological status is the most important predictor of outcome. It was observed that at the end of study 98 (86%) patients were surviving with focal deficit at 1 year in 3 (2.8%), 8 (7%) patients died and 8 (7%) were lost in follow up.

CONCLUSION: A combined medical and surgical management of brain abscess increase the overall favorable outcome with a cure rate > 90% and reduce the overall morbidity and mortality.

Key words: Brain, abscess, CT scan, MR imaging

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The Role of Urodynamic Study in the Management of Bladder Dysfunction in Myelo-radiculopathy - A Prospective Study

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ABSTRACT

AIMS AND OBJECTIVES: To diagnose and classify the type of bladder dysfunction associated with compressive myeloradiculopathy. To formulate a management protocol for bladder dysfunction and prognosticate the outcome of bladder function. To assess if any association exists between the level of spinal cord lesion and pattern of bladder recovery

STUDY DESIGN: All patients with compressive myelopathy (traumatic and non-traumatic) admitted in neurosurgery department.

SETTING: The prospective study was conducted in SKIMS in the Department of Neurosurgery and Urology.

METHODS: The study was carried out from November 2010 to Oct 2012 and included all subjects with myelopathy who underwent urodynamic study. Urodynamic study was done initially and was repeated after 6 months in the follow up. ASIA impairment scale was used to assess neurological status during admission as well as in the follow up. Bladder dysfunction was classified and management done accordingly based on urodynamic findings. The change in the bladder management at the follow up was noted. Neurological recovery and mode of bladder management were correlated during the follow up after a minimum of 6 months and if any significance exists between level of spinal cord lesion and pattern of bladder recovery was noted.

RESULTS: 63 subjects (42 males, 21 females), mean age of [44.6years $\pm$ 16.97] years (10–80) with the symptoms of bladder dysfunction due to compressive myelopathy underwent filling cystometry. The urodynamic study done initially and in the follow up showed significant improvement in total bladder capacity, voided volume and post void residual urine (p value < 0.01). But there was no significant improvement in maximum detrusor pressure and maximum vesical pressure (p value > 0.01). The patients with overactive detrusor with DSD were managed by CIC and anti-cholinergic medication. The patients with overactive detrusor without DSD were managed by timed voiding and anti-cholinergic medication. The patients with hypoactive detrusor with non-relaxing sphincter were managed by CIC and bladder muscle relaxants. The patients with hypoactive detrusor without non-relaxing sphincter were advised voluntary micturition, timed voiding and Credé's maneuver. No significant association was found between the level spinal cord lesion and pattern of bladder recovery (p value = 0.925). The level of spinal cord lesion and the type of bladder behavior according to urodynamic findings was observed to have a significant correlation (Using spearman correlation coefficient $p < 0.01$). Higher lesions (above D10) corresponded more with an overactive detrusor and somatic motor activity. Lower lesions more with areflexic detrusor. No significant association was found between neurological improvement and the pattern of bladder recovery (p value = 0.926). Significant neurological and functional recovery was observed in the follow-up with nearly 80% of the patients being ambulatory with or without orthoses and assistive devices. 85% of patients were doing voluntary micturition in the follow up. 20% of them were on anti muscarinic medication to control overactive detrusor and 15% patients were being managed by CIC in the follow up.

Conclusion: Urodynamic study was found to be important in the diagnosis and management of neurogenic bladder dysfunction, prevention of renal deterioration, assessment of postoperative effects after surgical decompression in patients with compressive myelopathy. Because it can determine the underlying neurologic abnormality, categorize the vesicourethral dysfunction, and provide a basis for appropriate therapy.

Neurodevelopmental Outcome in Perinatal Asphyxia

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ABSTRACT

BACKGROUND: WHO has defined perinatal asphyxia as a “failure to initiate and sustain breathing at birth”. It is an important cause of neonatal morbidity and mortality and cause of neurologic handicaps in children. As per NNPD data manifestation of HIE (Hypoxic Ischemic Encephalopathy) were seen in 1.5% live births and is responsible for 20% of neonatal deaths.

OBJECTIVES:

1. Incidence of HIE in hospital delivered patients.
2. Correlation between Apgar score and HIE stage with neurodevelopmental outcome at one year of age.

STUDY DESIGN: Prospective study from Oct. 2010 to Oct. 2012.

METHODOLOGY: 93 term infants admitted with diagnosis of HIE I, II, III were followed up for a period of 1 year. On follow up, thorough examination was done and development assessed by Trivendrum Developmental Screening Chart.

RESULTS:

1. Incidence of HIE at Trust Hospital = 2.2%
2. Apgar score at 1 minute had statistically no significant relation with neurodevelopmental outcome ($p=0.092$), while Apgar score at 5 minutes had statistically significant relation with neuro-developmental outcome ($p \leq 0.0001$).
3. 29(31.2%) patients had neurodevelopmental delay in the form of delayed attainment of milestones or abnormal neurological examination at the end of 1 year. All patients 8(100%) of Stage III HIE had neurodevelopmental delay while 21(52.5%) patients of Stage II and no patient of Stage I were affected during same period. There was statistically significant relation between Stage of HIE and neurodevelopmental outcome at 1 year, $p \leq 0.0001$.

