Abstract : Clinical Sciences

Autologous Serum Therapy in Chronic Spontaneous Urticaria

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INTRODUCTION

Chronic spontaneous urticaria (CSU) is a common and distressing dermatosis. The purpose of this study was to evaluate the efficacy of autologous serum therapy (AST) in CSU patients in a prospective long term follow up study.

METHODS

A total of 80 consecutive patients of CSU were selected. Autologous Serum Skin Test (ASST) was performed to divide patients into ASST positive and ASST negative groups. 0.05 ml/kg autologous serum was injected intramuscularly every week for 9 consecutive weeks in both the groups. Objective assessment by urticaria severity score (USS) and subjective assessment by chronic urticaria quality of life questionnaire (CU-QoL) was performed at each visit and after 3rd and 6th month of completing AST.

RESULTS

Out of the total patients, 70 (87.5%) completed 9 weeks of AST. Significant improvement of 61.87% in urticaria severity score was noted in ASST positive group at the end of 9 weeks of AST as compared to 53.77% in ASST negative group. Considerable improvement in CU-QoL score was reported by patients in both groups. Modest improvement in subjective and objective scores was noted at 3rd and 6th month follow up.

CONCLUSION

Significant reduction in disease severity can be achieved with autologous serum therapy at a low cost as compared to biologics.

Trichoscopic Findings in Alopecia Areata and its Clinical Correlation with Disease Activity and Severity

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INTRODUCTION

Alopecia areata (AA) is a common chronic inflammatory disease characterized by nonscarring hair loss on the scalp or any hair-bearing area of the body. The aim of this study was to evaluate various trichoscopic patterns in AA and correlate these patterns with the disease activity and severity.

METHODS

The study was conducted on 260 cases of alopecia areata. Trichoscopy was performed on AA patients using Dermlite DL3 dermatoscope. The trichoscopic patterns recorded were analyzed to identify any correlation with the disease activity and severity.

RESULTS

Most common type of alopecia areata was localized patch type. On trichoscopy, the most common finding was yellow dots (YDs) seen in 189 (72.71%) cases followed by short vellus hair seen in 168 (64.61%) cases. One new finding was broom like hairs (BLHs) seen in 88 (33.84%) cases. Statistically significant positive correlation was observed between YDs, black dots (BDs), broken hairs (BHs), tapering hairs (THs), CD, BLH, and disease activity. Statistically significant positive correlation was observed between TH, BH, BLH, and disease severity. Short vellus hairs (SVH) were correlated negatively with the disease activity and severity.

CONCLUSION

This study has proved the utility of trichoscopy in assessment of various patterns, severity and activity of alopecia areata.

Role of Gamma Glutamyl Transferase as a Marker for the Diagnosis of Metabolic Syndrome

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INTRODUCTION

Raised serum gamma glutamyl transferase (GGT) levels are associated with insulin resistance, fatty liver, metabolic syndrome, and cardiovascular risk. The present study was done to find out the correlation of serum GGT with metabolic syndrome and its relationship with its individual components.

METHODS

A case control study on 100 cases of metabolic syndrome and an equal number of age and sex matched controls between 30 to 70 years was conducted. Serum GGT levels were estimated and other components of metabolic syndrome were assessed.

RESULTS

The mean age of cases was 50.76 ± 10.25 years and of controls 50.78 ± 10.52 years. The mean serum GGT was significantly higher in patients of metabolic syndrome with diabetes and high waist circumference compared to controls. The mean serum GGT was insignificantly higher in patients with high triglycerides, low HDL, and hypertension. The overall sensitivity and specificity of GGT to diagnose patients with metabolic syndrome was 92% and 88% respectively.

CONCLUSION

Serum GGT may be a simple and cost effective marker for early diagnosis of metabolic syndrome and associated cardiovascular risks especially in diabetics and female patients with high waist circumference.

Febrile Thrombocytopenia in Western Rajasthan: An In-hospital Study

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INTRODUCTION

Thrombocytopenia, defined as subnormal number of platelets in blood is a manifestation associated with fever. In this study, an attempt was made to evaluate the aetiological factors, clinical and laboratory profile, and management of such patients.

METHODS

This cross sectional hospital based study enrolled 103 patients of pyrexia with thrombocytopenia. Patients with hematological disorders, drug induced and other causes of thrombocytopenia were excluded. CBC, chest X-ray, renal function test, liver function test, test for malaria parasite, Widal, IgM dengue, IgM leptospira, USG abdomen, and bone marrow examination were done.

RESULTS

A definitive diagnosis was made in 88.35% of the cases. Dengue was the most common etiology, followed by malaria and septicemia. Rare causes included enteric fever and chikungunia. Bleeding manifestations were most common (81.5%) in patients with platelet counts <20,000/μL. RFT and LFT were deranged in 28% and 83.5% of the patients respectively; most commonly with sepsis. 25% of cases required platelet transfusion out of them 12 were dengue followed by 11 malaria and one sepsis. Mortality was around 3.88%, most commonly with sepsis followed by malaria and dengue.

CONCLUSION

This study highlights the importance of thrombocytopenia in differential diagnosis of pyrexia cases as its recognition will lead to lesser number of diagnostic possibilities.

A Comparative Study of Cognitive Impairment in Patients of Schizophrenia and Bipolar Affective Disorder

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INTRODUCTION

Cognitive functioning is among the strongest predictors of outcome in patients with schizophrenia and bipolar affective disorder. The severity of impairment in schizophrenic patients is greatest in the domains of memory, attention, working memory, problem solving, processing speed, and social cognition.

METHODS

The study was conducted on 50 consecutive patients of schizophrenia and 50 consecutive patients of bipolar affective disorder (in remission phase) diagnosed as per International Classification of Diseases-10 (ICD-10) criteria. Socio-demographic profile was assessed. Neuropsychological mini mental state examination (MMSE), controlled oral word associations test (COWT), and Stroop color test were performed on both schizophrenia and bipolar affective disorder patients.

RESULTS

Schizophrenia and bipolar disorder patients were significantly impaired on different tests of executive function and verbal fluency. Patients with schizophrenia consistently performed worse than patients with bipolar disorder and differences between the two groups were significant in COWT and Stroop color test.

CONCLUSION

Patients with bipolar disorder exhibit cognitive difficulties that are very similar to schizophrenia in terms of their profile, although patients with schizophrenia may have more severe and widespread impairments.

Study of Platelet Indices as Prognostic Biomarkers in Acute Pancreatitis

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INTRODUCTION

Acute pancreatitis (AP) is a systemic inflammatory disease with various clinical courses. Several prognostic scoring systems and inflammatory markers have been studied to determine the severity of acute pancreatitis and establish the mortality risk accordingly. These markers are related to inflammation, which plays an important in the physiopathology of pancreatitis. In this study, correlation between the Ranson's criteria, BISHOP, APACHE-II, CRP, and ESR parameters with the platelet count, MPV, PCT and PDW was studied.

METHODS

The study included 50 adult patients of acute pancreatitis irrespective of sex, ethnicity, or etiology. We investigated platelet indices (mean platelet volume, platelet distribution width (PDW), plateletcrit) and various established scores for severity.

RESULTS

Significant differences were found between the groups as regard to platelets ($p<0.001$), PDW ($p<0.001$), plateletcrit ($p<0.05$), AST ($p<0.05$), ALT ($p<0.001$), total bilirubin ($p<0.05$), LDH ($p<0.001$), CRP ($p<0.001$), ESR ($p<0.001$), APACHE-II ($p<0.001$), and Ranson ($p<0.001$) parameters and non-significant difference were found in haemoglobin, amylase, lipase, BISHOP score, and MPV.

CONCLUSION

Platelet derivatives can be used as a good prognostic biomarker for the course of mild AP. In severe AP cases, however, usability of platelet indices must be supported with further studies.

Usefullness of Glycemic Gap to Predict ICU Mortality in Critically Ill Medical Patient

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INTRODUCTION

Stress-induced hyperglycemia (SIH) has been independently associated with an increased risk of mortality in critically ill patients without diabetes. The study aimed to assess whether the gap between admission glucose and A1C-derived average glucose (ADAG) levels could be a predictor of mortality in critically ill patients with diabetes.

METHODS

100 critically ill patients as per APACHE-II score, admitted in ICU, were studied. Sequential Organ Failure Assessment (SOFA) score and clinical outcomes of patients were evaluated. The glycosylated hemoglobin (HbA1c) levels were converted to the ADAG by the equation, ADAG=[(28.7×HbA1c)−46.7]. Receiver operating characteristic (ROC) curves were used to determine the optimal cut-off value for the glycemic gap when predicting ICU mortality and the net reclassification improvement (NRI) to measure the improvement in prediction performance gained by adding the glycemic gap to the APACHE-II score.

RESULTS

31 (31.0%) patients died during their ICU stay. Non survivors had significantly higher APACHE-II scores, SOFA score, and glycemic gaps than survivors. Critically ill patients with a high glycemic gap had significantly higher ICU mortality and adverse outcomes than those with a low glycemic gap.

CONCLUSION

The glycemic gap is easily available and calculable as compared to APACHE-II and SOFA score to predict ICU mortality.

A Study of Platelet Count/Spleen Diameter Ratio in Relation with Esophageal Varices in Patients of Cirrhosis

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INTRODUCTION

In patients with cirrhosis, upper gastrointestinal endoscopy is currently recommended as a gold standard tool to screen esophageal varices and to institute prophylactic measures in large esophageal varices. This study aimed at identifying noninvasive parameters especially platelet count, splenic diameter, and platelet count/spleen diameter ratio that could predict the presence of esophageal varices.

METHODS

This observational study included 100 patients between 31-50 years of age with cirrhosis. Patients were subjected to relevant clinical examination, laboratory workup like complete blood count, liver function test, ultrasound abdomen, and screening upper gastrointestinal endoscopy. Platelet count to spleen diameter ratio was calculated for all patients.

RESULTS

Among 100 patients of cirrhosis 77 had varices. Males predominated with 91. Evidence of esophageal varices was more common with cirrhosis secondary to alcoholism as compared to HBV and HCV. The Child Pugh score, platelet count, spleen size, and platelet count/spleen diameter ratio in patients with varices were significantly different from patients without varices. Platelet count/spleen diameter ratio cut off value of 909 was obtained with sensitivity of 87.1% and specificity 35.4%. The positive predictive value was 62.9% and negative predictive value 68.7%.

CONCLUSION

The platelet count/spleen diameter ratio may be a useful inexpensive tool for diagnosing esophageal varices in liver cirrhosis non invasively, when endoscopy facilities are not available.

Study of Microalbuminuria in Rheumatoid Arthritis

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INTRODUCTION

Microalbuminuria and subclinical renal damage are frequent in rheumatoid arthritis (RA) patients particularly with long standing disease and severe disease activity. The present study was conducted to assess the association of microalbuminuria with RA and to correlate microalbuminuria with indicators of disease activity like ESR, CRP, RA factor, and duration of the disease.

METHODS

This was a cross sectional study including 50 patients of RA over a period of six months. Patients having hypertension, diabetes mellitus, urinary tract infection, and renal disease were excluded. All the patients were tested for microalbuminuria by Micral test.

