Abstracts

A-1
Viral Hepatitis Award Session

Simultaneous PCR amplification of hepatitis C and E virus genomes in sera of patients with acute viral hepatitis and fulminant hepatitis. Kar P, Madan K, Agarwal A, Gopakrishna V, Das BC, Sharma JK, Das UP. Department of Medicine and Division of Molecular Oncology, Institute of Cytopathy and Preventive Oncology (ICMR), Maulana Azad Medical College, New Delhi

A study was undertaken to investigate the role of HCV either alone or together, in the causation of sporadic acute viral hepatitis (AVH) and fulminant hepatitis (FH) by simultaneous detection of their genomes in the serum samples using the reverse transcription and nested polymerase chain reaction (RT-PCR). A total of 50 patients were enrolled in the study of which 34 had AVH, HBsAg and IgM antibodies against HAV, HBsAg and HEV and also antibodies against HCV using the commercially available ELISA kits. All these samples were then subjected to RT-PCR using primers for both HCV and HEV simultaneously in the same reaction mixture. Hepatitis C or hepatitis E was diagnosed when either the antibodies or PCR or both were positive for the respective viruses. Evidence of hepatitis C was present in 6 of the 34 (17.6%) cases of AVH and 2 out of 16 (12.5%) cases of FH. In the AVH group 4 patients and 1 in the FHF group were positive by PCR and the rest by serology. But as a sole etiological agent, HCV infection was found in only one (2.4%) case of AVH and FHF respectively. Excluding coinfection with other viruses, HEV was found to be the sole etiological agent in 15/34 (44.1%) of AVH and 7/16 (43.8%) cases of FHF. In 5 (10%) (4 AVH and 1 FHF) of the 50 cases evidence of infection with both HCV and HEV was present. But only in 2 of these 5 cases genotypes of both HCV and HEV were coamplified. In 7 (4 AVH and 3 FHF) out of 50 (14%) cases, no known viral agent could be detected. Our results suggest that HEV is the most common etiological agent for both acute viral hepatitis and fulminant hepatic failure and that HCV is a rare cause of acute liver disease although along with other virus, evidence of either present or past HCV infection may be present in substantial number of cases. Furthermore advanced-stage pregnancy appears to be a potential risk factor for HEV infection and high rate of mortality in women. The study suggests that the method of simultaneous amplification of both HCV and HEV genomes could reduce the time, labour and cost involved in diagnostic workup of acute liver disease patients.

A-2
Acute sporadic non A to G hepatitis. Raj Mehrotra, Prateek K Mehrotra. Department of Pathology, King George's Medical College, Lucknow 226 003

The aetiological agents of acute sporadic non A to G hepatitis remain to be identified though it is recognised to be a definite clinical entity. The aim of the study was to identify prevalence of acute sporadic non A to G hepatitis, 67 acute viral hepatitis (AVH) patients (15-60 years), presenting within one week of onset of their clinical symptoms were studied. The AVH diagnosis was established by clinical symptoms, supplemented by abnormal liver function tests. Other possible causes which might have led to a similar clinical presentation (surgical jaundice, drug induced hepatitis, herpes and cytomegalovirus infection) were excluded. The diagnosis of non A to G hepatitis was done by exclusion. Detection of antigen / antibody for hepatitis A, B, C, D, E by enzyme immune assay (ELISA) and polymerase chain reaction (PCR) for hepatitis B (HBV-DNA), hepatitis C (HCV-RNA) and hepatitis G (HGV-RNA) were done at the time of presentation and at two weekly intervals. In 6 patients (9%) all the markers of hepatitis A to G were absent at time of presentation and subsequent intervals and were therefore labelled as acute non A-G hepatitis. A complete clinical and biochemical recovery occurred in all the 6 patients at the end of 3 months follow up. It is postulated that there indeed exists a subset of acute viral hepatitis (non A to G) which cannot be attributed to any of the known agents at present.

A-3
Combination therapy of low-dose interferon and lamivudine for chronic HBV infection. DN Amaraparkar, S Agal, R Baijal, PP Kulshrestha. *Bombay Hospital and Medical Research Centre, **Jagjivan Ram Hospital, Mumbai

OBJECTIVE: To evaluate the efficacy of combination therapy of low dose interferon and lamivudine in patients with chronic HBV infection. METHODS: Twenty patients (15 male, 5 female; mean age 33.3 years, range 25-55 years) with evidence of chronic HBV infection (HBV DNA positive by bDNA) with abnormal aminotransferases and without any prior antiviral treatment were studied. The subjects received combination of IFN α2b 3 mL/Tw and oral lamivudine 150 mg OD (children 25 mg OD) for a total duration of 16 weeks. RESULTS: Seventeen out of 20 patients were HBsAg positive and antiHBc negative whereas 3 patients were HBsAg as well as antiHBc negative (HBV mutants). Four patients were cirrhotics; 2 had glomerulonephritis as presenting feature and 4 had chronic renal failure harbouring chronic HBV infection. The response to treatment was seen in 17 out of 20 patients. (85%) indicated by normalisation of aminotransferases, disappearance of HBV DNA and seroconversion to antiHBe positivity in 14 out of 17 patients with wild type HBV infection at the end of 16 weeks of treatment. Of interest
was the clearance of virus from the two children included in the study and also from the 2 patients manifesting glomerulonephritis as the predominant presenting feature of HBV infection. Three patients (15%) failed to clear the virus with the combination therapy, one of them died of an upper GI bleed 2 months after stopping the treatment. The duration of follow up ranged from 0 to 21 months (mean 4 months) at the end of which none of the responders had a relapse. All the subjects tolerated the treatment well and none of them needed any dose reduction of interferon and lamivudine. Only minor side effect noted was leg cramps in a few patients.

CONCLUSIONS: The combination therapy with low dose interferon and lamivudine is a highly effective and well tolerated treatment for chronic HBV infection in interferon-naive patients and the responders maintain the remission in the short term follow up after completion of treatment.

B J Vakil Young Investigator Award

A-4
Assessment of rectal mucosal blood flow in patients of portal hypertension with laser doppler velocimetry.