CONCLUSION: Birth asphyxia still remains a major cause of morbidity and mortality during neonatal period in India. Overall mortality was 22.4%, which clearly indicates the need for early detection of maternal risk factors, better obstetric management and the prompt resuscitatory measures. Prolonged Apgar scores at 5, even at 10, 15, minutes duration and severe CNS damage (HIE III) were well recognized clinical markers of poor neurological outcome and higher mortality in perinatal asphyxia.

Key words: Perinatal asphyxia, Apgar score, HIE

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Evaluation of Jones Technique and Modified Jones Technique in the Treatment of High Undescended Testis

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ABSTRACT

BACKGROUND: Jones orchidopexy is extremely effective for treating patients with nonpalpable testis. It allows the wide mobilization and cord lengthening to allow the non-palpable intra-abdominal testis to be placed into the scrotum in a single stage.

OBJECTIVE:

1. To study the efficacy of Jones technique in the management of high impalpable testis.
2. To study the comparison between the Jones Technique and Modified Jones technique in the management of high impalpable testis.

STUDY DESIGN: Ours was a prospective randomised comparative evaluation of Jones Orchidopexy and Modified Jones Orchidopexy in the treatment of high undescended testis. A total of 50 patients upto the age of 6 years were included in our study and were randomly divided into two groups 25 in each.

METHODS: One group was subjected to Jones Orchidopexy and another group was subjected to Modified Jones orchidopexy. Jones technique of orchidopexy is an open surgical alternative for a high canalicular or intraabdominal testis. In Jones orchidopexy a transverse incision is given medial to anterior iliac spine. Principles of this procedure include preservation of spermatic vessels, high retroperitoneal mobilization of spermatic vessel and passage of the testis directly through the abdominal wall at the pubic. In Modified Jones orchidopexy, the surgical technique is same as in Jones Orchidopexy. However, patients were subjected to postoperative hormonal therapy (HCG) in the dose of 1000-2000 IU i/m weekly for a period of three weeks depending on age and weight of the child. Patients were followed-up in the postoperative clinic with special emphasis on testicular size, location, atrophy / other complication.

RESULTS : The result of the two procedures was compared in terms of post-operative localization and size / volume of the testis at 6 months. A success rate of 88% was seen in Modified Jones orchidopexy as compared to 64% in Jones orchidopexy.

CONCLUSION: Jones orchidopexy is a good surgical option for impalpable UDT and the addition of post op HCG therapy (Modified Jones orchidopexy) improves surgical outcome.

Key words: Jones orchidopexy, undescended testis, HCG

Clinical Profile and Outcome in Distal Gastrointestinal Obstruction in Neonates with Special Emphasis on Role of Colostomy and its Complications

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ABSTRACT

BACKGROUND: Despite improvements in care, neonatal intestinal obstruction continues to provide a diagnostic challenge for clinicians. This study presents a thorough analysis of neonatal distal intestinal obstruction and neonatal colostomies at SKIMS.

OBJECTIVES: Analysis of aetiology, presentation and outcome of neonatal distal intestinal obstruction and neonatal colostomies at SKIMS.

STUDY DESIGN: Prospective study Sep 2010 to Sep 2012.

MATERIAL AND METHODS: Data analysed for age, sex, gestational period, place of delivery, weight, clinical presentation, aetiology, associated anomalies, treatment, complications and outcome. Various colostomies were compared using SPSS software and Chi square test.

RESULTS : There were 170 neonates, male-female sex ratio being 2.21, mean age being 6.3 $\pm$ 1.3 days, 57.41 % presenting in the first week and weighing 2.1-4.1kgs. Majority presented with failure to pass meconium (77.64 %), abdominal distension (77.06%). ARM was the most common cause of obstruction (49.41 %), followed by Hirschsprung's disease (24.12 %) and intestinal atresia (12.35 %). Colostomy was the most common procedure performed (41.18 %), followed by anoplasty (26.47 %). The overall complication rate in our study was 17.95 %. The most common complication was surgical site infections (9.62 %) and urinary tract infections (8.33 %). An overall mortality of 14.10 % was seen. A total of 70 colostomies were performed with a male-female ratio of 1.59, mostly of for Hirschsprung's disease (58.57 %), mostly loop colostomies (37). The overall complication rate was 21.43 % after colostomy formation and 14.06 % after colostomy closure.

CONCLUSION: Rapid diagnosis, pre operative stabilization and early surgical intervention are pivotal for the successful outcome.

Key words : Neonatal intestinal obstruction, distal, outcome.

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Clinicopathological Study of Ovarian Tumours in Resected Specimens of Ovary in Tertiary Care Centre

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ABSTRACT

BACKGROUND: Ovary is a frequent site of primary and metastatic tumours. The diversity of neoplasms makes it important to classify the tumours accurately by histopathological features by universally accepted classification.

OBJECTIVE: To study the clinical presentation and pathological patterns of ovarian

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tumours.