RESULTS

Microalbuminuria was seen in 15 patients in whom 80% had morning stiffness and all 15 (100%) had constitutional symptoms. 18 patients (36%) were on treatment with DMARDs or NSAIDs. Mean duration of symptoms was 20.65±14.17 months in microalbuminuria positive patients as compared to 10.8 ± 3.57 months in microalbuminuria negative patients (p=0.007). Mean number of joints involved, ESR, and CRP were 23, 84.86, and 42.84 respectively in microalbuminuria positive group as against 13.05, 54.42, and 26.64 respectively in microalbuminuria negative group ($p < 0.001$, 0.001, and 0.009 respectively). Only one patient in microalbuminuria positive group was RF negative.

CONCLUSION

Immunological methods for detecting microalbuminuria should routinely be used in all RA patients to detect renal involvement in its initial phase.

A Study of Prevalence of Personality Traits and Psychiatric Comorbidity among School Going Adolescent Children with Internet Addiction

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INTRODUCTION

Higher scores for depression, anxiety, hostility, interpersonal sensitivity, and psychoticism are consequences of internet addiction (IAD). The present study was done to study the extent of using internet and to find out association between certain personality traits and internet addiction.

METHODS

A cross-sectional study comprising of 400 students of various faculties across the city of Ajmer was conducted. Students were assessed with a specially constructed self-administered semi structured performa and internet addiction test (IAT; Young, 1998). Depression anxiety stress scale (DASS21) was used to study depression, anxiety, and stress of students. Eyesenk personality inventory scale was applied to study personality.

RESULTS

Out of 400 candidates, 119 were problematic internet users (IAT Score>50) including 88 candidates with occasional/frequent problems (IAT SCORE 50-70) and 31 candidates with significant problems (IAT SCORE 80-100). The prevalence of problematic internet users was 29.75%.

CONCLUSION

Male students were more vulnerable to problematic internet use as compared to female students. The students whose fathers had higher education status and monthly income had more chances to develop internet addiction.

Comparative Study of Platelet Count in Cases of Plasmodium Vivax and Plasmodium Falciparum Malaria

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INTRODUCTION

Six malaria species of the genus plasmodium are *P falciparum, P vivax*, two sympatric species of *P ovale, P malariae,* and *P knowlesi*. Both non-immunological as well as immunological destruction of platelets have been implicated in causing thrombocytopenia. Platelet counts of less than 150,000/cu mm increases the likelihood of malaria 12 to 15 time. The present study was done to evaluate the platelet counts in patients of *Plasmodium vivax* and *Plasmodium falciparum* malaria and the effect of thrombocytopenia on prognosis.

METHODS

The present study was undertaken on 280 cases of malaria. Clinical analysis was performed and disease diagnosis done along with investigations (microscopy and RDT, CBC, LFT, RFT, biochemical and radiological tests, urine analysis, and USG).

RESULTS

The most common species of malaria was *P falciparum* (69.29%) followed by *P vivax* (27.5%), and mixed malaria (3.21%). Thrombocytopenia was seen in 56.07% of patients and was mostly caused by *P falciparum* (37.14%), *P vivax* (16.07%), and mixed (2.86%). On statistical analysis, the difference was found significant ($p<0.05$).

CONCLUSION

Malaria should be considered in all patients of fever with low platelets after excluding other causes of low platelets. Malaria with thrombocytopenia is a treatable disease if diagnosed early. Further evaluation of thrombocytopenia should be undertaken.

Prevalence of Diabetic Foot Complications and Diabetes Associated Complications: A Hospital Based Study

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INTRODUCTION

Diabetes associated complications are increasing at an alarming rate producing a huge burden in the health care expenditure. World-wide, more than a million lower leg amputations are performed each year as a result of diabetes. The present study was undertaken to assess the prevalence of diabetic foot complications and associated microvascular and macrovascular complications.

METHODS

It was an observational cross sectional study in type 2 diabetes mellitus (DM) patients aged >30 years over a period of one year. 1500 patients were enrolled and 143 diabetic foot cases were assessed for peripheral vascular disease (PVD), peripheral neuropathy, nephropathy, retinopathy, cerebrovascular accident (CVA), and ischaemic heart disease (IHD) by clinical, biochemical examination, and non- invasive imaging.

RESULTS

Maximum cases were diabetic males in their 5^{th} and 6^{th} decade of life. Prevalence of foot lesions was more in people with long duration of diabetes, uncontrolled diabetes, obesity, hypertension, and chronic tobacco exposure. Prevalence of diabetic peripheral neuropathy (90.9%), PVD (7.69%), amputation (13.98%), and foot ulcer (17.48%) were high. The prevalence of retinopathy (7.69%), nephropathy (28.67%), CVA (43.35%), and IHD (64.3%) were high in diabetic foot patients.

CONCLUSION

Prevalence of microvascular and macrovascular complications was more in diabetic foot patients indicating the importance of early screening and management.

Prevalence of Hypertension, Obesity, Proteinuria and Glycosuria in Adolescents of Bikaner

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INTRODUCTION

Hypertension, obesity, diabetes mellitus, and kidney diseases are emerging epidemics in developing countries. Early detection and diagnosis at initial stages can help in early treatment and prevention of long term complications of these diseases. The aim of the study was to evaluate the prevalence of hypertension, obesity, proteinuria, and glycosuria in adolescents of Bikaner.

METHODS

This study was a cross sectional study conducted in various educational institutes of Bikaner. Blood pressure was taken by mercury sphygmomanometer, obesity was assessed by waist hip ratio and body mass index, and proteinuria and glycosuria were detected by spot urinary dip stick testing.

RESULTS

The prevalence of hypertension was 14.4% (9.8% in hypertension stage 1 and 4.6% in hypertension stage 2), and 12.7% adolescents had elevated blood pressure. The prevalence of overweight adolescents was 14.9% and obese adolescents 0.1%. The prevalence of proteinuria was 7.2% (1+ in 3.9%, 2+ in 3.1%, and 3+ in 0.2%) and trace proteins were detected in 13.8% adolescents. The prevalence of glycosuria was 0.5% (1+ in 0.4% and 3+ in 0.1%) and trace glycosuria was found in 1.4%.

CONCLUSION

Prevalence of hypertension, overweight, proteinuria, and glycosuria was 14.4%, 14.9%, 7.2% and 0.5% respectively in adolescents of Bikaner.

Role of Fibroscan in Metabolic Syndrome

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INTRODUCTION

Metabolic syndrome is a cluster of metabolic and other risk factors that increases the risk for liver disease like non-alcoholic fatty liver disease (NAFLD). NAFLD is the commonest cause of chronic liver disease in Western countries and increases the risk of scarring and end stage liver disease. The purpose of this study was to determine liver stiffness in patients of metabolic syndrome with the help of fibroscan.

METHODS

It was a cross sectional descriptive study of liver function (morphological and physiological changes) conducted on 53 patients of age ≥ 20 years having metabolic syndrome according to NCEP ATP III (National Cholesterol Education Program Adult Treatment Panel III) criteria. Persons with clinical possibility of other types of liver disease (confirmed by history and appropriate investigations) and pregnant or breast-feeding women were excluded. A record questionnaire of waist circumference, waist hip ratio, and body mass index was filled and haematological and biochemical evaluations were done. Ultrasonography of abdomen, upper gastro-intestinal endoscopy and fibroscan were also done.

RESULTS

37 (69.8%) patients had fibroscan median stiffness score (FMSS) ≤ 7 kPa while 16 (30.2%) had FMSS >7 kPa.

CONCLUSION

Patients with high waist circumference, high body mass index, and high waist hip ratio does not necessarily have high FMSS. In patients with high FMSS (> 7), there is a possibility of having high body mass index, waist circumference, and waist/hip ratio.

Role of Ultrasound Doppler in a Snake Bite Patient Presenting with Significant Limb Edema or Ischemia

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INTRODUCTION

Snake bite is common in Western Rajasthan and patients often present with significant edema and necrosis/ gangrene. The aim of this study was to evaluate usefulness of doppler ultrasound in patients of snake bite presenting with significant limb edema to measure frequency of compartment syndrome and vascular thrombosis.

METHODS

A cross sectional hospital-based study was conducted which included 50 patients of snake bite with significant limb edema or ischemia. Detailed history and physical examination was done. Severity index was calculated. Complete blood count, liver function tests, renal function tests, leucocyte count, PT-INR and aPTT were done. Doppler ultrasound of affected limb was done.

RESULTS

All patients had subcutaneous tissue edema, 39 had soft tissue edema, seven had compartment syndrome, and eleven had vascular thrombosis among which seven were arterial and four were venous thrombosis. Bleeding manifestations were found in 18 patients and gangrene in seven. Seven patients had compartment syndrome with thrombosis and four had thrombosis without compartment syndrome. Seven patients were managed with surgical procedure and rest medically. Hospital visit after 12 hours of snake bite was associated with increased risk of vascular thrombosis.

CONCLUSION

The study highlights significant risk of vascular thrombosis after hematotoxic/cytotoxic snake bite. Use of doppler ultrasound in all patients of snake bite with significant limb edema was recommended as it has potential to modify treatment.

A Study on Association of Serum Prolactin Level with Impaired Glucose Regulation and Diabetes

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INTRODUCTION

Prolactin (PRL) is a pituitary hormone which is not only important for the initiation and maintenance of lactation, but also involved in many other regulatory functions and metabolism. PRL has an influence on adipose tissue, insulin resistance, and lipid metabolism. PRL promotes the growth and survival of pancreatic β-cells and supports insulin secretion. High level of prolactin is seen in patients who are at higher risk of hyperglycemia accompanied by obesity and insulin resistance. The study was conducted to evaluate the relationship of prolactin with diabetes and impaired glucose regulation (IGR).

METHODS

This was a population-based study including 100 participants, 60 males and 40 postmenopausal females, in IGR diabetic and control groups. The participants were categorized into sex-specific quartiles of serum prolactin. Multi-nominal analyses were performed.

RESULTS

Prolactin levels decreased from normal glucose regulation to IGR to diabetes as compared to the control group. On quartile-based analysis, higher prolactin levels were found to be associated with lower HbA1c and fasting plasma glucose.

CONCLUSION

High circulating prolactin is associated with lower prevalence of diabetes and IGR.

Prospective Study to Find out the Role of Gastric Aspirate Examination by Ziehl-Neelsen Staining and Cartridge Based Nucleic Acid Amplification Test as a Diagnostic Method in Childhood Tuberculosis

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INTRODUCTION

The recent introduction of cartridge based nucleic acid amplification test has significantly transformed the diagnostics of tuberculosis in adults. This study was conducted on the role of gastric aspirate in detection of acid fast bacilli by Ziehl-Neelsen (ZN) stain and cartridge based nucleic acid amplification test (CB-NAAT) in the diagnosis of childhood tuberculosis.

METHODS

A prospective hospital based study was conducted on 100 randomly selected patients suspected of tuberculosis who had their gastric aspirate tested for CB-NAAT and ZN stain for AFB alongwith Mantoux test and other routine investigations. Chi square test was applied.

RESULTS

Culture positive tuberculosis was found in 21 children. The sensitivity, specificity, positive predictive value, and negative predictive value for CB-NAAT were 76.1%, 98.7%, 94.1%, and 93.9% and for ZN stain were 47.6%, 98.7%, 90.9%, and 87.6%, respectively. CB-NAAT detected an extra six tuberculosis cases compared with smear microscopy and was more sensitive than ZN staining. Positive history of contact ($p= 0.0217$), reactive Mantoux test ($p<0.001$), and low socioeconomic status were independently associated with a positive CB-NAAT result.