INTRODUCTION: A lot of literature is available regarding portal hypertensive gastropathy (P.H.G.). However, there is a paucity of data on portal colopathy (P.H.C.). We decided to study the correlation between rectal mucosal blood flow (R.M.B.F.) and P.H.C. for the first time in the world literature.

OBJECTIVES: To study the rectal mucosal blood flow in the patients of portal hypertension. PATIENTS AND METHODS: Patients of cirrhosis, pre and post sclerotherapy with age and sex matched controls without any major illness were included in the study. R.M.B.F. was studied with laser doppler velocimeter and endoscopic probe. RESULTS: R.M.B.F. was studied in pre and post sclerotherapy group and was compared with the control group. There were 15 patients (M:12, F:3) in the presclerotherapy group and 15 patients (M:13, F:2) in the post sclerotherapy group and 11 controls (M:8, F:3). The R.M.B.F. values were as follows:

- Presclerotherapy group: 2.357 ± 0.667 v
- Postsclerotherapy group: 2.212 ± 0.937 v
- Controls: 4.69 ± 1.208 v

R.M.B.F. was significantly low in the presclerotherapy (p < 0.001) and post-sclerotherapy group (p < 0.0001) than the controls. The R.M.B.F. was lower in the post-sclerotherapy group than the presclerotherapy group but was statistically insignificant (p > 0.05). Rectal varices were seen in 2 patients in the presclerotherapy group and 8 in the post-sclerotherapy group. Colopathy was seen in 5 patients in pre and 11 in the post-sclerotherapy group. CONCLUSION: (1) R.M.B.F. was lower in patients of portal hypertension and it reduced after sclerotherapy. (2) P.H.C. and colorectal varices are more common after sclerotherapy. (3) Laser doppler is a simple method to study R.M.B.F.

A-5
Comparison of natural history of hepatitis B and hepatitis C. DN Amarapurkar, U Bannerjee, R Baijul, S Agar, PP Kulshreshtha. Departments Of Gastroenterology, Bombay Hospital and Jagivanram Hospital, Mumbai

AIM: To study the presenting features and mode of infection with hepatitis B and hepatitis C and the time taken to develop cirrhosis. METHODS: 182 patients with hepatitis B and 141 patients with hepatitis C presenting to the Gastroenterology Department from 1994 to 1997 were analysed for clinical presentation and mode of infection. Patients with a known mode of infection were analysed with the Kaplan Meier actuarial method to calculate the time taken to develop cirrhosis. RESULTS: 30/182 (16.4%) patients presented with acute hepatitis B and 5/141 (5.6%) presented with acute hepatitis C (p=0.0048). 106/182 (58.2%) and 122/141 (86.5%) patients of hepatitis B and hepatitis C respectively had chronic liver disease. Transfusion associated hepatitis was seen in 24/182 (13.2%) hepatitis B cases and in 106/141 (75.2%) of patients with hepatitis C (p<0.00001). The mode of infection in patients with chronic liver disease was known in 75/106 (70.7%) patients of hepatitis B and in 117/122 (95.9%) patients of hepatitis C. Of these evaluable patients, the median time to develop cirrhosis in patients acquiring the disease before the age of 35 years was 10 years in the case of hepatitis B and 20 years in hepatitis C. In patients who acquired the disease after the age of 35, the median age to develop cirrhosis was 8 years for hepatitis B and 16 years for hepatitis C. CONCLUSION: Hepatitis B presented more often as acute hepatitis than hepatitis C. Hepatitis C was more commonly associated with a history of transfusion than hepatitis B. Patients with chronic hepatitis B had a more aggressive course and developed cirrhosis earlier than patients with chronic hepatitis C, especially if they had acquired the disease after the age of 35 years.

A-6
Evaluation for hypercoagulable states in patients with hepatic venous outflow obstruction (HVOO). TS Narayanan, S Shetty, D Mohanty, P Abraham, AY Phadke, NM Narawane, SL Rajput. Departments of Gastroenterology and Immunohematology, KEM Hospital, Mumbai

AIM: To evaluate patients with HVOO for hypercoagulable states. METHODS: Thirty one patients with radiologically confirmed HVOO were prospectively evaluated. Hematological workup included hemogram, protein C, protein S and antithrombin III levels, anticardiolipin antibodies, polymerase chain reaction for diagnosis of factor V Leiden gene mutation and platelet aggregation. Tests for paroxysmal nocturnal hemoglobinuria, viral marks

(HBsAg, HCV), circulating immune complexes, ANA, dsDNA, RA factor, VDRL and HIV were performed. RESULTS: Platelet hyperaggregability was found in 69%. Factor V Leiden gene mutation was commonest coagulation abnormality (26.3%), followed by anticoagulant antibody positivity (19.3%), low protein C (9.6%) and antithrombin III deficiency. One patient each had anticoagulant antibodies along with low protein C and factor V Leiden gene mutation. Evaluation for autoimmune markers revealed elevated circulating immune complexes (87.5%), ANA (12.9%) and RA factor (6.4%). HBsAg was positive in one while HCV, HIV and VDRL were negative in all.

CONCLUSION: Platelet hyperaggregability was the commonest abnormality. Factor V Leiden gene mutation was the commonest coagulation factor deficiency, followed by anticoagulant antibody positivity and protein C deficiency.

A-7 Natural history of portal hypertensive gastropathy before and after variceal eradication. Shahi H, Sarin SK. Department of Gastroenterology, G B Pant Hospital, New Delhi

BACKGROUND: The natural history and likelihood of bleeding from portal hypertensive gastropathy (PGP) present in patients with portal hypertension (PHT) prior to endoscopic variceal eradication may differ from that of patients who develop PGP during or after variceal eradication.