STUDY DESIGN: This was a prospective observational study conducted over a period of 2 years (June-2010 to May-2012).

METHOD: The study was conducted at Sher-i-Kashmir Institute of Medical Sciences (SKIMS), Srinagar, in the Department of Pathology. The specimens of ovarian lesions were subjected to Histopathological examination.

RESULTS: During this time period, 154 ovarian lesions were identified and histopathologically analysed. Of these 119 cases were classified as neoplastic and 35 as non neoplastic lesions. Of 119 neoplastic lesions 67 (56.3%) were benign, 2 (1.7%) were borderline and 50 (42%) were malignant. Tumours were classified as per WHO classification 2003. The surface epithelial group formed the largest group constituting 74.8% of all the ovarian neoplasms, followed by germ cell tumours (16%), metastatic tumours (5.9%), sex cord stromal tumours (1.7%) and miscellaneous (0.84%). Among the individual neoplasms, serous tumours were the commonest (59.7%), followed by teratomas (13.4%), mucinous tumours (12.6%), metastatic tumours (5.9%) and dysgerminomas (1.7%). Ovarian neoplasms were found in all age groups. Majority of the tumours were seen in the age group of 31-50 years. Abdominal pain/discomfort was the most common presenting symptom seen in 64.7% of patients. CA 125 levels showed sensitivity of 90.9% and specificity of 83.7% in predicting the malignant nature of ovarian tumours.

CONCLUSIONS: These observations and results proved to be valuable base line information regarding patterns of ovarian tumours in our population.

Key words: Ovarian tumours, CA 125 levels, Germ cell tumour, Malignant, Metastatic tumours, Surface epithelial tumour

Role of Bronchial Biopsy and Bronchoalveolar Lavage(BAL) in Diagnosing Lung Malignancies

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ABSTRACT

BACKGROUND: Lung cancer is currently the most frequently diagnosed major cancer in the world and the most common cause of cancer mortality worldwide. It comprises about 17% of the total new cancer cases in males and 23% of the total cancer deaths.

OBJECTIVE: The objectives of this study were to compare bronchoalveolar lavage (BAL) cytology and bronchial biopsy in the diagnosis of carcinoma lung.

STUDY DESIGN: Comparative study

METHODS: The study was done in the Department of Pathology, Sher-i-Kashmir Institute of Medical Science (SKIMS), Srinagar, Kashmir; All patients clinically suspected of lung malignancies who presented between April 2004 and May 2012 and underwent both bronchial biopsy and BAL were included in the study.

RESULTS: Out of a total of 902 clinically suspected cases of lung cancer tumor was found in 760 cases (760/902) by biopsy and in 301 cases by BAL (301/902). The total number of false positive cases were 31 and false negative cases were 490. Sensitivity of BAL was found to be 35.5% and specificity 78.16%. In the present study yield of diagnosis was highest with the

bronchoscopic biopsies and in maximum number of cases, specific histologic diagnosis was made by biopsies only. Though BAL was inferior to bronchial biopsy in diagnosing lung malignancies but it was effective for peripheral lung malignancies and when the patient was at risk of hemorrhage.

Key words: Biopsy, bronchoalveolar lavage, lung carcinoma

Histopathological Study of Renal Tumors in Resected Nephrectomy Specimens

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ABSTRACT

BACKGROUND: Renal epithelial neoplasms are a heterogenous group comprised of subtypes that have distinct gross, ultrastructural and immunohistochemical features.

OBJECTIVE: To study the histopathological spectrum of renal tumors in resected nephrectomy specimens.

STUDY DESIGN: Descriptive study

METHODS: Renal tumors in resected nephrectomy specimens over a period of 10 years from June 2002 to May 2012 were studied.. The nephrectomy specimens for renal tumors received by the department of pathology were properly labeled, numbered and then subjected to gross and detailed histopathological examination

RESULTS & CONCLUSIONS: Of the total of 184 renal tumors studied 164 (89.13%) were found to be malignant and 20 (10.86%) were benign tumors. Thus majority of the renal tumors, comprised of malignant lesions.. Of the total 184 cases recorded, RCC-clear cell type was the most common tumor with 112 cases (60.8%) followed by Wilms tumor 27 cases (14.7%), RCC-papillary type 15 cases (8.2%), Angiomyolipoma 11 cases (5.9%), Congenital mesoblastic nephroma 5 cases (2.7%), Renal sarcoma 4 cases (2.2%). Squamous cell carcinoma, RCC-chromophobe type, Oncocytoma, RCC-unclassified constituted 2 cases each (1.1%). 1 case each (0.5%) of Leiomyoma and Juxtaglomerular cell tumor was also seen in our study. Wilms tumor was the most common childhood tumor and most common tumor in adults was Renal cell carcinoma

Key words: Nephrectomy, renal tumors, subtypes.