CONCLUSION

Analysis of gastric aspirate samples with CB-NAAT is a sensitive and specific method for rapid diagnosis of pulmonary tuberculosis in children who cannot produce sputum.

Parental View, Perception, and Satisfaction with Immunization Services at Immunization Clinic at Jhalawar Medical College

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INTRODUCTION

The World Health Organization (WHO) in 1974 initiated the Expanded Program of Immunization (EPI) for immunizing and thus protect mothers against tetanus and their children against the six deadly diseases. This study was aimed at finding out parental view, perception, and satisfaction with immunization services at immunization clinic at Jhalawar Medical College.

METHODS

This cross-sectional descriptive study was conducted among parents of 384 children under two years of age. Systematic random allocation technique was used. Parental view, perception, and satisfaction with immunization services were assessed. During this study of 6 months period children from $1^1/_2$ months (6 weeks) to 2 years of age were vaccinated.

RESULTS

352 (91.7%) parents out of 384 were having knowledge about vaccination. Parental satisfaction level was 98.7% with the services available, 95.6% with behavior of the doctor and staff, and 97.9% with information provided at the immunization clinic about next vaccine, place, and date. 95.8% parents were satisfied with the waiting place and found it comfortable.

CONCLUSION

Parental view, perception, and satisfaction with immunization services were satisfactory.

Correlation between Viral Load and Fibroscan Score in Hepatitis C Positive Multi-transfused Thalessemic Patients

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INTRODUCTION

Hepatitis C virus (HCV) is a major cause of post transfusion hepatitis infection in patients with beta-thalassemia major. This study was aimed at finding out correlation between viral load and fibroscan score in hepatitis C positive multi transfused thalessemic patients.

METHODS

135 multi transfused thalassemic patients who had received frequent blood transfusions were included in the study and Fibroscan® test was done to estimate median liver stiffness. The blood samples were analyzed by rapid card test for detection of antibodies against hepatitis C virus. The confirmation was done with ELISA and hepatitis C RNA viral load was obtained in all ELISA confirmed HCV positive patients.

RESULTS

The maximum number of patients i.e. 49 (36%) were in the age group of 6-9 years. 58 (42.97%) patients tested positive for HCV by card test and 42 out of 77 patients were ELISA positive. Maximum number of patients i.e. 88 (65%) were in f_0-f_1 (2.5-7 kpa) followed by 33 patients (24.45%) in f_2 stage (7-9.5 kpa). Eight patients were in f_3 stage (9.5-12.5 kpa) while six were in f_4 stage (>12.5 kpa). Patients who were HCV ELISA positive had higher values of mean median stiffness (8.7±2.83 kpa) than those who were HCV ELISA negative (5.6±1.46 kpa). These results were statistically significant ($p<0.0001$). However, no statistically significant correlation was seen between viral load and fibroscan score.

CONCLUSION

HCV positive thalassemic patients had significantly higher grades of liver fibrosis compared to HCV negative thalassemics.

Prevalence, Co-morbidities, and Complications in Children with Severe Acute Malnutrition Admitted in a Tertiary Care Centre of Western Rajasthan

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INTRODUCTION

Severe acute malnutrition (SAM) is a major public health issue affecting 8 million under-five children in India. The present study was done to find out the prevalence, co-morbidities and complications in children with severe acute malnutrition.

METHODS

It was a hospital based observational study among hospital children of age 6 to 60 months admitted with SAM. WHO criteria was followed for the diagnosis of SAM.

RESULTS

Prevalence of SAM was 6.2 %. Majority of children with SAM (both edematous and non-edematous) belonged to 6-12 months age group. Mean age of presentation was significantly lower in edematous group. 15% of children with SAM had developmental delay significantly greater than non-edematous SAM. The commonest presenting complaint at admission was fever the commonest co-morbidity associated was anemia (89.7% and 75.2% respectively) while most common complication was dehydration followed by electrolyte disturbances. The mean hemoglobin, serum protein and albumin levels were significantly lower in edematous than non-edematous group. Hypokalemia was observed in 10% cases of SAM with mean serum potassium levels being significantly lower in edematous group. Mortality rate in the study was 4%.

CONCLUSION

The edematous group of SAM is more vulnerable and should be managed accordingly.

Significance of Hematological Scoring System in Early Diagnosis of Neonatal Sepsis at Tertiary Care Hospital in Western Rajasthan

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INTRODUCTION

Neonatal sepsis is characterized by signs and symptoms of infection with or without accompanying bacteremia in the first month of life. The present study was done to evaluate the utility of peripheral smear and a hematological scoring system (HSS) in relation to certain tests like C-reactive protein detection and blood culture, which aids in early diagnosis of neonatal sepsis.

METHODS

This was a hospital based prospective study involving 100 neonates who were clinically suspected to have bacterial infection within first week of life and evaluated for sepsis work-up involving complete blood counts along with hematological score and blood culture.

RESULTS

There were 27.2% neonates with sepsis, 24.3% had probable sepsis while 48.5% were healthy. The preterm babies, babies with birth weight ≤1.5 kg, with abnormal WBC count, abnormal PMN count, I:M ratio>0.3, I:T ratio>0.120, and platelet count<1.5 lacs had more chances of developing sepsis. Two-third of neonates with positive blood culture were having HSS score>4 with statistically significant results showing strong correlation of HSS score > 4 and positive blood culture.

CONCLUSION

HSS is a simple, quick, cost effective, and readily available tool that assists in timely diagnosis of neonatal sepsis so that treatment of the neonates can be initiated before their health is compromised further.

Serum Vitamin D, Zinc, Iron, and Copper Levels in Children with Newly Diagnosed Celiac Disease

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INTRODUCTION

Children with newly diagnosed celiac disease (CD) have variable vitamin and mineral deficiencies. However, no well-designed studies exist to document these deficiencies in pediatric populations with CD. The current study was designed to determine the levels of vitamin D, zinc, iron, and copper in children with celiac disease at the time of diagnosis and to study the association of these serum values with Marsh staging and anthropometry.

METHODS

A cross-sectional study was conducted among 60 newly diagnosed children with celiac disease (age <18 years) confirmed on the basis of serologic and/or endoscopic findings. Serum levels of vitamin D, zinc, iron, and copper were assessed. A representative sample of 30 healthy subjects (comparable for sex, age, and BMI) as controls was added for comparison.

RESULTS

Mean age of study group was 6.19±3.42 years. Serum vitamin D, zinc, iron, and copper deficiencies were seen in 55%, 40%, 58.3%, and 11.66% of the cases respectively. Mean serum vitamin D, zinc, iron, and copper values were lower in the study group than control group. A statistically significant correlation was seen between tissue trans-glutaminase antibody and mean serum vitamin D levels of deficient cases ($p<0.05$) and also between vitamin D levels and short stature ($p<0.001$) in the study group.

CONCLUSION

All patients presenting with CD should be screened for vitamin D and mineral deficiencies and it should be an integral part of celiac disease diagnosis and treatment.

Two-Dimensional Second Trimester Ultrasonographic Evaluation of Umbilical Cord Thickness, Cross Sectional Area and Coiling Index as Predictors of Perinatal Outcome

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INTRODUCTION

The well being of foetus is influenced by a number of factors. The purpose of this study was to assess correlation of the umbilical cord thickness, cross sectional area, and antenatal coiling index at 18 to 24 weeks of gestation with perinatal outcome.

METHODS

This study was conducted on 100 pregnant women. The umbilical cord thickness, cross sectional area, and antenatal coiling index were studied by ultrasonography during 18-24 weeks of gestation at the time of anomaly scan. Their correlation with perinatal outcome in terms of gestational age at birth, mode of delivery, birth weight of the baby, APGAR score, meconium stained amniotic fluid (MSAF), and NICU admission of the baby were assessed and statistically compared.

RESULTS

There was a significant correlation between hypocoiled cord (aUCI less than 10^{th} percentile) with preterm labour (p 0.035) and low birth weight ($p<0.001$), hypercoiled cord (aUCI more than 90^{th} percentile) with MSAF ($p< 0.001$), umbilical cord thickness and cross-sectional area with preterm labour ($p=0.002$ and 0.012), low birth weight ($p<0.001$ and <0.001), and NICU admission ($p= 0.005$ and <0.001) respectively.

CONCLUSION

Hypocoiled cords are associated with spontaneous preterm labour and low birth weights while hypercoiled cords with MSAF.

Role of Multidetector Computed Tomography in the Evaluation of Pediatric Abdominal Masses

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INTRODUCTION

A broad spectrum of tumors involves the pediatric abdomen. The purpose of this study was to characterize various pediatric abdominal masses by Multidetector CT and to assess the role of Multidetector CT in imaging of various abdominal masses in pediatric age group.

METHODS

This hospital-based study was conducted among 50 cases of pediatric abdominal masses. A preliminary ultrasound scanning was done in all cases. Color doppler imaging was done as and when required. Non-contrast and contrast enhanced CT examination of the patients was carried out. Imaging findings were correlated with the clinical course of disease and surgical/cytological findings as far as possible.

RESULTS

Malignant cases were 44% and 56% benign. 52% were retroperitoneal out of which 14 (28% of total) were renal, 8 neoplastic (57%), and 5 (62.5%) had Wilms' tumor. Masses of gastro intestinal/mesenteric origin constituted 12%, hepatobiliary masses 16%, and of genital system 12% of the total cases. The accuracy of USG in predicting nature of the mass, its localisation, extent, and exact diagnosis was 81%, 64.5%, 59%, and 54.5% respectively and for CT 100%, 97%, 100%, and 81% respectively.

CONCLUSION

Multidetector computed tomography (MDCT) with its multiplanar reconstruction is an excellent imaging modality to locate and characterize pediatric abdominal tumors.

Prospective Evaluation of Spinal Injuries by CT and MRI and Assessing their Role in Predicting Prognosis

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INTRODUCTION

Spinal trauma still remains a large socio-economic stress to the society. The leading causes of spinal trauma are motor vehicle accidents and falls. Computed tomography (CT) has assumed increased importance in the overall evaluation of patients with spinal fractures. Subtle bone marrow, soft-tissue, and spinal cord abnormalities, which may not be apparent on other imaging modalities, can be readily detected on MRI. The purpose of this study was to assess prospective evaluation of spinal injuries by CT and MRI and to assess their role in predicting prognosis.

METHODS

This prospective study was done on 52 patients. Patients were evaluated with CT and MRI spine. Out of 52 patients, 40 patients went for CT spine.

RESULTS

The study showed that spinal injury was common in adult male with road traffic accident. Cervical region was the most commonly involved segment. CT was sensitive to find retro pulsed fragments and any compromise of the spinal canal. Patients with cord hemorrhage and large cord edema had initial high grade AIS and less chance of recovery and vice versa.

CONCLUSION

Focus of hemorrhage within the cord was most important prognostic factor. Recovery rates of sensory scores were significantly lower in patients with hemorrhage when compared with those without hemorrhage in the spinal cord.

Evaluation of Painful Knee Joint in Adult Patients Using Magnetic Resonance Imaging

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INTRODUCTION

MRI is the diagnostic imaging of choice in the evaluation of internal joint structures of knee like menisci, cruciate ligaments, and articular cartilage. The purpose of this study was to describe the MRI features in various traumatic and non-traumatic lesions causing painful knee joint.

METHODS

MRI studies of the knee were performed among 120 patients (95 men, 25 women) with history of painful knee joint using a 1.5 T MRI machine. The sequences included coronal and sagittal proton density, sagittal T_2 fast spin echo, fat suppressed T_2 FSE, STIR axial and coronal. Knee MRI studies were obtained to evaluate ligament, menisci, articular surface, and bone pathologies causing painful knee joint.