METHODS: 967 variceal bleeders who had achieved variceal eradication by endoscopic therapy (either sclerotherapy or band ligation) in the recent past were prospectively studied. 88 (9.1%) patients (cirrhosis 56, non-cirrhotic portal fibrosis [NCPF] 18 and extrahepatic portal vein obstruction [EHPVO] 16) had distinct mucosal lesions. PGP alone was present in 78. PGP + gastric antral vascular ectasia (GAVE) in 8 and GAVE alone in 2 patients. PGP was graded as mild (isolated red spots with mosaics pattern) or severe (confluent red spots with or without ooze) and whether present before endoscopic intervention (Gr. A) or after intervention (Gr. B). Serial endoscopies were done to see if the PGP had transitory (disappearing within 3 mo), persistent (no change) or progressive. Bleeding was defined as acute (no other bleeding site, with persistent ooze at endoscopy) or chronic (drop in Hb of >2 g/dl in 3 mo with fecal occult blood positive).

RESULTS: Twenty two (26%) patients had PGP before (Gr. A) and 64 (74%) developed PGP after variceal eradication (Gr. B). In Group A lesions disappeared in only 2 (9%), but in Gr. B in 29 (45%) patients (p<0.05). PGP lesions more often progressed in Gr. A compared to Gr. B (18% vs 9.4%). Bleeding from PGP was seen in 10 patients (11.6%) over a follow-up of 20.1±18.2 mo. 5 were acute and 5 chronic bleeds. 7 of the 10 bleeders were from Gr. A; all had either progressive (3) or persistent (4) lesions. The incidence of bleeding in Gr. A was higher than in Gr. B (32% vs. 4.7%, p<0.02). The only death from PGP bleed was in a Gr. A patient.

CONCLUSIONS: i) PGP developing after variceal eradication is often transitory and clinically insignificant. ii) When PGP is present prior to initiation of endoscopic therapy for varices, the lesions are progressive or persistent and are more likely to bleed. Such patients need to be monitored for treatment with beta-blockers.

Free Papers

A-8 Prevalence of viral hepatitis marker in homogenous thalassemia population. Ajay K Jain, SP Jaiswal, DS Chitnis, Ashok K Porwal, M Harsh, S Inamdar. Dept. of Digestive Diseases, Microbiology and Paediatrics, Chatram Hospital, Indore (MP)

AIM: To find the prevalence of viral hepatitis marker in post vaccinated (against HBV) homogenous thalassemia population. METHODS: Our hospital has adopted the thalassemic society of Indore which has 120 children registered for blood transfusion and comprehensive care. All were vaccinated against HBV and had received blood transfusions after vaccination. 68 such children were screened for prevalence of HBsAg, total antiHBc, antiHCV by ELISA II and for unknown viruses by SGPT. RESULTS: None of the vaccinated children had shown HBsAg positivity by ELISA; however 44% of children (30/68) were positive for total antiHBc, 19% (13/68) for antiHCV, 4% (6/168) for both. Out of 30 total antiHBc positive children, 13 had SGPT >60 IU/L. In antiHCV positive, 4 had SGPT levels >60 IU/L while those positive for both, 3 had high SGPT. Among the group who were negative for these markers, 11 had SGPT >60 IU/L. CONCLUSIONS: 1. Strict screening and vaccination has reduced HBV infection. 2. The present prevalence of HCV infection in our thalassemic children is 19%. 3. There is possibility of unknown viral infection (HGV) in 43% (13/30) of total antiHBc positive children and in 44% (11/25) of children who are negative for both.

A-9 Prevalence of hepatitis C virus antibody in healthy blood donors. Deshpande AS, Khodaji S. P D Hinduja National Hospital and Medical Research Centre, Mumbai

All the transfusion centres screen the donors for HBsAg (HBV Australia antigen) and therefore the incidence of post transfusion hepatitis (PTH) due to HBV has decreased remarkably. Hence the most common cause of PTH is hepatitis C virus (HCV). Many studies have indicated different prevalence rates of HCV antibody among healthy blood donors in U.S.A. and European countries. Since very little data was available in Indian literature, the current study was undertaken to find out the prevalence of HCV antibody in healthy Indian population. We have analysed 13625 healthy blood donors for HCV Ab using ELISA technique (III generation). Our results showed that out of 13625 donors screened, 47 donors showed strong positivity
Prevalence of hepatitis C virus antibody in voluntary replacement blood donors of Mumbai. Samir Shah, Rashmi Thakkar, Harish Ahuja, Pravin Sawant, HG Desai. Jashok Hospital and Research Centre, Mumbai

Testing for hepatitis C virus antibody in blood donors is now routine in many countries. Limited data from our country regarding the prevalence of HCV antibody in blood donors suggests a variable prevalence rate between 0.3 - 1.8%. We have screened 19,839 voluntary blood donors for HCV ab using 2nd generation ELISA (Abbott). Between May 95 to Dec 97, 72 blood donors tested positive for HCV ab (0.36%). In comparison 1.76% were tested positive for HBsAg and 0.84% for HIV antibody. Only one was tested positive for both anti HCV and HIV.

The prevalence rate for HCV Ab is comparable with those reported from USA although our HBsAg positivity is much higher in comparison. This raises important issues about the mode of transmission and strategies for prevention of HCV and HBsAg in our country.

A prospective study to test for ALT and HCV RNA in the samples tested positive is undertaken to find out the significance of these findings and their clinical implications.


Seroprevalence studies of hepatitis B in Indian population has limitations having mainly addressed select groups (blood donors etc.). Present study was planned to look for the dynamics of hepatitis B exposure in the community. METHODS: All inhabitants of a village (total 1261, ’91 census) in Birbhum district of W. Bengal were invited to participate in the study. A questionnaire regarding exposure to potential risk factors was administered and a blood sample was drawn from every person. Serum was tested for HBsAg (ELISA) and when positive, for HBeAg and ALT. Univariate analysis and multiple logistic regression analysis was done to estimate the odds ratio for each risk factor related to HBV infection. RESULTS: Total 960 persons (53% F47%, Age 2 mo - 84 years) out of 1261 residents of the village responded (participation rate 76.13%). Overall HBSAg carrier rate was 5.31%. Only 251 (3.92%) carriers were HBeAg positive. ALT was elevated (>40 I.U.) in 59.21% of carriers. All were clinically normal. Immunisation (OR=3.01), age 20 years (OR = 1.41) and male sex (OR=1.57) were significant risk factors. Improper immunisation practice has a population attributable risk of 84% in this community. CONCLUSION: The results of this rural, predominantly poor, agrarian based community data reveals a fairly large reservoir of infection (5.31%). It is mainlly built up early in life. ALT elevations are common even when asymptomatic and immunisation practices need to be safer in addition to HBV vaccination to fight this menace.