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Evaluation of Bone Marrow Aspiration and Biopsy in Non-hematological Disorders

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ABSTRACT

BACKGROUND: In the present day, screening of the bone marrow is considered one of the most valuable diagnostic tools to evaluate hematologic disorders, diagnosis, staging and therapeutic monitoring. The application of bone marrow analysis has grown to incorporate

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other non-hematologic conditions as well. Bone marrow biopsy has proven to be very effective in detecting non-haematological malignancies

OBJECTIVE: To evaluate the frequency of involvement of bone marrow with non-hematologic disorders and to have a comparative evaluation of diagnostic yield in bone marrow aspiration and biopsy in patients with non-hematological disorders.

STUDY DESIGN: Comparative study.

METHODS: Study extended from June 2002 to June 2012. A total of 4817 bone marrow aspirate and trephine were included in the study. Only the non-hematological disorders were analysed.

RESULT: 147 patients (3%) were diagnosed to have non haematological diseases. Age range was 5 month to 80 years of age. Male : female ratio was 1.9 :1. The most common non-hematologic disorder diagnosed was metastasis (81%) followed by granulomatous lesions (10.9%). Storage and parasitic lesions accounted for 5.4% and 2.7% respectively.

CONCLUSION: The bone marrow examination is a useful tool in diagnosing metastatic tumors, granulomatous diseases, storage disorders and many other non haematological diseases and it may provide an insight in to the diagnosis of a previously undiagnosed patient. Bone marrow aspiration and biopsy are complimentary to each other because either might show diagnostic features when other procedure had failed to do so.

Key words: Bone marrow, granulomatous, metastasis, parasitic, storage

Estrogen and Progesterone Receptor Status of Malignant Breast Tumors at A Tertiary Care Centre

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Saleem Hussain
G. N. Sofi

ABSTRACT

BACKGROUND: Breast cancer is third most common cause of cancer deaths.

OBJECTIVE: This study was conducted with the objective of assessing hormone receptor positivity in breast cancer and its correlation with age at diagnosis, tumor size, histological grade and lymph node metastasis.

STUDY DESIGN: Two year prospective descriptive study from July 2010 to July 2012.

MATERIALS AND METHODS: 132 cases of newly diagnosed invasive breast cancer diagnosed at department of pathology, SKIMS were included.

RESULTS: Mean age of the patients was 48.2 years. 59.1% cases were ≤ 50 years of age. Mean duration of symptoms was 6.32 months. Most of the lesions (65.1%) were 2 to 5cm and 16.7% were ≥ 5.0 cm in greatest dimension. The predominant (80.3%) morphology was IDC- NOS. The majority of the cases presented as grade II (52.1%) lesions and lymph node involvement was present in (65.2%). ER and PR were positive in 66.3% and 63.4% cases respectively. ER/PR positivity increased with rising age. High grade lesions and larger size tumors were more likely to be ER and PR negative. No correlation was found between ER/PR status and lymph node metastasis.

CONCLUSIONS: ER and PR expression in breast cancers in the current study was found

to be higher than studies done in India/Asia but lower than studies done in west even on Indian/Asian immigrants there. Although receptor expression is lower in Indians/Asians compared to Caucasians but markedly lower receptor expression in Indian/Asian studies is more likely due to preanalytic variables, thresholds for positivity, and interpretation criteria. American Society of Clinical Oncology/College of American Pathologists Guideline Recommendations for Immunohistochemical Testing of Estrogen and Progesterone Receptors in Breast Cancer are strongly advocated for standardization of receptor evaluation and for management of breast cancer patients to provide best therapeutic options.

Key words: Allred score, breast cancer, ER, PR

A Comparative Study of Sexual Dysfunction Associated with Typical and Atypical Antipsychotics in Outdoor Patients

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ABSTRACT

BACKGROUND: Antipsychotics are a class of drugs used to treat a variety of mental health problems. Antipsychotic can cause various side effects like sexual dysfunction which can result from the use of antipsychotics over prolonged time that causes a decline in their quality of life and medication acceptance.

AIMS AND OBJECTIVES:

1. To assess the frequency of sexual dysfunction in a sample of outpatients with schizophrenia and schizoaffective disorders under antipsychotic therapy.
2. To investigate the effect of different antipsychotics on sexual function.
3. An attempt to identify the least sexually adverse antipsychotic drug amongst the groups.

MATERIAL AND METHODS: The total sample size was 120 patients divided into 6 groups of 20 patients each. Sexual dysfunction was assessed in outpatients on antipsychotics using Arizona sexual experience scale (ASEX) and using prolactin as a biochemical marker. To analyze the sexual dysfunction, the mean scores on all the domains of sexual functional questionnaire (SFQ) were compared across the study groups by using chi-square test for proportion. Relation between ASEX score and prolactin were assessed by Spearman's rank order partial correlation and prolactin levels before and after drug intake by students t-test.

RESULTS: Among drugs, correlation between ASEX score and prolactin was highest for Trifluoperazine group (0.726) and lowest for quetiapine group (0.123). Among domains desire and erection were most commonly impaired. Desire was most impaired in risperidone group (60%) while erectile dysfunction was mostly impaired in olanzapine group (75%). However statistically, the parameter most effected was erectile domain ($p=0.005$).

CONCLUSION: Trifluoperazine, Haloperidol showed a higher risk of sexual dysfunction than risperidone. Quetiapine showed a lowest risk of sexual dysfunction during treatment period.