RESULTS

The mean age of study participants was 40.4 years. Out of 120 patients, MR images were normal in five. It was positive for meniscal tears in 50 patients with maximal involvement of the medial meniscus and the posterior horn. Maximum number of tears belonged to grade 3. All vertical types of meniscal tears were of traumatic cause. Ligament tears were seen in 100 patients. Other chronic causes of painful knee joint were minimal.

CONCLUSION

MRI is a very good modality to diagnose complete tears of the anterior cruciate ligament and diagnosing meniscal tears and classifying them into grades and types which would avoid unnecessary arthroscopic examination.

To Compare Role of Elastography and Magnetic Resonance Imaging in Evaluation of Suspicious Breast Masses

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INTRODUCTION

Breast elastography is a new sonographic imaging technique which provides information on breast lesions in addition to conventional ultrasonography (USG) and mammography as it provides a non-invasive evaluation of the stiffness of a lesion. The purpose of this study was to compare role of elastography and magnetic resonance imaging in evaluation of suspicious breast masses.

METHODS

A prospective study was carried on 33 patients. Women of all the age groups with clinically palpated breast lump or BI-RADS III/IV/V were included. Already diagnosed cases on treatment/recurrence/BI-RADS I/II/VI were excluded.

RESULTS

Out of total 33 cases examined, there were 14 cases of ductal carcinoma, 6 cases of fibroadenoma, 3 of phylloides tumor, 3 cases of abscess, one case of lobular carcinoma, papillary carcinoma, mucinous adeno-carcinoma, mastitis, mastitis with abscess, granulomatous mastitis, and complex cyst. The elastography had 88% sensitivity and 86% specificity for differentiation between BI-RADS III, IV, and V and MRI had 83% sensitivity and 73% specificity.

CONCLUSION

Ultrasound elastography is extremely helpful in accurate estimation of breast benign verses malignant pathology differentiation and helps in avoiding many unnecessary procedures. Combination of morphologic and dynamic MRI studies is very important for breast lesion evaluation.

Role of Multi Detector CT in Evaluation of Congenital Heart Disease

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INTRODUCTION

Congenital heart diseases (CHDs) are considered as the most common congenital birth defects, comprising 1% of all live births. The aim of the present study was to assess the role of multidetector CT in the evaluation of CHD and its comparison with echocardiography.

METHODS

This retrospective study was conducted on 62 consecutive patients with CHD. Non-ECG gated CT angiographic studies were performed by default pulmonary embolism protocol and by modifying low dose protocols, with non-ionic contrast material containing iodine concentrations of 350 mg/mL administered at a dose of 1- 2 mL/kg.

RESULTS

The intracardiac lesions were present in 85% and 74% patients had extracardiac anomalies. 11% had only intracardiac lesions without any extracardiac anomalies. 1.61% had only extracardiac lesion. Echocardiography could detect only 68.5% (122/178) total anomalies and there was only 25% (2/8) agreement between echocardiography and CT scan in assessment of systemic as well as pulmonary venous anomalies. Compared to CT scan, echocardiography failed to detect all MAPCAs, most of arch and branching pattern anomalies. These differences were statistically significant (<0.0001). In 62 patients, CT could diagnose 64 shunt anomalies compared 55 shunt abnormality diagnosed by echocardiography.

CONCLUSION

Multidetector CT is an invaluable tool for depiction of congemital heart disease and is comparable/better than echocardiography.

Three-Dimensional Magnetic Resonance Angiographic Evaluation of Circle of Willis and its Anatomical Variations in General Population

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INTRODUCTION

Circle of Willis has great influence on clinical prognosis of cerebrovascular diseases (CVD), vascular surgeries, and interventional procedures. The purpose of this study was to evaluate and describe various patterns of anatomical variations of circle of Willis, in general Indian population by using 3D time-of-flight MR angiography (3D TOF MRA).

METHODS

A cross sectional study was undertaken among 200 subjects having no manifestations of CVD. Subjects were analyzed on Philips 1.5T Achieva MR Scanner using Philips intellispace portal workstation. The MR angiography protocol consisted of non-contrast 3DTOF transaxial acquisition. The post-processing algorithm, maximum intensity projection (MIP) was used.

RESULTS

The prevalence of complete configuration of the circle was 9%. There was significantly higher incidence of complete circle in <40 year age group (24%) than >40 yr age group (4%). An incomplete circle was noted in 91% subjects. Posterior circle variations were significantly higher than anterior circle ($p<0.0001$). Most common variation in anterior circulation was hypoplastic anterior communicating artery (19%) and aplasia of bilateral posterior communicating artery (43%) in posterior circulation.

CONCLUSION

Anatomical variations of circle of Willis can be accurately assessed using magnetic resonance angiography. The 3D TOF MRA is a fast, non-invasive and non-radioactive technique.

Comparison of Planned and In-Vivo Measured Rectal Dose during Intracavitory HDR Co^{60} Brachytherapy in Cervical Cancer

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INTRODUCTION

The use of Co-60 as source for HDR brachytherapy poses a question on whether rectum will receive higher radiation dose due to the relatively higher average gamma energy of 1.25 MeV. The purpose of this study was to measure rectal dose during treatment and its comparison as calculated by TPS (Treatment Planning System) and measured by Diode.

METHODS

The study was undertaken on 50 patients of carcinoma cervix. Intracavitary brachytherapy FLETCHER SUIT applicator was inserted. Finally, vaginal packing (beta dine socked) was done to displace rectum and bladder away from the intracavitary applicator and to immobilize the applicator. An amorphous silicon diode encapsulated with rubber was inserted into rectum. Images obtained by C-arm were transferred to treatment planning system which calculated rectal dose. After treatment, dose measured by diode and calculated by TPS were compared.

RESULTS

The mean doses and 95% confidence interval limits as per TPS and diode calculation were 4.43±3 Gy and 4.56±3.32 Gy respectively. The dose measured using diode was higher than that by TPS, but it was not statistically significant ($p<0.69$) as per Mann Whitney U test. There was an observable but statistically insignificant difference between both doses.

CONCLUSION

In vivo dosimetry is beneficial and feasible. It can be performed to estimate the dose to the rectum during HDR brachytherapy using Co-60.

Clinical and Radiological Outcome of Distal Femur Fractures Treated by Locking Compression Plate

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INTRODUCTION

Distal femoral fractures represent a challenging problem in orthopaedic practice. Open reduction with internal fixation replaces previous trend of closed conservative management and external fixation. Distal femoral locking compression plate (DF-LCP) requires both locking and compression screw fixation of the femur shaft. This study was conducted to examine the short-term clinical (functional) and radiological results of distal femoral fractures treated with the DF-LCP.

METHODS

It was a prospective study on 25 cases of distal femoral fracture (AO type A and C) treated by DF-LCP. Lateral approach was performed as standard surgical technique. The total follow up period was six months. Functional and radiological results were evaluated using Neer's score.

RESULTS

There were 18 male and 7 female patients of mean age 40.56 years. Road traffic accident (68%) was the commonest mode of injury. Most of them were closed fractures. Wound infection was seen in one patient. Average flexion at knee joint was 117^0. There was 100% union rate with an average union time 14.3 weeks. Neer's score was excellent in 12 (48%), good in 9 (36%), and fair in 4 (16 %).

CONCLUSION

DF-LCP is an important armamentarium in treatment of distal femur fractures especially when fracture is closed, severely comminuted, and in situations of osteoporosis.

Comparative Study of Minimal Invasive Subvastus Approach versus Standard Medial Parapatellar Approach in Total Knee Arthroplasty

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INTRODUCTION

Total knee arthroplasty (TKA) remains the gold standard treatment for end stage degenerative arthritis or deformity of knee. The purpose of this study was to compare the early functional results and complication rates of the minimal invasive subvastus (SV) approach to the standard medial parapatellar (MPP) in primary TKA.

METHODS

This was a prospective, randomized and comparative study consisting of 20 randomly selected patients in SV group and 20 in MPP group, suffering from primary osteoarthritis of knee and treated with total knee arthroplasty. Assessment of the results was based on the overall clinical and functional knee society score (OCFKSS) at preoperative; 2 weeks; 3, 6, and 12 months postoperatively.

RESULTS

In the SV group, straight leg raise (SLR) time and length of hospital stay were significantly shorter as compared to MPP group (2.40±0.68 days v/s 4.30±0.92 days; $p<0.0001$) (6.3±1.26 days v/s 7.9 ± 1.25 days; $p = 0.0003$). On the other hand, SV group has slightly longer surgical time than MPP group (80.75 ± 10.6 minutes v/s 73.35± 10.87 minutes; $p=0.0356$). According to the OCFKSS there was statistically insignificant improvement at different follow-up periods in both groups. There was no increase in postoperative complication rate in SV group in comparison to MPP group.

CONCLUSION

SV approach is a good alternative approach for TKA with early functional improvement.

Long Term Functional Outcome of Intertrochanteric Femur Fractures Treated with Dynamic Hip Screw versus Proximal Femoral Nail: Retrospective Study

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INTRODUCTION

Intra and extra medullary fixation are two primary options for treatment of intertrochanteric fractures.The purpose of this retrospective study was to review the long-term functional outcome of intertrochanteric femoral fractures treated with dynamic hip screw (DHS) v/s proximal femoral nail (PFN).

METHODS

The study was conducted on 1000 patients of intertrochanteric femoral fractures above 16 years of age who were operated by DHS (500 patients) and PFN (500 patients). Functional results were assessed by Harris hip scoring system (HSS).

RESULTS

In the PFN group, the occurrence of infection, anterior thigh pain, shortening (>1 cm), peri-implant fracture, mechanical complications and deformity (varus deformity and external rotation) were 26 cases (5.2%), 17 cases (3.4%), 13 cases (2.6%), 8 cases (1.6%), 24 cases (4.8%) and 11 cases (2.2%) respectively while these were 47 cases (9.4%), 29 cases (5.8%), 21 cases (4.2%),19 cases (3.8%), 16 cases (3.2%) and 44 cases (8.8%) in the DHS group. Screw cut out occurred in 23 cases (4.6%) in DHS group. Mean HHS of PFN was 92.06 and of DHS was 91.75($p = 0.425$).

CONCLUSION

Long term functional outcome measured by HHS of intertrochanteric femoral fractures treated with dynamic hip screw v/s proximal femoral nail had no significant difference but complications like peri-implant fracture, shortening, screw cut-out, and varus deformity were more in patient operated by DHS.

Evaluation of Operative Management of Lower Third Tibial Fractures with Locking Compression Plate: A Clinical Study

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INTRODUCTION

As an external fixator, locking compression plate is an attractive technique. This study was conducted to assess the functional outcome, duration of union**,** clinical and radiological, the advantages and complications of locking compression plate for lower third fractures of tibia.

METHODS

This prospective and retrospective study included 40 cases with lower third tibial fracture treated with locking compression plate who were followed up over a minimum period of six months for complication and functional outcomes. The assessment of anatomical and functional outcome was made according to Johner and Wruhs criteria system at six months.