A-13
Acute pancreatitis associated with viral hepatitis: a report of six cases. Mishra A, Saigal S, Sarin SK. Department of Gastroenterology, G B Pant Hospital, New Delhi

BACKGROUND: Acute pancreatitis has many etiological
associations including several viral infections. Its occurrence in fulminant hepatic failure is fairly common, but its occurrence in non-fulminant viral hepatitis is rare.

OBJECTIVES: To document the clinical profile of viral hepatitis complicated with pancreatitis. MATERIAL AND METHODS: Six documented cases (5 male) of acute viral hepatitis with pancreatitis diagnosed over a period of 5 years (1992-1996) are analysed. RESULTS: All the patients were young (mean age 13.5 yr) and had a typical prodrome before clinical jaundice. Severe abdominal pain developed in the 2nd 3rd week after the onset of icterus. The diagnosis of pancreatitis was made based upon high serum amylase (mean 795 U/L) and ultrasound or CT scan features which suggested acute pancreatitis. The pancreatitis was of mild to moderate severity and no patient had evidence of pancreatic necrosis. Minimal ascites and pleural effusion were commonly seen on CT. Five patients had hepatitis A (IgM and HAV +) and one had hepatitis E (IgM and HEV +) which did not progress to fulminant hepatitis. The latter is probably the first reported case in the literature. No patient had recurrence of pancreatitis over a mean follow-up of 42.3 months (range 18-70 mo). CONCLUSION: Acute pancreatitis should always be thought of when disproportionate pain complicates acute viral hepatitis. Usually such pancreatitis is of mild to moderate severity and can be managed conservatively.

A-15
Autoimmunity in chronic hepatitis C virus infection. MJI Dhorda, SR Kankonkar, AL Kirpalani, DN Amarapurkar. Medical Research Centre of Bombay Hospital, Mumbai

AIM: To study immune aberrations in chronic hepatitis C virus (HCV) patients. PATIENTS AND METHODS: 30 HCV RNA positive, non-alcohol, non-HBsAg related cases of chronic hepatitis were selected. They were tested for ANA (anti-nuclear antibody), AMA (anti-mitochondrial antibody) using indirect immunofluorescence, and ALKMI (anti-liver-kidney-microsomal antigen) using ELISA. 13 of the patients selected are suffering from CRF and/or have undergone renal transplant. One of these 13 is a patient of SLE. RESULTS: 14/30 (46.67%) patients were ANA +ve at a dilution of 1:40. 5/13 (38.46%) CRF patients and 9/17 (52.94%) non-CRF patients were positive. Only 4 (13.33%) of the patients were positive at a titre ≥1:80; one of these was the CRF patient with SLE. None of the patients tested were positive for AMA or ALKMI. CONCLUSIONS: Infection with HCV is infrequently associated with serological markers of autoimmunity; there is little or no association between HCV and ALKMI seropositivity in our community.

A-16
Interferon alfa 2b in patients with HBV-related decompensated but stable cirrhosis. L Venkatakrishnan, George Kurian, George Chandy, CMCH, Vellore 532 004

AIM: To assess the effect of interferon in the treatment of patients with decompensated cirrhosis who are HBeAg positive. METHODS: Nineteen patients of biopsy proven cirrhosis of hepatitis B etiology, decompensated stable cirrhosis with active replication – HBeAg positive were administered 3 MU of interferon intramuscularly thrice a week for sixteen weeks. Their antigen status was assessed at the end of therapy. Another assessment was done at the end of six months following therapy. RESULTS: 3 of 19 patients (16%) seroconverted and remained negative at the end of six months. None of the patients who had seroconverted have eliminated HBsAg. There is distinct
improvement in the liver functions of the seroconverted patients. Diarrhoea was seen in all patients, depression in 2 patients, 2 patients died and 1 had severe bone marrow depression. CONCLUSIONS: The results indicate that 16% of patients seroconverted. Though side effects are common, interferon was well tolerated in our group of patients. Further studies with larger group of patients are essential.

A-17  
Alpha interferon therapy in chronic hepatitis due to dual infection with hepatitis B and C. RC Gupta, V Thakur, V Rai, SK Sarin. Department of Gastroenterology, G B Pant Hospital and Department of Medical Oncology, AIIMS

OBJECTIVES: Nearly 14% of non-alcoholic chronic liver disease in India is related to dual hepatitis B virus (HBV) and hepatitis C virus (HCV) infection. There is no clear data available from world literature on the therapeutic management of these patients who otherwise can have an unfavourable course. MATERIAL AND METHODS: Fourteen consecutive biopsy proven chronic liver disease (CLD) patients, fulfilling the following criteria were included: Child's A or B liver disease, HBsAg +ve, HCV RNA +ve, anti-HCV +ve and HCV RNA +ve. Seven patients had chronic liver disease (Group A), while the remaining (Group B) patients had additional pathologies (non-Hodgkin's lymphoma 2, acute leukaemia 2, thalassemia 2, chronic renal failure 1). IFN alfa 2b was given in a dose of 6 MU A/D x 6 mo. Complete response was defined as loss of HBV DNA and HCV RNA at 6 months. RESULTS: At the end of 6 months, while ALT levels remained unchanged (120±40 vs. 136±64 IU/L, p=ns), six of the seven (85.7%) patients in Gr. A lost HBV DNA. All the 3 HBeAg positive patients lost HBeAg with an early 'flare' (45±12 therapy days). Two (28.5%) patients lost HCV RNA. One patient of acute leukaemia and another with renal failure had complete response, while none of the lymphoma patients showed any antiviral response. Overall, complete response in both the groups after completion of therapy was seen in 3 (21.4%) and in 4 after 12 mo (28.5%) patients. One patient relapsed in Gr. B leaving sustained responders to be 3 (21.5%). CONCLUSIONS: Interferon therapy (I) is effective in chronic hepatitis due to dual infection with HBV and HCV, more so in clearing HBV, (II) is often associated with 'early flare', and, (III) is ineffective if non-Hodgkin's lymphoma is the primary disease process.