Key words: Schizophrenia, sexual dysfunction, antipsychotics, ASEX, erectile dysfunction.

Diabetic Foot Ulcer Vacuum Assisted Closure(VAC) versus Conventional Dressings

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ABSTRACT

BACKGROUND: Foot disorders such as ulceration, infection and gangrene are the most common, complex and costly sequelae of diabetes mellitus (DM). Diabetic patients have up to a 25% lifetime risk of developing a foot ulcer. The optimal topical therapy for diabetic foot ulcer (DFU) remains ill-defined. Saline-moistened gauze has been the standard method, however, it has been difficult to continuously maintain a moist wound environment with this dressing. This has led to the development of various therapies which are associated with significant expense and are being utilized in some situations without sufficient scientific evidence demonstrating their efficacy. Therefore, the search for an efficacious, convenient and cost-effective therapy continues. Negative pressure wound therapy is a newer noninvasive adjunctive therapy system that uses controlled negative pressure using Vacuum-Assisted Closure device (VAC) to help promote wound healing.

OBJECTIVE: To compare the effectiveness of vacuum assisted closure (VAC) with conventional dressings in the healing of diabetic foot ulcer, in terms of healing rate, safety and patient satisfaction.

STUDY DESIGN AND METHOD: Our study was a comparative one conducted in the Department of Plastic and Reconstructive Surgery from May 2010 to November 2012. 56 patients were included in the study and divided into two groups A and B (28 in each). Group A was subjected to VAC and Group B was subjected to saline-moistened gauze dressing, for a period of 8 weeks.

RESULTS: Granulation tissue appeared earlier in group A, complete granulation was achieved in higher proportion of patients and earlier in group A, wound discharge disappeared earlier in group A, failure rate was more in group B, time to wound closure was less in group A and patient satisfaction was more in group A.

CONCLUSION: VAC is a better treatment option for DFU than Normal saline Gauze dressing.

Key words: Diabetes Mellitus (DM), Diabetic Foot Ulcer (DFU), Vacuum Assisted Closure (VAC)

Burns in Epileptics with Special Reference to Kangri Burns

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ABSTRACT

BACKGROUND: During seizure attacks patients may suffer severe trauma such as deep burns, limb fractures, head and neck injuries. Most burns in epileptic patients occur during major seizures. Such burns are always full-thickness. Because of extreme cold conditions, people in Kashmir valley especially in rural areas use Kangri to keep themselves warm. This

Kangri which is already notorious for causing Kangri cancer has an additional disadvantage in causing deep burns mainly to the hands in epileptic patients.

OBJECTIVE:

1. To analyze the epidemiological data of burnt hospitalized epileptic patients.
2. To determine the frequency, causes and consequences of burns in patients with epilepsy stressing on Kangri burns in epileptics.

STUDY DESIGN AND METHOD: It was both a retrospective and prospective study. All patients of epileptic burns admitted in the hospital from Jan 2005 to Nov 2012 were included. In the retrospective group the case records of epileptic burnt patients were carefully analyzed. All new patients were evaluated in detail.

RESULTS: Out of 73 patients, 32(43%) were in the age group of 16-30 years. Mean age was 26 ± 17 years. Majority of the patients 46(63%) were females. 61(84%) patients belonged to rural areas. Kangri was the most common etiological agent of epileptic burns in 46(63%) patients. 37(52%) had sustained full thickness burns and total body surface area(TBSA) involved was up to 5% only. Commonest site of burns was hands/upper limbs 40 (56%). Amputation of the gangrenous digits/hands was the commonest surgery performed in 22(25%) patients. Complication in burnt epileptic patients was included of a body part 22(41%) followed by contracture (36%), wound infection (21%) and loss of vision in 1(2%) patients.

CONCLUSION: Epileptic patients should avoid high risk situations like working alone in kitchen. Kangri should be replaced by alternative simple and safe warming devices.

Key words: Total body surface area(TBSA).

Clinical Profile of Brain Metastasis in Patients of Systemic Cancer

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A B S T R A C T

BACKGROUND: Brain metastases are a common cause of morbidity and mortality in cancer patients. Proper patient selection can help identify patients likely to benefit from aggressive treatment of their brain metastases.

OBJECTIVES: To find out the relative frequency of different malignancies presenting with brain metastasis in their natural history and to identify various prognostic factors that could that could affect the outcome in patients of brain metastasis.

STUDY DESIGN: It was an observational type of retrospective study.

METHODS: The study included 95 patients registered in RCC SKIMS from January 2005 to June 2012 with a known primary malignancy and a CT/MRI based diagnosis of brain metastasis, those with unknown primary were excluded. Information on potential prognostic factors (age, sex, residence, performance status, number and distribution of brain metastases, symptoms at presentation, site of primary tumor, histology, interval between primary tumor and brain metastases, treatment for primary, presence of extracranial metastasis, and treatment modality for brain metastasis) was collected and survival after the diagnosis of brain metastases were documented.