RESULTS

The age of patients ranged from 18 to 65 years. Average time for partial weight bearing, full weight bearing (excluding non-union) and to attain radiological union (excluding the 2 cases that went into non-union) was 8.8±2.16 weeks, 17.23 ±2.53 weeks, and 17.23±2.53 weeks, respectively. Six (15%) patients had ankle movement restriction, two (5%) had non-union and two (5%) had superficial skin infection. On assessment of anatomical and functional outcome 22 (55%) out of 40 patients showed excellent results.

CONCLUSION

Locking compression plate technique provides effective stabilization of the lower third tibia fracture, goodfracture union, and an early mobilization with adequate ankle mobility, allowing a rapid fracture healing and return to daily activity with great patient satisfaction.

Tear Glucose in Diabetics

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INTRODUCTION

An approach of non-invasive monitoring of blood glucose concentrations is to monitor glucose concentration in tear fluid. This study was an attempt to comprehensively evaluate the tear glucose estimation, relationship between tear and plasma glucose concentration, and the role of tear glucose as an indicator of plasma glucose level.

METHODS

After approval from ethical committee, 95 patients were divided into four groups: patients on oral antidiabetic drugs (n=30), on insulin (n=30), uncontrolled diabetics (n=5), and control group (n=30). The estimation of glucose concentration in both tear fluid and blood was carried out by an autoanalyzer /semi autoanalyzer using glucose-oxidase peroxidase method.

RESULTS

Statistical analysis revealed that the magnitude of correlation between blood and tear glucose values (both fasting and postprandial) was statistically significant (i.e. $p<0.05$) in cases on oral antidiabetic drugs, on insulin and in the control group.

CONCLUSION

Tear glucose estimation is a simple and more efficacious method for detection of diabetes. The ready accessibility of tears and the simplicity of method offer a simple screening procedure for diabetes mellitus and rapid indirect measurement of hyperglycemia not only to the ophthalmologist but also to the physician.

The Study of Screening for Retinopathy of Prematurity in High Risk Infants

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INTRODUCTION

Retinopathy of prematurity (ROP) is believed to be due to multifactorial causes. Interruption of normal retinal vascularisation in neonates results in ROP. ROP continues to be an important cause of potentially preventable blindness worldwide. It is believed to account for 6-18% of childhood blindness in developed countries. The purpose of the present study was to detect ROP early, to measure the incidence of ROP in high risk infants, and to know its association with several risk factors.

METHODS

ROP screening was performed by enrolling 300 premature infants with a gestational age of 32 weeks or less and a birth weight of $\leq$ 2000 g. Study also included preterm infants with a gestational age of more than 32 weeks with other documented risk factors.

RESULTS

Out of the 300 infants, 55 (18.33%) developed ROP from stage 1 to stage 3. None of the infants presented with ROP at stages 4 or 5. There was a significant relationship between the occurrence of ROP and gestational age, birth weight, duration of oxygen therapy, ventilation, respiratory distress syndrome (RDS), apnea, PCV transfusion, and phototherapy. However, non-significant relationship was found with sepsis.

CONCLUSION

The presence of risk factors in preterms can be taken as basis for screening them for retinopathy of prematurity.

Study of Demographical and Clinical Profile of Ocular Trauma Patients and Determination of Visual Prognosis Using Ocular Trauma Score

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INTRODUCTION

The incidence of ocular injuries is constantly on the rise. This study was performed to assess demographic and clinical profile of ocular trauma patients and to determine visual prognosis using ocular trauma score.

METHODS

A prospective study was conducted among 92 patients. Detailed history, thorough clinical examination and detailed fundus examination were performed. Gonioscopy was performed in closed globe injury patients. Visual acuity was recorded with Snellen's chart. Injuries were classified according to Birmingham Eye Trauma Terminology system.

RESULTS

The mean age was 20 years with 63.04% cases from rural and 36.96% from urban population. The commonest place of injury was home (44.56%) followed by workplace (35.87%) and road traffic accidents (20.97%). The most common object was wooden (31.52%) followed by metallic (16.30%) and then stone. Open globe injuries (48%) were commoner than closed ones (41%). The common presentations were corneal tear (38.04%), traumatic cataract (27.17%) and hyphaema (15.22%).

CONCLUSION

Ocular trauma score can help in the prediction of prognosis at the time of presentation.

Spectrum of Glycosylated Haemoglobin and its Relation to Preoperative and Postoperative Changes in Corneal Endothelium in Patients Undergoing Phacoemulsification Surgery with Diabetes Mellitus

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INTRODUCTION

The corneal epithelium's barrier function is impaired in diabetic patients. The purpose of this study was to investigate glycosylated haemoglobin (HbA1c) level and its relation to preoperative and postoperative corneal endothelial cell changes in patients undergoing phacoemulsification surgery with diabetes mellitus.

METHODS

This prospective study included 100 patients with same grade of cataract and operated by phacoemulsification for same surgical time by one surgeon. The study subjects were divided into 4 groups of 25 each. After history taking and complete ocular examination, specular microscopy was done. Readings were taken preoperatively, post-operatively on day 7 and day 15, and after one month.

RESULTS

A statistically significant decreased mean value of endothelial cell density ($p<0.0005$), increased central corneal thickness (CCT), increased coefficient of variation of cell size, and decreased hexagonality was present among patients preoperatively. With increased HbA1C, there was increase in endothelial cell loss, central corneal thickness, coefficient of variation of cell size, average endothelial cell size and decrease in hexagonality postoperatively.

CONCLUSION

Raised HbA1C level were associated with a decreased endothelial cell density, increased CV, increased CCT, and increased average cell size post operatively in diabetes.

Brainstem Evoked Response Audiometry in Chronic Metabolic Disorders (Diabetes Mellitus Type II and Chronic Kidney Diseases)

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INTRODUCTION

Diabetes mellitus and chronic renal failure are common metabolic disorders having deleterious effect on central nervous system. Brainstem evoked response audiometry (BERA) is a noninvasive electrophysiological tool which offers the possibility to perform a function evaluation of neural pathways in the central nervous system. The aim of present study was to study the BERA changes in chronic metabolic disorders namely diabetes mellitus (DM) and chronic renal failure (CRF).

METHODS

The study included 60 individuals divided into two groups of 30 each. The study group comprised patients suffering from DM and CRF, while control group comprised age and sex matched healthy individuals. Two channel BERA study was done on each individual and absolute latencies of waves I, III and V and interpeak latencies of I-III, III-V and I-V were recorded at 90 dB and 70 dB and compared using student t test.

RESULTS

Delayed absolute latencies were found for wave III and V but not for wave I and also interpeak latencies were found for wave I-III and I-V delayed but not for III-V.

CONCLUSION

The duration of the disease has major effect on neural function rather than control of the disease.

Prospective Study of a New Graft Technique: Boomerang-Shaped Chondro-perichondrial Graft in Type-I Tympanoplasty

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INTRODUCTION

Many techniques and graft materials have been used for the reconstruction of tympanic membrane. The aim of this study was to evaluate graft uptake and to compare pre and post-operative hearing after the placement of boomerang shaped chondro-perichondral graft in type I tympano-plasty.

METHODS

The present study was a prospective study conducted on 40 patients. Tympanoplasty was done with boomerang shaped chondro-perichondral graft in all the patients.

RESULTS

The main outcome measures were anatomical and functional in form of graft uptake and postoperative hearing evaluation, within three months of follow-up. Out of 40 patients (mean age 26.23±12.46 years), 33 (82.50%) patients had central perforation, 2 (5%) patients had posterio-superior retraction pocket, 5 (12.50%) patients had marginal peforation. There was no immediate or long-term postoperative complication of surgery. There was a 7.1 decibel improvement in mean air conduction threshold post-operatively. Pre and post-operative air bone gaps were 27.57±9.83 and 21.35±10.05 respectively. There was no case of retraction, adhesion, or graft lateralization.

CONCLUSION

Tympanoplasty with boomerang shaped chondro-perichondral graft in middle ear reconstruction has excellent surgical results and minimal complications, even in patients with poor prognostic factors.

Endoscopic Assisted Middle Ear and Mastoid Surgery: Our Experience

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INTRODUCTION

Chronic suppurative otitis media (CSOM) is a chronic inflammation of the middle ear and the mastoid cavity. This study was done to compare outcomes, intra operative visualization of middle ear and operative time duration of endoscopic assisted middle ear surgery with conventional microscopic middle ear surgery.

METHODS

This was a prospective study on 50 patients, randomly divided into two groups: group A (n=25) endoscope assisted middle ear surgery and group B (n=25) with conventional microscopic middle ear surgery. A four mm diameter, 18 cm long rigid, zero-degree endoscope and operating microscope were used. Primary outcomes included mean average pre and post-operative air-bone gap hearing thresholds, intra operative visualization and duration of surgery.

RESULTS

Mean air bone gap closure for endoscopic assisted tympanoplasty was 12.76 6.00 dB, while 8.385.78 dB for non-endoscopic assisted tympanoplasty. A statistically significant difference was observed in the intra-operative duration of endoscopic assisted tympanoplasty in both groups. Graft uptake rate was 92.31% and 84.62% for endoscopic assisted tympanoplasty and non-endoscopic assisted tympanoplasty, respectively. Residual chole-steatoma remnant on endoscopy was found in 5 cases out of 12 mastoidectomy cases performed via endoscopic assistance.

CONCLUSION

The endoscope can be successfully applied to ear surgery for most of the ear procedures with a reasonable success rate both in terms of perforation closure and hearing improvement with minimal exposure.

A Prospective Study of the Evaluation of RIPASA Score in the Diagnosis of Acute Appendicitis

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INTRODUCTION

Recently Raja Isteri Pengiran Anak Saleha Appendicitis (RIPASA) score has been developed for the diagnosis of acute appendicitis in Asian population. RIPASA score is a simple qualitative scoring system based on 14 fixed parameters (two demographic, five clinical symptoms, five clinical signs, two clinical investigations, and one additional parameter NRIC). The purpose of this study was to evaluate the sensitivity and specificity of RIPASA score and its histopathological correlation in acute appendicitis.

METHODS

A prospective study of 100 patients who presented with signs and symptoms of acute appendicitis under various surgical units was conducted after taking clearance from the ethical committee.

RESULTS

In the present study, 100 cases were recruited of which 59 were males and 41 were females. In the study, 89 cases were operated and acute appendicitis was found in 75. This included 46 males and 29 females. The RIPASA scoring system has high sensitivity (94.66%) and positive predictive value (92.20%). RIPASA score was very effective in the diagnosis of acute appendicitis in both genders.

CONCLUSION

The RIPASA score is a fast, simple, reliable, non-invasive, repeatable, and safe diagnostic modality without extra cost and complications. The application of this scoring system improves diagnostic accuracy and consequently reduces negative appendicectomy and complications.

Clinical Study of Post-Operative Pulmonary Complications in Patients of Emergency Abdominal Surgeries and their Prevention and Management

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INTRODUCTION

Post-operative pulmonary complications (PPCs) form a significant chunk of post operative morbidity. Their incidence varies from 2.7-23% in multiple studies. The purpose of this study was to study incidence, morbidity, and risk factors of pulmonary complications in post operative patients of emergency abdominal surgeries.

METHODS

A retrospective case control study was carried on 50 patients of emergency abdominal surgeries. Medical and personal history were evaluated and database was prepared for the preoperative and postoperative pulmonary events of the surgery.

RESULTS

Smoking was found to be twice as common as in case group. Pre-operative clinical chest findings were abnormal in 2/3rd of cases while 92% had normal chest examination. Pre-operative chest skiagram abnormalities were three times more common in the case group. Upper abdomen surgeries were 20% more common in case group. Surgery lasting for three hours had increased chances of PPCs. Mean hospital stay was 21.7 days and mean ICU stay was 8.5 days.