A-19  
Chronic hepatitis B: a 7 years histological follow up of interferon-treated patients. SK Thakur, PS Reddy, H Subramanya, SK Dham. Departments of Gastroenterology and Pathology, Army Hospital Research and Referral, Delhi Canton-10

OBJECTIVES: (i) To assess histologically the natural history of untreated mild CH-B (CLH/CPH). (ii) To assess the short and long term sequential changes of liver pathology after therapy with interferon alfa 2b in patients with chronic active hepatitis B. SUBJECTS: 48 patients with biopsy-proven Chronic hepatitis B. METHOD: All patients had evidence of active viral replication. 18 (14 CLH/ 4 CPH) were not treated. 30 patients had CAH and received interferon alfa - 2b (Intron A) 6 MU TIW S/C for 16 weeks. Biopsy specimens were obtained prior to treatment and after completing treatment. Short term follow up was done at 11/2 years (untreated cases) and 1-3 years (treated cases). Long term follow up where possible (12/30 treated group) was done at 3-7 years. RESULTS: At follow up 6/14 (4 CLH and 2 CPH) untreated cases had progressed to CAH. In the treatment group there was significant improvement in portal inflammation and intralobular necrosis (p<0.05). This correlated to the status of seroconversion. Short and long term follow up of treated patients has shown satisfactory histological regression. CONCLUSION: (i) One-third of cases of mild CH-B (CLH / CPH) progress to moderate / severe CH (CAH) if untreated. (ii) Interferon alfa-2b in a dose of 6 mu TIW S/C for 16 weeks is effective in inducing sustained histological improvement in CH-B.

A-19  
Natural history of patients with extra-hepatic portal venous obstruction. Sudarshan Shah, SK Mathur, Gastroenterology Surgical Services, King Edward VII Memorial Hospital, Mumbai

OBJECTIVES: To determine the natural history of patients with extra-hepatic portal venous obstruction (EHO) with variceal bleeding. METHODS: A historical cohort study prospectively evaluating 200 patients of EHO presenting with variceal hemorrhage between January 1996 and January 1997. Detailed history of probable etiology, previous bleeding episodes and blood transfusion requirements was elicited. Hemogram, biochemistry, ultrasonography, liver scan and liver biopsy where indicated were used to establish the diagnosis. Annual bleed rate (ABR) and annual blood transfusion requirements (ABT) were calculated as the cumulative number of bleeding episodes and units of blood required per year, respectively. RESULTS: Modal age at presentation was 11 years, and 7 years at 1st bleed. Documented splenomegaly was present 0.75 - 10 years prior to first bleed in 5 patients. Probable cause was found in only 10% of patients, with umbilical sepsis in 7%. The number of bleeds and blood required did not correlate with interval from 1st bleed; however, excellent correlation existed between ABT and ABR (r = 1.54 x 101, r2=0.71, p<0.001). There was a higher ABR amongst adults (2.17 vs 1.26, p = 0.016, Mann Whitney test). Severity of bleed (ABT/ ABR) was more between 12 and 20 years as compared to the rest (2.6 vs 1.4, p = 0.004, Mann Whitney test). CONCLUSION: A wide variation in time between onset of EHO and bleed exists. Severity of bleed is maximum in the teens and least amongst children and is independent of duration since first bleed.
A-20
Incidence and fate of antral varices in patients with portal hypertension. Sudeep R Shah, Chirag S Desai, SK Mathur. *Gastroenterology Surgical Services, King Edward VII Memorial Hospital, Mumbai*

**OBJECTIVES:** To assess the incidence of antral varices (AV) and study their fate in patients with portal hypertension so as to formulate a management policy. **METHODS:** Over a ten year period, 580 patients with portal hypertension (cirrhosis 160, extra-hepatic portal venous obstruction (EHO) 224 and non-cirrhotic portal fibrosis (NCPF) 88) were prospectively subjected to upper GI endoscopy on presentation. Endoscopic sclerotherapy was administered for esophageal varices only, with 3% phenol on day 0, 3, 7 and then monthly till obliteration. At each endoscopy, the grade of esophageal varices, presence of AV and gastroscopy were looked for; bleeding episodes were documented. **RESULTS:** Thirteen (2.2%) patients developed AV, in cirrhosis - 1.9%, EHO - 2.7%, NCPF - 2.3% (p=0.82). No patient had AV on index endoscopy; AV developed after a mean of 15 months. Esophageal varices took a longer number of sessions to obliterate in patients with AV (11.1 vs 5.98 sessions, p < 0.00001). Congestive gastropathy was seen in 38%, 2 prior, 2 following and 1 during detection of AV. Only one patient bled, having coexistent esophageal varices and gastropathy, requiring 2 units blood. AV disappeared in 7 spontaneously, recurring in only one. Of 7 persisting AV, none have bled over a mean of 30 SD 23.2 months. **CONCLUSIONS:** AV are seen in a small proportion of patients, and are distributed equally amongst the etiologies of portal hypertension. They rarely bleed and may be ignored during sclerotherapy.