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RESULTS: From total of 95 patients most common was non small cell lung(34.7%), followed by small cell lung(16.8%), breast (15.8%), GIT(14.8%), malignant melanoma(7.4%),ovary (3.2%),renal(2.1%) and others(5.3%). 94.7% patients were symptomatic and headache and seizures were commonest symptoms .Median interval from diagnosis of primary to development of brain metastasis was 11 months. Cerebellar involvement was seen in 85.3% of patients, followed by cerebellum in11.6% and brain stem in 3.2% of patients. Adverse prognostic factors included; multiple brain metastasis ($P < 0.021$), poor performance status ($P < 0.001$), extracraial metastasis ($P < 0.042$), and no radiation to brain lesions. Median survival time after diagnosis of intracerebral metastasis was 2.2 months(mean 3.3) for the entire series. Median survival was more in patients who received radiotherapy to brain(2.8 months) compared to those who did not(1.8 months) receive.

CONCLUSION: Brain metastasis a very deadly disease seen mainly in elderly people with no sex discrimination. Although the therapeutic goal in intracerebral metastases is generally palliative, it appears that there are categories of cases that may benefit from more aggressive treatment.

Key words: Brain metastasis, Prognostic factors, Survival.

Comparative Evaluation of Gemcitabine Concurrent with External Beam Radiotherapy against Cisplatin Concurrent with External Beam Radiotherapy in Locally Advanced Squamous Cell Carcinoma Esophagus

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A B S T R A C T

BACKGROUND: Jammu and Kashmir has highest incidence of carcinoma esophagus in India with extremely bad prognosis. Multimodality treatment has promising results.

OBJECTIVES:

1. To evaluate efficacy of gemcitabine concurrent with radiation in locally advanced squamous cell carcinoma oesophagus and compare the same with cisplatin concurrent with radiation in locally advanced squamous cell carcinoma esophagus.
2. To investigate the toxicity of gemcitabine concurrent with radiation and compare the same with cisplatin concurrent with radiation in locally advanced squamous cell carcinoma esophagus.

Study design: Comparative prospective simple randomized study.

METHODS: Patients were randomized blindly into two groups-Group 1 and 2

Group 1: This group received Cisplatin $40\text{mg}/\text{m}^2$ i.v. over three hours on day 1 every Monday concurrent with external beam radiotherapy to a dose of initial 40Gys by two parallel opposite portals in 20 fractions with conventional fractionation. This was followed by a supplementary of 25Gys in conventional fractionation by 3 field technique; after localizing the tumor on a CT simulator.

Group 2: This group received Gemcitabine $200\text{mg}/\text{m}^2$ i.v. over 30 minutes once a week every Monday concurrent with external beam radiotherapy to a dose of initial

40Gys by two parallel opposite portals in 20 fractions with conventional fractionation. This was followed by a supplementary of 25Gys in conventional fractionation by 3 field technique; after localizing the tumor on a CT simulator.

RESULTS: Overall survival and disease free survival was better in Gemcitabine Arm as compared to Cisplatin Arm. Recurrence was less in Gemcitabine Arm.

CONCLUSION: Gemcitabine is a novel agent in the treatment of squamous cell carcinoma esophagus with encouraging preliminary efficacy data.

A Randomized, Prospective Comparative Study of Neo-adjuvant Chemoradiotherapy, between Capecitabine and 5-fluoro- Uracil with Leucovorine, in Patients with Locally Advanced Rectal Cancer

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ABSTRACT

BACKGROUND: Fluorouracil based chemoradiation is regarded as a standard perioperative treatment in locally advanced rectal cancer. Based on phase II data, the pattern of practice has shifted to capecitabine. We investigated the efficacy and safety of substituting fluorouracil with the oral prodrug capecitabine.

MATERIAL AND METHODS: Our study enrolled patients with locally advanced rectal cancer, Stages II or III (T3/4 or N+) disease. The study was designed as a two-arm,prospective,randomized trial. Patients in 5FU group received 2 cycles of bolus 5FU 500mg/m² concurrent with radiation and patients in capecitabine group received 1650mg/m² oral capecitabine in divided doses on all radiotherapy days. Radiation was delivered 45Gy/25#/5days a week for 5 weeks. Patients were reassessed after neoadjuvant therapy and subjected to surgery within 4-6 weeks after completion.

OBJECTIVES: Primary endpoints were the pathologic PCR and T and N stage down-staging, the rate of sphincter preservation, the overall survival rate and toxicity profile.

RESULTS: 60 patients were enrolled in our study 30 in each arm. Out of 30 patients 24(80%) underwent curative resection in arm 1 compared to 23(76.7%)($p=0.756$) in arm 2. p-CR was seen in 2(6.67%) in arm1 compared 3 (10%) in arm 2($p=0.500$).Sphincter saving with respect to curative resection was seen in 62.5%vs 60.8% respectively ($p=0.909$).T Down-staging by at least 1 T-stage level, was seen in 60% cases in arm 1 as well as arm 2($p=1.00$).N-Down-staging by at least 1 N-stage level was seen in 66.7% cases in arm 1 and 63.3%in arm 2($p=0.926$).At the end of the study 93.3% patients were alive in arm1 and 96.7% were alive in arm2.Median overall survival was 49.8 weeks in arm 1 and 59.6 in arm2(p -value 0.192).Diarrhoea($p=0.474$),hand and foot disease ($p=0.317$)and proctitis ($p=0.278$)were more common in capecitabine group while haematological toxicities(leucopenia: $p=0.006$; anemia: $p=0.003$) and mucositis ($p=0.006$) were more common in 5 Fluoro-uracil group.