CONCLUSION

Pre-operative chest examination, cheat skiagram, and regular SpO_2 monitoring helps in diagnosing PPCs earlier. Early mobilization and deep breathing exercises should be encouraged.

Randomized Control Prospective Comparative Study of Lichtenstein Tension Free Hernioplasty under Local Anaesthesia versus Spinal Anaesthesia at Tertiary Care Health Centre in Bikaner City

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INTRODUCTION

Lichtenstein carried out a series of laboratory and clinical investigations, comparing various prosthetic materials and, in 1991, reported that monofilament polypropylene stimulates a strong fibroblastic response throughout the interstices and also has a marked resistance to infection. The purpose of this study was to compare Lichtenstein Tension Free Hernioplasty under local anaesthesia versus spinal anaesthesia.

METHODS

A total 100 patients taken were divided into two random groups, one group (Group I) with hernia repair done under local anaesthesia and second group (Group II) hernia repair done under spinal anaesthesia.

RESULTS

Cost of hernioplasty was less in local anaesthesia group (mean 157.88±24.82 Rs.) as compared to spinal anaesthesia (mean 831.20±203.63 Rs.). Total operative time was less in local anaesthesia group 40.14±5.41 minutes as compared to spinal anaesthesia group 54.58±6.78 minutes.

CONCLUSION

Local anaesthesia was associated with less immediate post operative complications. No recurrences were noted during the study period. It is apparent from the study that local anesthesia is a better alternative to spinal anesthesia for short stay or day care surgery.

A Study of Correlation between Clinical, Radiological, and Operative Finding and Conservative Measures in Head Injury

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INTRODUCTION

Head trauma is a leading cause of death in children and young adults. According to CDC, 1.4 million brain injuries are sustained each year. The purpose of this study was to assess correlation between clinical, radiological, and operative finding and conservative measures in head injury.

METHODS

A prospective study was done on 100 patients of head injury. Clinical history, radiological and operative findings were noted. Management modalities were also evaluated. Injury evaluated using Glassgow Coma Scale (GCS).

RESULTS

Out of 100 cases of head injury, 30 cases were operatively managed and 70 were conservatively managed. Road traffic accidents (RTA) were most common cause for head injury. Mild head injury (GCS 14-15) was present in more than half cases, moderate head injury (GCS 9-13) and severe head injury (GCS <8) each were present in nearly quarter of these cases. With decreasing GCS score, operative management of head injury cases increased. Most common CT finding was contusion and subdural hematoma (SDH) in one third of cases each. Most common operative finding was SDH in more than half cases and contusion in one third of cases. Mortality was seen in SDH and ICH in nearly one third of cases.

CONCLUSION

Vast majority of cases could be managed conservatively and in one third of cases, early surgical intervention helped in saving lives of patients.

Abbreviated Injury Scale and Management of Abdominal Organ Injuries in Trauma Patients

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INTRODUCTION

Abdominal trauma is the leading cause of morbidity and mortality in all age groups worldwide. The abbreviated injury scale (AIS) is an anatomically based consensus derived global severity scoring system. The aim of this study was to assess the role of AIS in the management of abdominal organ injuries in trauma patients.

METHODS

A prospective study was conducted on 80 patients and abbreviated injury scale (6 point) was used for scoring the injuries of the abdominal organ. Management protocol was noted for all the patients.

RESULTS

Solid organs were most commonly injured accounting for 71% of the cases as compared to hollow viscous which accounted for 28% of the cases. In solid organs injury, liver was most commonly injured with 37 cases (47%) while spleen ranked second with 16 cases (20%). Patients with AIS score 2 accounted for maximum number of cases in trauma patients (46%) followed by AIS score 3 (33%), and AIS score 4 (9%). Maximum incidence of surgical intervention was seen with AIS score 6 and 5. Patients with AIS score 5 and 4 had maximum average duration of hospital stay. The mortality was highest in patients with AIS score 6 followed by 5.

CONCLUSION

AIS score for any organ injury have a significant impact on the clinical presentation, management, and outcome and should be used by clinicians routinely to improve the results of trauma.

To Study the Clinical Features of Various Causes of Acute Abdomen

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INTRODUCTION

Acute abdominal pain is defined as a pain that arises suddenly and is of less than a week's duration and in most cases less than 48 hours' duration. The purpose was to study the clinical features of various causes of acute abdomen patients.

METHODS

This was a prospective study conducted on 100 patients of acute abdomen who attended surgical out patients' department. A brief clinical history was taken and cause of the pain was noted

RESULTS

Acute appendicitis was the most common cause of acute abdomen comprising of 48% of cases followed by perforation peritonitis comprising of 22% cases. Among perforation peritonitis, peptic perforations were the most common type (17%) and biliary diseases comprised of 11% of cases.

CONCLUSION

Acute abdomen is one of the most common presentations in emergency department. The common causes are acute appendicitis, perforation peritonitis, biliary diseases, and intestinal obstructions followed by traumatic causes in decreasing order.

A Clinical study of Enterocutaneous Fistulae

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INTRODUCTION

Entero cutaneous fistulae (ECF) may be challenging to manage due to large volume of fluid losses that may result in severe dehydration, electrolyte imbalances, malnutrition, and sepsis. The purpose of this study was to describe cause, anatomical location, fistula output, complications, and outcome of enterocutaneous fistula.

METHODS

The present retrospective study was based on case records of 70 patients of ECF admitted in various surgical wards. The description of fistula included cause, anatomical location, fistula output, complications, and outcome. Fistula output was quantified by direct measurement, in the presence of drain or by calculating number of dressing pads soaked per day.

RESULTS

In the study, 12 patients had colonic fistula and the remaining had small intestinal fistula: 30 ileal, 12 duodenal, and 16 jejunal. There were 38 patients with high-output fistula. 86% patients received octreotide subcutaneously TDS. 71% patients could be managed successfully with conservative means while 12% (8) underwent operative management namely exteriorization of bowel loop and resection and anastomosis. Overall mortality was 22% (15).

CONCLUSION

Early diagnosis and stabilization form key aspects of management of ECF as most patients are managed conservatively with advantageous role of octreotide.

Comparative Study of Platelet Rich Plasma, Povidone Iodine and Silver Sulfadiazine Dressing in Management of Burns and Chronic Ulcers

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INTRODUCTION

Platelet rich plasma (PRP) contains high concentrations of platelet and natural fibrinogen which significantly affect wound healing. The purpose of this study was to study and compare the effect of platelet rich plasma, povidone iodine, and silver sulfadiazine in management of chronic ulcers and burns.

METHODS

A prospective comparative study was carried among 70 cases admitted in various surgical and burn wards of Department of General Surgery. These cases were divided into three groups: Group A was given PRP, Group B povidone iodine, and Group C sulfadizine. Observations were made regarding subjective complaints of pain, fever, discomfort, discharge etc. Photographic records and bacteriological counts of ulcers and burns were made before and after treatment. Rate of healing in cases of chronic ulcers and burns was observed on every fifth day by size of ulcer and appearance of granulation tissue.

RESULTS

In chronic ulcers, average reduction in size of ulcers at the time of patient's discharge from hospital were 71%, 68%, and 62% in groups A, B, and C, respectively. While in burn cases, average reduction in size of ulcers was 63.5%, 62% and 60% with groups A, B, and C, respectively.

CONCLUSION

In burns, dressing by PRP in comparison with povidone iodine and silver sulfadiazine is very useful by promoting rapid epithelialization.

A Prospective Study of Role of Preoperative Ultrasound in Breast Cancer Patients for Evaluating Axillary Lymph Node Status

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INTRODUCTION

Breast cancer has been the focus of intensive study in relationship to its etio-pathogenesis, early diagnosis, therapeutic modalities, and prognosis. The aim of this study was to determine the axillary lymph node status prior to surgery with the help of ultrasonography (USG).

METHODS

A total of 40 cases of proven breast malignancy with clinically negative axilla (i.e. T1-T2, N0) underwent USG and ultrasound guided FNAC of axilla preoperatively. Patients underwent modified radical mastectomy and specimen were sent for histopathological examination. The collected data was statistically analysed.

RESULTS

Out of 70 lymph nodes, USG labelled 28 lymph nodes as normal (benign) and 42 as abnormal (indeterminate + suspicious). Out of 28 normal lymph nodes on USG, 24 were found true negative on FNAC and out of 42 abnormal lymph nodes, 35 were found true positive on FNAC, with sensitivity=53.6%, specificity=99.0%, negative predictive value= 88.1%, and positive predictive value =93.8%.

CONCLUSION

Axillary ultrasound and ultrasound guided FNAC are a rapid and cost-effective method of axillary staging in breast cancer patients and should become a routine part of patient care because it will spare many patients from undergoing sentinel lymph node biopsy (SLNB) and unnecessary axillary lymph node dissection (ALND).

An Evaluation of Cases of Gangrenous Gut Cases

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INTRODUCTION

Gangrenous bowel goes unrecognized or misdiagnosed most of time. The time interval between onset of disease and admission of the patient affects the outcome. The purpose of this study was to describe the etiology, clinical findings, and management of gangrene of gut so that gut gangrene can be suspected as early as possible.

METHODS

Study was done on 30 patients of gut gangrene who attended the outpatient department. A clinical and personal history was taken. Clinical findings, cause and management of gangrene was noted.

RESULTS

Males (67%) were affected more than females. Besides pain abdomen in all cases, vomiting was present in 63.3%, followed by not passing flatus and motion in 60%. The past history of surgery was present in 20% of patients. Most common organ involved in gangrenous gut was ileum (66.66%), followed by colon, appendix, and jejunum. Out of 20 cases of gangrenous ileum, resection anastomosis was done in 15 cases. In 5 cases, ileostomy was made. Out of 4 cases of gangrenous colon, resection anastomosis was done in 2 cases (6.6%) and in two cases colostomy was made. In post-operative complications, wound dehiscence was found in 4 cases.

CONCLUSION

The delay in the hospitalization of five days or more after the onset of symptoms had poor outcome which indicate that the patient should be hospitalized and managed as early as possible after the onset of symptoms.

Prospective Analysis of the Management of Small Bowel Obstruction Using Oral Contrast Agent at Tertiary Care Hospital in Western Rajasthan

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INTRODUCTION

Intestinal obstruction is a frequently seen entity in the emergency department that represents 25% of abdominal pain consultations. The purpose of this study was to evaluate operative rate reduction and shortening of the hospital stay after the use of gastrografinin in management of adhesive small bowel obstruction.

METHODS

A total of 100 patients were randomized into two groups: the control group received conventional treatment, whereas the study group received an addition of 100 ml gastrografin meal. Patients were followed up within 4 days after admission and clinical and radiological improvements were evaluated.

RESULTS

Surgical procedure was performed in 10% of the gastrografin group for whom conservative treatment failed at the end of fourth day. In contrast, surgery was required in 28% of control group. These findings show that gastrografin decreased the need for surgical management by 18%, but no statistically significant differences were observed. The analysis of length of hospital stay revealed a significant reduction from 4.60 ± 1.14 days to 2.64 ±1.05 days for control and gastrografin groups, respectively.

CONCLUSION

The use of gastrografin in adhesive small bowel obstruction is safe and reduces the length of hospital stay.