A-21
Long-term post sclerotherapy follow up of EHPVO patients. Viral Patowara, Prabha Sawant, Pravin Ratbi, Sheetal Dhadphale, Kausal Vyas, Haribhakti Seba Das. Dept of Gastroenterology, LTMC and LTMGH, Sion, Mumbai 400 028

**INTRODUCTION:** There is paucity of data regarding the long term follow up of patients with EHPVO from western India; hence we decided to study these patients. **AIMS AND OBJECTIVES:** To assess the long term post sclerotherapy follow up of the patients of EHPVO who had an index bleed. **MATERIALS AND METHODS:** A retrospective survey of all patients with EHPVO who had an index bleed and underwent sclerotherapy between Feb 88 and Jan 98 were studied. They underwent a detailed clinical examination and were diagnosed as EHPVO on the basis of portal cavernoma on ultrasound examination or splenoportogram. Upper GI endoscopy was done and 1% polidocanol was injected paravascularly. Sclerotherapy was carried out at weekly intervals for first three weeks and three weekly till complete thrombosis was achieved. **RESULTS:** Of 113 patients of EHPVO, 66 patients were included in the study. There were 41 males and 25 females. The age at diagnosis ranged from 7 months to 35 years with mean age of 10.7 years. These patients were followed up between 2-87 months with a mean follow up of 20.5 months. Gastric varices were detected in 37, 24 patients at presentation and in 13 patients on follow up. Bleeding gastric varices were present in 6 (9%) and were injected with histoseryl. Gall bladder varices were present in 10 of 40 patients. Of the 66 patients, 27 (40%) had a relapse during or after sclerotherapy and patients were put again on sclerotherapy schedule. Of the patients who had relapsed 12 had more than one episode. Of the 66 patients, 8 (12%) patients developed ascites following an upper GI bleed. The ascites resolved spontaneously. During follow up 2 patients died after massive upper GI bleed. **CONCLUSION:** Sclerotherapy controls esophageal variceal bleed in patients with EHPVO; however they develop varices at uncommon sites. Long term studies are required to know natural history of ectopic varices. Gastric varices are seen in 56% of the patients; however bleeding from gastric varices was seen in only 9%.

A-22
Hemorrhoidal shunt in the era of sclerotherapy. SS Nagpal, SR Shah, SK Mathur. *Gastroenterology Surgical Services, KEM Hospital, Mumbai*

Although endoscopic methods form the mainstay of therapy for variceal bleeding, portosystemic shunt surgery has a role for specific indications. Between Jan 1992 and Dec 1997, 56 patients with variceal bleeding underwent splenorenal shunt (proximal=31, distal=21, side to side=3, others=1). There were 32 males and 24 females (median age 28 years, range 6-55). The etiology was EHPVO in 27, NCPF in 20 and cirrhosis in 9 (Child A=5, Child B=6). Indications of surgery included failed sclerotherapy in 11, difficulty in follow up in 15, fundal varices in 10, symptomatic hypersplenism in 13 and others in 7. The mean operative blood loss was 700 ml. Major complications included intraabdominal abscesses needing drainage in 4 and re-bleeding needing laparotomy in 1 patient. There were no intraoperative or immediate postoperative deaths. Two patients died 6 weeks and 7 months after surgery. Four patients had a blocked shunt giving an overall patency rate of 93%. All these bled and were controlled with endoscopic methods or devascularisation. Five patients are lost to follow up. The mean follow up in the rest of the group is 29 months. All these are free of bleeding. Varices (including fundal) have regressed in all with a patent shunt and hypersplenism has reversed. Two patients with cirrhosis developed encephalopathy. There was no encephalopathy in any of the non-cirrhotic patients including those undergoing a non-selective shunt and no post splenectomy sepsis in those splenectomised. Majority of the children are growing normally and going to school. The low morbidity, mortality and shunt blockage rates in this series show that...
with proper patient selection as well as attention to technical
detail the lienorenal shunt is a safe and effective procedure
in the long term. It is effective in preventing rebleeding,
treating fundal varices and hypersplenism and should be
offered as an alternative to those finding it difficult to
follow up regularly.

A-23
Transjugular intrahepatic portosystemic shunts: the
experience in India. S J Punamiya, DN Amarpurkar,
NH Banka. Bombay Hospital and Medical Research Centre,
Mumbai

OBJECTIVES: To present our initial experience with TIPS
procedure in the management of complications of portal
hypertension. METHODS: Six patients (5 male, mean age
52.2 years) underwent TIPS placement for variceal bleeding
with failed sclerotherapy (n=3), intractable ascites (n=2),
and hepatic hydrothorax (n=1) during the past 2 years.
Hepatocellular disease was due to alcoholic cirrhosis (n=3),
hepatitis B cirrhosis (n=2), and cryptogenic cirrhosis (n=1).
Most of the patients (n=5) had Child-Pugh grade B disease
at the time of TIPS with a mean overall Child-Pugh score
of 8.9. Shunt function was assessed by direct measurement
of the portosystemic pressure gradient and Doppler
sonography. All patients were asked to follow up with a
Doppler sonography at 3 month intervals. RESULTS: Shunt
creation was successfully carried out in all six patients
using 10 mm diameter Wallstents, lowering the mean (SD)
portosystemic pressure gradient from 36.2 (5.6) to 10.1
(2.3) mmHg. The post-procedure complications included
mild encephalopathy in two cases, with no procedure related
mortality. Patient compliance for follow up was very poor
with no patient conforming to the shunt surveillance protocol.
Three patients died within 6 months (mean 2.6 months).
Two patients were lost to follow up. The only patient that
did follow up at 6 months had shunt occlusion and developed
rebleed at 8 months. CONCLUSION: TIPS is an excellent
method for portal decompression and management of its
complications. Though the long term patency of the shunt
is not good, regular follow up and close surveillance would
be mandatory to prolong its function.