CONCLUSION:Capecitabine is equivalent to 5Fluorouracil in neoadjuvant chemoradiation in locally advanced rectal cancer in terms of sphincter saving procedures, pathological complete response,tumour down staging, and increasing the resectability in fixed tumours.

Key words:capecitabine, neoadjuvant, rectal cancer

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Association of EBV with mucosal squamous cell cancers of Head and Neck

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ABSTRACT

BACKGROUND: Epstein-Barr virus (EBV) is a human herpes virus which causes certain type of lymphoma and some epithelial neoplasm such as undifferentiated nasopharyngeal carcinoma. However, the role of EBV as a causative factor in head and neck tumor is not fully elucidated.

OBJECTIVE: The aim of this study was to analyze the relationship between the presence of EBV in head and neck squamous cell carcinoma and clinicopathologic characteristics.

STUDY DESIGN: 53 cases of biopsy proven head and neck squamous cell carcinoma were recruited in this study.

METHODS: Formalin-fixed, paraffin-embedded blocks (biopsy samples) were analyzed for the presence of EBV by PCR technique.

RESULTS : EBV was detected in none(0%) of the 53 patients with head and neck squamous cell carcinoma.

CONCLUSION: These results suggest that EBV may possibly not play an etiologic role in the pathogenesis of head and neck squamous cell carcinoma.

Key words: Epstein Barr Virus, Head and Neck Cancer, Squamous Cell Carcinoma

Isolated Left Sided Hepatolithiasis: Preoperative Evaluation of Left Hepatic Duct Anatomy and Management by Appropriate Left Hepatic Resection

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ABSTRACT

BACKGROUND: Isolated left-sided hepatolithiasis is common in the Asia Pacific region.

OBJECTIVE: To describe various clinical presentations, diagnosis and treatment of patients with isolated left-sided hepatolithiasis.

STUDY DESIGN: Retrospective Descriptive Analysis

METHOD: Eighty patients with isolated left-sided hepatolithiasis who underwent isolated left-sided hepatic resection between May 2003 and December 2011 were included in this study. The clinical profile, left hepatic duct anatomy, appropriate left hepatic resection, postoperative complications and final outcome were examined.

RESULTS: Analysis of magnetic resonance cholangiopancreatography (MRCP) and endoscopic retrograde cholangiopancreatography (ERCP) findings revealed three types of left hepatic ductal variations (type 1 in 90.0%, type 2 in 6.25% and type 3 in 3.75% patients). In

70% subjects stones were located in segment 2 & 3, in 28.75% in segments 2-4 and in 1.25% patients in segments 1-4 of the affected liver. Left hepatic duct (LHD) strictures were observed in 60 (75%) patients; out of these LHD strictures were classified only in 55 patients (type 1 in 89.1% and type 2 in 10.9%). Of the 80 patients, 57 (71.25%) underwent a left lateral sectionectomy, 22 (27.5%) a left hemi-hepatectomy and 1 (1.25%) patients were treated with a left hemi-hepatectomy combined with a caudate lobe resection. No statistical significant difference in post-operative complications was observed between the left lateral sectionectomy group (wound infection (8.7%), pulmonary atelectasis (3.5%), pulmonary effusion (1.75%), bile leak (1.75%), pneumonia (1.75%), intraabdominal collection (1.75%), pancreatitis (1.75%)) and left hemi-hepatectomy group (wound infection (8.7%), pulmonary atelectasis (4.34%), pulmonary effusion (4.34%), bile leak (8.7%), intraabdominal collection seen in 4.34%).

During mean follow-up period of 45.2 months (range 3-102 months) 62 patients remained asymptomatic; two (2.8%) patients developed residual stones and three (4.2%) patients developed recurrent stones.

CONCLUSIONS: It is concluded that hepatic resection is an appropriate treatment modality in localized left-sided hepatolithiasis.

Key words: Hepatolithiasis, Left lateral sectionectomy, Left hemi-hepatectomy.

The Role Of Tgfβ1 in Renal Cell Carcinoma

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ABSTRACT

BACKGROUND: Up to now, clinical tumor-markers for renal cell carcinoma (RCC) have been lacking. Increased plasma levels of tgfβ1 were described as a tumor-marker and prognostic factor in RCC.

OBJECTIVE: The aim of this study was to test the clinical suitability of plasma tgfβ1 as a tumor-marker for RCC.

MATERIALS AND METHODS: The level of transforming growth factor beta1 tgfβ1 was measured in plasma samples by ELISA. These samples were collected from patients with RCC before they underwent radical nephrectomy, on postop day 3, on follow up of 2-6 months and from healthy controls.