A Prospective Study to Assess Association of Iron Deficiency with Gallstone Disease

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INTRODUCTION

Gallstone disease is a common clinical entity affecting adult population of both the sexes. The objectives of this study were to assess the role of iron deficiency in the formation of gallstones and to estimate the serum ferritin level as a diagnostic tool of iron deficiency anaemia in patients with gallstone disease.

METHODS

A prospective study was performed among 60 patients (13 males and 47 females). The included cases were those in whom cholelithiasis was diagnosed on ultrasonography with special focus on association with iron deficiency. Special investigations included serum iron, serum ferritin, TIBC, serum cholesterol, and bile cholesterol.

RESULTS

Iron deficiency was observed in 19 patients. Out of the total 47 female patients, 31 patients were multipara. The serum cholesterol was found to be increased in 12 patients in the anaemic group compared to 8 in the non-anaemic group. Serum ferritin levels were less than normal in 2 anaemic patients while they were less than normal in 4 patients in non anaemic group. The mean bile cholesterol in anaemic patients was found to be 289.46 mg/dl while it was found to be 158.68 mg/dl in non anaemic patients.

CONCLUSION

The low serum iron levels lead to bile supersaturation with respect to cholesterol which leads to gall stone formation. The serum ferritin cannot be taken as sole diagnostic tool in the diagnosis of iron deficiency as its values can vary according to various other causes.

A Study of Perforation Peritonitis with Special Reference to Bacteriological Profile

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INTRODUCTION

Perforation of gastro-intestinal tract with peritonitis is the most common surgical emergency in India. The purpose of this study was to describe perforation peritonitis with special reference to bacteriological profile.

METHODS

This study was carried out on 60 patients.. An erect abdomen X-ray was done for all patients to particularly look for presence of gas under diaphragm.

RESULTS

Peptic ulcer perforation was found to be the most common cause of perforation peritonitis. The most common age group involved was more than 50 years and males: female ratio was 6:1. Pain abdomen was the most important presenting symptom in non-traumatic perforation peritonitis followed by distension of abdomen, constipation, and vomiting. *E coli* was the most common organism followed by *Klebsiella* and *Pseudomonas. E coli* and *Klebsiella* was found to be sensitive to Piperacillin + Tazobactum and Meropenam in all cases. *Pseudomonas* was found to be sensitive to Meropenam and Cefoprazone in all cases.

CONCLUSION

Primary closure of perforation was the most common procedure employed. Resection and anastomosis were also done for bowel perforation.

Maternal and Fetal Outcome in Liver Disorders with Pregnancy

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INTRODUCTION

Normally in pregnancy some hepatic changes occur, but they needed to be differentiated from pathologies which carry significant risk to the mother and fetus. The purpose of this study was to assess the liver disorder in pregnancy and its effect on the maternal and fetal outcome.

METHODS

This was a hospital-based prospective observational study and all pregnant women who presented with liver dysfunction to the antenatal clinic or admitted in the obstetrics wards were enrolled.

RESULTS

Incidence of liver disorder in pregnancy was 1.2%. Preeclampsia (36%) was the common cause accounting for liver dysfunction in pregnancy. Out of 203 cases, 200 delivered and 3 aborted spontaneously. Among the delivered patients, 66% patients delivered vaginally and 34% underwent the cesarean section. DIC (10.8%) was the most common maternal complication and 16.3% mothers needed MICU admission. There were 7 maternal deaths (3.4%). Among the 205 births, there were 166 live births and 130 low birth weight. Seventy three babies had APGAR score of <7 at 5 minutes. There were 23 intrauterine deaths, 16 stillbirths, and 14 neonatal deaths. Perinatal mortality rate was 25.85%.

CONCLUSION

Pregnancy with liver disorder results in very high fetal as well as maternal morbidity and mortality.

A Study of Maternal Near Miss using WHO Scoring System

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INTRODUCTION

Maternal mortality is a great public health concern. It also helps health professionals to revise obstetric policies and practices. The purpose of this study was to determine the frequency of Maternal Near Miss (MNM) cases, to calculate maternal near miss incidence ratio, maternal near miss to mortality ratio and MI, nature of near miss events with that of maternal mortality, epidemiological profile, risk factors and trend of near miss events.

METHODS

A prospective and descriptive study was conducted on 24,486 obstetric admissions. Those with life threatening conditions were classified using WHO 2009 criteria for identification of MNM cases.

RESULTS

There were 20,008 deliveries and 24,486 obstetric admissions. There were 380 MNM cases and 30 maternal deaths. With 17633 live births, MMR of our hospital was 170.13 per lakh live births. MI was 7.32. Near miss incidence ratio was 14.29/1000 deliveries and near miss to mortality ratio was 12.6:1. Hemorrhagic and hypertensive disorders were the commonest complications associated with near miss and maternal deaths.

CONCLUSION

Identification of preventable factors and special preventive actions should be taken for management of complications in MNM cases.

Comparative Study of Primary Caesarean Section in Primigravida and Multigravida at Tertiary Care Hospital of Western Rajasthan

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INTRODUCTION

Caesarean section is one of the commonly performed surgical procedures in obstetrics and is certainly one of the oldest operations in surgery. The purpose of this study was to compare primary caesarean section in primigravida and multigravida.

METHODS

This was a hospital based prospective study. The study was conducted on 16386 patients who were divided in groups A and group B.

RESULTS

Total 16386 patients delivered 27.1% had LSCS. Total 6572 primigravida patients delivered out of which 32.1% had LSCS while 12.6% of total 9814 multigravida patients delivered had primary LSCS. Moderate and severe anemia was more common in group B (84.7%) as compared to group A (32.7%). In group A, 10% LSCS were elective whereas only 7.3% were elective in group B. Fetal distress was most common indication in group A (53.3%) while in group B most common indication was APH (35.9%). Maternal intra-operative complications were much higher in group B (38%) as compared to group A (1.3%). Blood transfusion rate was high in multigravida (20.7%) compared to primigravida (4.7%). Perinatal mortality was significantly higher in group B (7.3%) as compared to group A (2.7%).

CONCLUSION

Although primary caesarean section in multipara constitute only a small percentage of total deliveries and caesarean, they are associated with high maternal and perinatal morbidity.

A Prospective Comparative Study to Assess the Impact of Maternal Body Mass Index on Obstetric Outcome at Tertiary Care Hospital in Western Rajasthan

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INTRODUCTION

Pregnancy complications related to maternal body mass index (BMI) is a growing problem. The purpose of this study was to assess the pregnancy outcome among underweight and overweight women.

METHODS

A hospital based prospective comparative study was conducted on 225 women attending the antenatal outpatient department. These were divided into three groups normal, high and low maternal BMI.

RESULTS

The incidence of underweight was 13.88% and obese pregnant women were 27.57%. Average weight gain was 7.42 kg in overweight, 8.38 kg in normal weight and 6.44 kg in underweight group ($p=0.001$). Severe anemia was more common in underweight group (16%) as compared to normal and overweight group ($p<0.05$). Incidence of preeclampsia was higher in overweight group ($p=0.009$). Induction of labor (29.33%), failed induction, LSCS (37.33%) instrumental delivery (2.67%) and elective LSCS were also higher in over weight category. Postpartum complication like PPH and cesarean wound infection rate were significantly higher in over weight group.

CONCLUSION

Prevalence of overweight and obesity in reproductive age group has risen over the years. On the other hand, underweight is still a major problem in developing countries due to poverty, malnutrition and illiteracy.

Comparison of Intramuscular Methergin, Rectal Misoprostol, and Low Dose Intravenous Oxytocin in Active Management of the Third Stage of Labour

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INTRODUCTION

Active management of third stage of labour (AMTSL) is a critical intervention for the prevention of post partum haemorrhage, which is still the most common cause of maternal morbidity and mortality. The objective of this study was to compare the effect of intramuscular methergin, rectal misoprostol and low dose intravenous oxytocin in the active management of the third stage (AMTSL) of labour in terms of amount of blood loss, duration of third stage of labour, cost effectiveness and side effect profile.

METHODS

The present study was conducted on 600 pregnant patients admitted in the maternity ward. These were divided in three groups group A intramuscular (methergin), group B-rectal (misoprostol) and group C intravenous (oxytocin) consisting of 200 cases each.

RESULTS

Mean blood loss in methergin group (251.48 ± 49.60 ml) was found to be least as compared to misoprostol (338.23 ± 74.37 ml) and oxytocin (330.29 ± 63.44 ml) (p=0.000). Mean duration of third stage of labor was also found to be least in methergin group (6.18±1.48 minutes) (p=0.000).

CONCLUSION

Methergin was found to be the most effective drug for active management of third stage of labor. In remote areas, rectal misoprostol remains an alternative.

Prediction of Adverse Maternal Outcome in Pre-Eclampsia using Full PIERS Model

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INTRODUCTION

Hypertensive disorders of pregnancy (HDP) remain a leading cause of maternal and perinatal morbidity and mortality. The Pre-eclampsia Integrated Estimate of Risk (PIERS) model predicts combined adverse maternal outcome. The purpose of this study was to evaluate the accuracy of full PIERS model for prediction of adverse maternal outcome.

METHODS

This was a prospective observational study on 410 women. A combined risk probability score was calculated by using full PIERS equation and online calculator after obtaining all variables within 24 hours of admission.

RESULTS

Adverse outcome was seen in 72 (17.5%) women, more in unbooked than in booked (68% and 32% respectively). 50% were in group of <34 weeks. Most common symptom was swelling (69%) followed by headache, pain abdomen. Symptoms of chest pain, dyspnea, nausea, vomiting, epigastric pain and visual disturbances had good correlation with maternal outcomes. Thrombocytopenia, high LDH, creatinine, urea and uric acid were also associated with adverse outcomes. Most common adverse outcome was eclampsia (37.5%) followed by abruption (29.1%). A score above 10% had significant adverse outcome.

CONCLUSION

Full PIERS risk prediction model is useful to guide clinical decision making, improve understanding of the disease process and to define at-risk groups based on prognosis.

Fundus Changes in Hypertensive Disorders of Pregnancy and its Correlation with Maternal and Fetal Outcome

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INTRODUCTION

Hypertensive disorders in pregnancy are considered the major cause of maternal morbidity and mortality in developing as well as developed countries. The objectives of this study was to estimate the frequency and severity of fundoscopic changes in women with hypertensive disorders in pregnancy and correlation of the fundus changes with maternal and fetal outcome.

METHODS

A total 700 patients diagnosed with hypertensive disorder after 20 weeks of gestation were enrolled in the study. Hypertensive retinopathy changes were graded according to Keith Wagener Classification.

RESULTS

The rate of positive findings of fundoscopy was high 63%. The mean diastolic BP was 105.78 ± 10.57 mm Hg. Mean birth weight was 2.43 kgs, mean gestational age at delivery was 36.56 weeks. 79.81% women with positive fundus changes had proteinuria ≥+1. 27.71% women with positive fundus changes needed ICU admission. The frequency of eclampsia was high 25.3% in primigravida as compared to 13.8% in multigravida. Presence of grade ≥1 retinopathy change in mother was associated with higher rate of low birth weight (84.52%); low apgar <7 at 5 min (81.97%), stillbirth (71.43%) and NICU admission (81.40%).

CONCLUSION

Fundoscopy, a very simple tool, is a wonderful bedside investigation which must be used in all women with hypertensive disease in pregnancy.