A-24
A simple investigative model for non cirrhotic portal
hypertension. S Seth, D Amarpurkar, P Kulshreshtha,
B Sajjial, S Agar, A Deo, S Mani, K Chopra, S Bichitra, P
Mehra. Dept. of Gastroenterology, Bombay Hospital and
Dept. of Medicine, Hematology and Gastroenterology,
B Y L Nair Hospital and Jagiwan Ram Hospital, Mumbai

Non-cirrhotic portal hypertension (NCPH) accounts for
almost 1/3rd of patients with portal hypertension in India.
Though liver biopsy is the gold standard for diagnosing
cirrhosis and non-cirrhotic portal fibrosis, it may not always
be possible. This study was designed to produce a highly
accurate and simple reproducible model to predict NCPH.
101 consecutive patients with portal hypertension were
thoroughly evaluated, with clinical history and examination,
complete blood count, ultrasonography, isotope liver scan,
upper gastrointestinal endoscopy and liver biopsy whenever
necessary and feasible. Computer aided multivariate
discriminant analysis was used to determine relative
weightage to be given for discrimination for different
parameters, singly or in combination. Parameters used were
(1) Splenic volumetric index (2) Albumin:globulin ratio
(3) Marrow uptake on isotope scan (4) Evidence of
hypersplenism (5) Presence of ascites. For individual
parameters, overall accuracy for predicting NCPH varied
from 65 to 80%. The product of splenic volumetric index,
AG ratio and grade of hypersplenism divided by ascites
score had sensitivity, specificity, positive predictive value,
negative predictive value and overall accuracy of 93%,
95%, 90%, 97% and 95%, respectively. This model was
put to test in 20 consecutive patients presenting with portal
hypertension and accuracy was confirmed. We conclude
that the model proposed by us for the prediction of NCPH
is simple, highly accurate and reproducible which may
avoid the need for liver biopsy.

A-25
Budd-Chiari syndrome: clinical profile and treatment
modalities. L Venkatakrishnan, George Chandy, Sunil
Chandy. Department of G.I. Sciences and Cardiology,
CMCH, Vellore 632 004

AIM: To study the clinical presentation, etiology and
management of patients admitted in 1996-1997. METHODS:
14 patients were admitted to the dept. of GI sciences under
Hepatology during 1996 and 1997. The patients' clinical
presentation, etiological work up and treatment modalities
are being presented. RESULTS: Abdominal pain 72%,
hepatomegaly 80% and ascites 96% were the most common
findings. Portal hypertension was noted in 72%. Only 1
patient had consumed OCP and haematological abnormality
was observed only in 2 (16%) patients. One patient had
HCC. Doppler findings in 11 patients correlated with IVC
gram (86%). IVC gram confirmed the findings in all the
patients who underwent the procedure. 8 patients underwent
angioplasty - 3 had undergone hepatic vein stenting and
5 had thrombolysis along with dilatation. 3 patients had
died and 6 of 8 patients who had successful angioplasty
are well during this one year follow up. CONCLUSIONS:
(1) Budd Chiari should be considered in differential diagnosis
of unexplained ascites. (2) Intrinsic venous thrombosis with
or without membrane is the most common cause. (3) Doppler
USG is an excellent screening test with high degree of
correlation with IVC gram. (4) Angioplasty has given
promising results.

A-26
Conservative management of blunt liver trauma. B
Acharyya, T Patankar, S Nagarn. Dept. of Surgery and
Radiology, KEM Hospital, Mumbai

S10  Indian Journal of Gastroenterology 1998 Vol 17
The aim of this study was to assess the safety of conservative management of blunt liver trauma in the setting of a large public institution. Over a 16 months period, 11 patients with blunt abdominal trauma who were haemodynamically stable or were easily stabilised were prospectively studied. Inclusion criteria included a Contrast enhanced CT Scan (CECT) showing liver Trauma with or without haemoperitoneum without evidence of injury to any other organ or major vessels. The injuries were graded on CECT as per the ‘Liver Injury Scale’ of the American Association for the Surgery of Trauma and Haemoperitoneum was graded as per the classification of Jeffrey and Oclott. The patients were monitored in a Surgical Intensive Care Unit for at least 48 hours and were monitored with haemodynamic parameters, serial haemoglobin and abdominal ultrasound. There were 8 males and 3 females (median age=30). The nature of injury was automobile accident in 9 patients, fall from height in one and railway accident in one. Admissions systolic BP was >100 mmHg in 7 patients and between 90 to 100 mmHg in 4. 2 patients needed blood for stabilisation, 3 patients had minor (grade 1-2) and 8 had major injuries (grade 3-5). 3 patients had large, 3 had moderate and 3 had small haemoperitoneum. There were no major complications directly related to the liver injury (3 patients had sterile collections which resolved) and no patient required laparotomy. There was no mortality. The median length of ICU stay was 2 days and hospital stay was 10 days. Non operative management is safe for haemodynamically stable patients with hepatic trauma including major trauma in the presence of haemoperitoneum provided associated injuries requiring laparotomy and major vascular injuries are ruled out with a CECT. This approach is practical in large institutions with facilities of emergency CT and intensive care.

A-28
Are apparently non-resectable hepatomas really non-resectable? SK Mathur, RM Joshi, RS Parikh, CJ Desai, K Chandrika, Gastroenterology Surgical Services, BYL Nair Charitable Hospital, Mumbai

OBJECTIVE: To evaluate outcome of hepatic resection (HR) in apparently non-resectable hepatocellular carcinoma (HCC) on clinical, imaging and operative assessment.

METHODS: Four patients with HCC had detailed clinical, biochemical, viral markers, imaging and operative evaluation. The diagnosis of cirrhosis and HCC was established on histology. Total vascular exclusion (TVE) was done for HR in 2 patients. RESULTS: All 4 patients were males with mean age of 58 years (42-75) and disease duration of 98 days (1-330). Of these 4 patients, one had haemoperitoneum, one had obstructive jaundice, one had non-resolving abscess and one presented with syncopal attacks. All had moderately differentiated large sized HCC; in 3 it was situated in the right and in 1 in the left lobe. Of the 2 patients with HBsAg +ve (blood+tumour) 1 had liver cirrhosis, and in the other 2 patients HCC occurred on a non-cirrhotic liver with all the viral markers negative. Reasons for apparent non-resectability were: haemoperitoneum and duodenal involvement in one, tumor thrombosis in CHD, IVC involvement and adherence to the diaphragm in the second patient, airway disease and adherence to the diaphragm in the third patient and only diaphragmatic involvement in the 4th patient. HR was performed in 2 with TVE and in two without TVE. All 4 patients are alive with a mean follow up of 3 months (1-5). CONCLUSION: We could resect large sized HCC in 4 patients who had suggestion of non-resectability on pre-operative and intra-operative evaluation.