RESULTS: In all cases of RCC the levels of tgfβ1 in plasma were much higher 27930 ng/l (18,380–46,530 ng/l) for tgfβ1 than the age and sex matched control group (n=80) who had mean plasma concentration of 2584 ng/l (1,853–3,315 ng/l). The post nephrectomy group had mean concentrations of 26892 ng/l (12,425–46,380 ng/l) for tgfβ1. Mean plasma levels during follow-up 8878.52 ng/l (4,526–15,615 ng/l) without evidence of disease (2–6 months) showed decrease but did not normalise and were still elevated. Patients with metastatic disease showed mean plasma concentrations of 42828.40 ng/l for tgfβ1.

CONCLUSION: We conclude that increased levels of tgfβ1 are common in the plasma of RCC patients. The present study indicates that tgfβ1 levels in RCC patients irrespective of pathological stage of tumor & or metastasis remain quite high even after nephrectomy and even upto six months of follow up.

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Thus $\text{tgfb}\beta 1$ levels alone cannot be used as single prognostic marker to monitor the progression of disease or treatment in RCC .

Key words: $\text{tgfb}\beta 1$ -transforming Growth Factor $\beta 1$, RCC- renal cell carcinoma, ELISA- Enzyme-linked immunosorbent assay

Role of Magnetic Resonance Urography (MRU) as a single imaging modality in evaluation of Pelvi-ureteric junction obstruction

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ABSTRACT

OBJECTIVES: Role of MRU as a single imaging modality in evaluation of Pelvi-ureteric junction obstruction

MATERIAL AND METHODS: 40 patients of hydronephrosis suspected to have PUJ obstruction were enrolled for the study from May 2010 to Nov. 2012. All patients underwent USG, intravenous Urography (IVU), Glomerular filtration rate (GFR) Calculation by Cockcroft-Gault formula and renal DTPA Scan for determining split renal function and GFR calculation of each kidney. MRU was done to determine the anatomical details and function of each renal unit.

MRU was performed on a 1.5 tesla unit (Magnetom Avento; Siemens, Erlangen, Germany). Static T2-weighted Magnetic Resonance Urography (MRU) was performed by using a standard fast spin echo technique. Dynamic study was performed after injecting intravenous diuretic followed by Gadolinium contrast media.

Morphological results of MRU were compared with USG, IVU, manual GFR and Renal DTPA scan. The anatomical findings were compared with operative findings.

Statistical analysis was performed and data expressed as mean $\pm$ SD. MRU GFR, DTPA GFR and manual GFR were compared by Wilcoxon Method.

RESULTS: MRU showed morphology in 39 out of 40 patients (97.5%) and a close correlation was observed between DTPA-GFR, and MRU-GFR ($p < 0.0001$).

CONCLUSION: MRU can provide complete diagnostic evaluation of entire urinary tract in a single session and has potential to replace multiple investigations.

Key words: Pelvi-ureteric junction obstruction (PUJO), MRU (Magnetic Resonance Urography), IVU (Intravenous Urography)

N Terminal Domain of Androgen Receptor Contains a Novel CRM1-Dependent Nuclear Export Signal

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ABSTRACT

BACKGROUND: Androgen receptor (AR) intracellular trafficking is a key step in androgen action.

SUMMARY: Androgen Receptor (AR) is a member of the steroid receptor superfamily that regulates gene expression in a ligand-dependent manner. Nucleocytoplasmic trafficking of AR represents an essential step in androgen action. AR contains multiple signals regulating nucleocytoplasmic trafficking, including nuclear localization signals, N11 in the DNA-binding domain and hinge region (DBDH), N12, which is induced by androgens in the ligand-binding domain (LBD) and a CRM1-independent nuclear export signal (NESAR) in unliganded-LBD. However, it is not clear if the amino-terminal domain (NTD) or AR can modulate nuclear import or export. To determine whether NTD contains potential nuclear export and/or import signals, we have generated various deletion mutants of NTD, tagged them with green fluorescent protein (GFP), and then tested for their intracellular localization in both AR negative and AR positive cell lines. The subcellular localization analysis of various mutants suggested a role of NTD in regulating AR subcellular localization and revealed the existence of a nuclear export signal in the N-terminal portion of NTD, AR (1-293). Further deletion mutagenesis defined the novel nuclear export signal in the region of a.a. 0-250 of NTD of AR, which we term NES2AR. Leptomycin B inhibited the activity of NES2AR, indicating that NES2AR is mediated through exportin 1. The above observations argue for an important role of NTD in regulating AR nuclear cytoplasmic trafficking as well as provide a strong foundation to further investigate interactions among different signals in regulating AR nucleocytoplasmic trafficking, which may lead to new approaches to inhibit AR nuclear localization in prostate cancer.

SIGNIFICANCE: Identification of NES2AR provides new insights into the mechanisms regulating AR intracellular trafficking in prostate cancer cells.

RESULTS: N-terminal (NTD) of AR contains a region a.a. 50-250, capable of directing cytoplasmic localization.

CONCLUSION: There is a novel nuclear export signal, NES2AR, within NTD of AR that is likely an important small molecule target in prostate cancer.

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