Association of Bacterial Vaginosis and Preterm Labour and its Effect on Feto-maternal Outcome-A Prospective Case Control Study

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INTRODUCTION

Bacterial vaginosis (BV) is a condition characterized by a change in microbial echo system of vagina. The present study was carried out to know the association of bacterial vaginosis with preterm labour and to evaluate feto-maternal outcome.

METHODS

A total of 85 pregnant women between 28 and 37 weeks of gestation with preterm labour and 85 pregnant women more than 37 week of gestation with labour pain were selected as case and control group respectively.

RESULTS

In the case group, 34% women were having bacterial vaginosis compared to 18% of control group by Amsel's criteria. This result was highly significant statistically to prove bacterial vaginosis as a cause of preterm labour (p=0.0143). Whiff test was very sensitive (90.91%) and clue cells were very specific (89.68%) criteria among all four diagnostic criteria. Bacterial vaginosis was related to premature birth at a mean gestational age of 33 weeks and a mean birth weight of 1827 gm and low APGAR score.

CONCLUSION

Bacterial vaginosis was one of the most important causes of preterm labour leading to various neonatal mortality, morbidity and even permanent disability. Its detection and early treatment may improve the perinatal outcome.

A Prospective Study of Causes and Fetomaternal Outcome of Critically Ill ICU Obstetric Cases

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INTRODUCTION

The critically ill obstetric patient presents a unique clinical challenge to the intensivist. This is because of maternal physiological adaptations to pregnancy, pregnancy specific conditions which may require critical care management and also the presence of a fetus whose well-being is linked to the mother. The purpose of this study was to assess causes and fetomaternal outcome of critically ill ICU obstetric cases.

METHODS

This was a prospective observational hospital based study conducted on 200 critically ill obstetric patients admitted in ICU.

RESULTS

Mean age was 23.22±4.02 years, 57% women were primigravida and 43% women were multipara. 70.50 % at term, 27.50% pre-term, and 2% at post-term. The obstetric causes accounted for 73% and non obstetric causes were 27%. The heart failure accounted for 53.70 %, respiratory disorder 27.78 %, hepatic disorder 18.52 %, hypertensive disorder 46.58 % , PPH 23.29 %, and hemorrhage 17.12%. Among 200 cases, 116 patients required hemodynamic support, 74 required ventilator support and 20 patients surgical interventions with hemodynamic and ventilator support. Majority of them delivered vaginally. Among the total patients 82% were alive and 9% were fetal death.

CONCLUSION

Early detection and prompt referral to tertiary centre with intensive care facilities minimize the prevalence of multiple organ failure and mortality in critically ill obstetric patients.

Middle Cerebral Artery Doppler Peak Systolic Velocity and Pulsatility Index in Prediction of Perinatal Outcomes of IUGR Pregnancies

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INTRODUCTION

Fetal middle cerebral artery-peak systolic velocity (MCA-PSV) appears to be a reliable indicator of adverse perinatal outcome in growth restricted (IUGR) fetuses. This study was aimed to determine the association of MCA-PSV and pulsality index (PI) in prediction of perinatal morbidity and mortality in clinically suspected IUGR pregnancies.

METHODS

This was a hospital based prospective study conducted on 80 patients suspected with IUGR singleton pregnancies (estimated fetal weight <10^{th} percentile for gestation) with gestational age of 28 to 36 weeks. These were divided into two groups, group A IUGR patients with normal MCA-PSV (5^{th}-95^{th} percentile) and group B IUGR patients with abnormal MCA-PSV (>95^{th} percentile).

RESULTS

In group B, majority of fetuses showed adverse perinatal outcome in term of all variables. The association of abnormal MCA doppler with adverse perinatal outcome was found to be significant for both PSV and PI ($p<0.05$ for both), MCA-PSV was 81.40% sensitive and 86.49% specific with 87.50% positive predictive value in determining adverse perinatal outcome. However, specificity of MCA-PI was lower (78.38%) than MCA-PSV (86.49%).

CONCLUSION

Serial doppler examinations of fetal MCA-PSV provide better information than does a single measurement.

A Comparative Analysis of First Trimester Medical Abortion in Cases with Previously Scarred and Non-Scarred Uterus

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INTRODUCTION

In the recent years, the caesarean section rate is increasing gradually in almost all countries of world. In previously scarred uterus, the use of medical abortion regimen could avoid severe complications such as uterine perforation, cervical laceration and other physical and psychological trauma which are caused by surgical termination of pregnancy. This study was aimed to compare the efficacy, safety, and acceptability of medical abortion in previously scarred and non-scarred uterus.

METHODS

This prospective study was conducted on 150 cases and were divided into two groups, group A amenorrhoea $\leq$ 49 days with previous one or two LSCS (lower segment cesarean section) and group B with no LSCS (primi-gravida and multipara with prior normal delivery). Regime used in this study was tablet Mifepristone 200 mg followed by Misoprostol 600 µgm. The follow up was done at day 14 using ultrasonography.

RESULTS

The overall success rate for complete abortion in group A was 88% and that of group B was 89.3%. Total incidence of incomplete abortion was 9.33% in group A as compared to 8% in group B and continuation of pregnancy occurred in 2.67% .

CONCLUSION

These regimens offer the prospect of a more private, less intrusive form of abortion that is both safe and effective.

Fetomaternal Outcome in Obstructed Labour

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INTRODUCTION

Obstructed labour is still a major clinical problem of obstetrics seen in the developing countries which results from neglected watch on progress of labour. The study was aimed to analyze the various factors, complications, the management and incidence of maternal and perinatal mortality due to obstructed labour.

METHODS

The study was a descriptive cross-sectional study conducted on 50 cases admitted with prolonged labour and maternal distress with signs and symptoms of maternal exhaustion, dehydration, keto-acidosis, Bandl's ring.

RESULTS

Out of the 50 cases, obstructed labour was mostly seen in primigravidae 62% (31) and cephalopelvic disproportion (CPD) was the most common cause in 64% (32). Abdominal delivery was carried out in 98% cases (49), most common maternal complication was puerperal sepsis 40% (20). The still birth rate was 18% (9 cases) and NICU admission was 72% (36). Perinatal mortality was 24% and maternal mortality was seen in 2 %.

CONCLUSION

Peripheral hospitals need appointment of qualified personnel and well trained staff who can recognize any deviation from normal labour and recognize malpresentation and malposition at the earliest and refer such cases to higher centers.

Comparative Study of Efficacy of IV Dexamethasone and Perineural Dexamethasone in Prolonging the Duration of Analgesia in Single Shot Supraclavicular Block in Upper Limb Surgery

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INTRODUCTION

Dexamethasone has been used as an off-label drug for post-operative pain control. The purpose of this study was to confirm whether addition of intravenous dexamethasone will prolong the duration of analgesia after single-injection supraclavicular block compared to the conventional long-acting local anaesthetic alone or in combination with perineural dexamethasone for ambulatory upper extremity surgeries.

METHODS

A total of 120 patients undergoing elective upper limb procedures below elbow were recruited in the study. Patients were given supraclavicular block after randomizing them into three groups of 40 each group. Group A received 30 ml 0.5% ropivacaine + 10 mg dexamethasone perineural (RDP), group B received 30 ml 0.5% ropivacaine+10 mg dexamethasone IV (RDI), group C received 30 ml 0.5% ropivacaine only without adjuvants (R).

RESULTS

Patients who were administered dexamethasone through either route showed a significantly short period of onset and longer duration of sensory and motor blockade ($p<0.001$) compared to patients receiving only ropivacaine.

CONCLUSION

Perineural dexamethasone decreased the onset time of sensory and motor blockade and increased the duration of blockade without causing any intraoperative or post-operative complications.

A Comparative Study between Dexmedetomidine and Fentanyl on Intubating Conditions during Awake Fiberoptic Bronchoscopy

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INTRODUCTION

Various drugs are used for providing favorable intubation conditions during awake fiberoptic intubation (AFOI). However, most of them cause respiratory depression and airway obstruction leading to hypoxemia.The purpose of this study was to compare dexmedetomidine with fentanyl for conscious sedation during awake fiberoptic intubation (AFOI) in adult patients scheduled for elective surgeries.The drugs were compared in terms of patient comfort during intubation, oxygen desaturation caused, tolerance to intubation, and changes in hemodynamics.

METHODS

In this randomized double blinded prospective study, patients were randomly divided into two groups with 30 patients in each. Infusion of dexmedetomidine (1.5 mcg/kg over 10 min) in group A and fentanyl (2 mcg/kg over 10 min) in group B was started.

RESULTS

Cough score and intubation comfort score were significantly favorable ($p<0.05$) in group A as compared to group-B. There was significantly less number of people with oxygen desaturation in group A ($p<0.05$). Post intubation score was also significantly better in group A ($p<0.05$). There was no significant variation in hemodynamics in group A.

CONCLUSION

Dexmedetomidine is more effective than fentanyl in producing better intubating conditions.

To Evaluate the Effect of Dexmedetomidine Pretreatment on Myoclonus During Anaesthetic Induction with Etomidate

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INTRODUCTION

Etomidate is frequently used nowadays as an inducing agent in patients with compromised cardiovascular function, but it leads to undesirable side effect like myoclonus during induction. Several drugs have been considered before induction to reduce the incidence of myoclonus. The aim of the study was to compare the effect of dexmedetomidine (DEX) pretreatment on the incidence and severity of etomidate-induced myoclonus.

METHODS

This prospective, randomized double blinded study was done in 100 patients undergoing elective surgical procedures. They were randomly allocated to two groups for intravenous administration of 100 mL isotonic saline (group I), and 1.0 µg/kg DEX in 100 ml isotonic saline (group II), 10 minutes prior to induction. All groups subsequently received 0.3 mg/kg etomidate by intravenous injection. The incidence and severity of myoclonus were recorded for 1 minutes after etomidate administration.

RESULTS

The severity of myoclonus was graded as mild, moderate, and severe. In group II and group I number of patients who had mild, moderate and severe myoclonus was 10, 5, 4 and 11, 15, 9 respectively.

CONCLUSION

Pretreatment with 1.0 µg/kg dexmedetomidine significantly reduced the incidence of etomidate induced myoclonus during anesthetic induction.

Inhalation of Ketamine in Different Doses to Decrease the Severity of Postoperative Sore Throat

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INTRODUCTION

Post-operative sore throat (POST) occurs in 21 to 65% of patients. Nebulization of ketamine reduces POST. The purpose of this study was to compare the effectiveness of nebulized ketamine in different doses to reduce POST and effect on intraoperative haemodynamics.

METHODS

This study was a prospective, randomized, and double blind controlled trial included 150 patients undergone surgery under general anaesthesia. They were randomized into three groups, patients were nebulized with 5 ml solution (group K 1-1 ml of ketamine, 50 mg/ml +4 ml normal saline), group K 2 (0.5 ml of ketamine, 50 mg/ml + 4.5 normal saline), group S-5 ml normal saline. Preoperative, intra operative and postoperative haemodynamic monitoring were done. The POST monitoring was done at 2, 4, 8, 12 and 24 h post operatively.

RESULTS

The overall incidence of POST in the present study was 29.33%. In group S, the incidence of POST was observed to be 46%. In group K1, the incidence was 20%, and 22% in group K2 ($p< 0.05$). The intra operative vitals were more stable at all time intervals in group K 1 as compared to the other groups.

CONCLUSION

Both doses (25 mg and 50 mg) of nebulized ketamine were almost equally effective in preventing post-operative sore throat; however the intra operative vitals were more stable.