A-27
Results of hepatic resections: a review. N Doctor, BR Davidson, Royal Free Hospital, London, UK

The indications and results of hepatic resections at a single center were reviewed. 110 elective resections were performed during the period 1 January 1994 to 31 December 1996. There were 61 males and 49 females. The age range was 29-73 years (mean: 59 years). The indications were:

1. Colorectal metastases: 80
2. Hilar cholangio-
carcinoma: 11
3. Primary hepatocellular
carcinoma: 11
   a. Noncirrhotic liver: 9
   b. Cirrhotic liver: 2
4. Hydatid cyst: 2
5. Hepatic adenoma: 2
6. Pancreatic metastasis: 1

The type of resections performed included right hepatectomy (n=25), extended right hepatectomy (n=20), left hepatectomy (n=18), extended left hepatectomy (n=5), left hepatic lobectomy (n=7), and non-anatomic segmental resections (n=25). 2 patients died, one from pulmonary embolism on day 12 just before discharge, and one from sepsis, after undergoing resection for cholangiocarcinoma following failure to treat preoperative cholangitis. Significant bile leak was observed in 12 patients. In 8, it spontaneously closed and the other four needed biliary stenting and percutaneous drainage. The technique for resection included complete mobilisation of the liver, intermittent portal occlusion and ligation of hilar structures for major resections, total vascular occlusion for caval or hepatic venous involvement (n=4) or massive intraoperative blood loss (n=1). Complete excision of the extrahepatic biliary tree with subsequent Roux loop reconstruction was performed in all patients with hilar cholangiocarcinoma. Epidural analgesia was used for post operative pain relief for 3-5 days in all patients. In conclusion, hepatic resections can be performed safely and can provide improved long term survival for patients with a variety of malignant and benign liver lesions.

A-29
Cystogastrostomy — a modality of treatment for complicated hydatid cyst. RD Bapat, CV Kantharia, AV
Deshpande, SS Shirodkar, RY Prabhu. Gastroenterology Surgical Services, K E M Hospital, Mumbai

INTRODUCTION: Hydatid disease in India is infrequent but not rare. The various surgical options for hepatic hydatid disease are (1) Enucleation (2) Partial excision with marsupialization (3) Excision (4) Lobectomy if involving one lobe. Cystogastrostomy i.e., anastomosis of cyst wall to stomach providing internal drainage has not been described in literature. AIM OF STUDY: To evaluate the procedure of cystogastrostomy in terms of morbidity and mortality for the treatment of hepatic hydatid cyst. STUDY DESIGN: 30 patients of liver hydatid cyst over a period of three years, diagnosed by USG and CT scan, were put into two groups. First group of 17 patients was treated with excision and drainage while the second group of 13 patients was treated with cystogastrostomy. Two groups were compared with regards to complications and residual disease. RESULTS:

<table>
<thead>
<tr>
<th>Type of Surgery</th>
<th>No. of patients</th>
<th>Complications</th>
<th>Residual disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excision of cyst</td>
<td>19</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Cystogastrostomy</td>
<td>13</td>
<td>Nil</td>
<td>Nil</td>
</tr>
</tbody>
</table>

A-30

Excision of choledochal cyst — a modified technique.


A modification of the conventional surgical technique performed for excision of choledochal cyst which facilitated complete excision of the cyst based on our experience of management of choledochal cysts during a period of six years is described. This involved development of a plane around the proximal end of the cyst at the porta hepatis and division of the duct at the hepatic duct confluence. This renders the dissection and complete mobilisation of the cyst from the adjacent structures easier. Cholangiographic demonstration of the terminal end of the choledochal cyst and its relation to the pancreatic-biliary ductal confluence helps further for complete excision of the cyst and prevention of damage to the pancreatic duct.

A-31

Immunotherapy sans biliary decompression — beneficial in surgery for surgical jaundice. RD Bapat, CV Kantharia, AV Deshpande, NN Rege, SA Dahanukar. Department of Gastroenterology Surgical Services and Pharmacology, K E M Hospital, Mumbai

INTRODUCTION: Immunomodulation in surgical jaundice and its modulation with Tinoprosor cordifolia (TC) was presented by us in HPB Congress in 1990. Considering the disadvantages of PTBD I, immunomodulation followed by surgery appeared to be the logical choice of therapy, which has been practised by us in last 2.5 years. AIM: To present our therapeutic plan of management of surgical jaundice and evaluate the efficacy of immunomodulation as regards sepsis, morbidity, mortality and host defence mechanisms. STUDY DESIGN: In a prospective study, 29 patients (M:F 15:14), with mean age 48.5 years, received a standardised whole aqueous extract of TC in a dose of 500 mg thrice daily orally for 10 days preoperatively. These patients were treated with biliary-enteric bypass. The following parameters were assessed: (1) Complete blood count (2) Serum bilirubin (3) Serum alkaline phosphatase (4) The pre-and post operative morbidity and mortality over 30 days. RESULTS: Of the 29 patients, 3 patients showed evidence of clinical sepsis and one of them died. There was no other mortality. Post-operative period was uneventful. Leucocytosis too normalised following surgery. PMN function improved with TC.

A-32

Ultrasoundography-guided fine needle aspiration cytology (FNAC) of liver. JD Rege, AD Amarapikar, LP Naik, JM Vora. Dept of Pathology, BYL Nair Ch Hospital and TN Medical College, Mumbai

FNAC is widely accepted diagnostic procedure in liver lesions. Guided FNACs are useful in getting well targeted representative samples. OBJECTIVES: 1) To study cytological features in various liver lesions. 2) To correlate cytological diagnosis with clinical, ultrasonographic and serological (AFP) findings. METHOD: Total 60 USG guided FNACs were studied over last 3 years. The smears were stained with routine Papanicolaou stain and May Grunwald Giemsa stain. FNAC findings were correlated with clinical findings, USG or serum AFP levels. RESULTS: Out of total 60 FNACs of liver, 31 were neoplastic, 16 non-neoplastic and in 13 cases the smears were inadequate to opine. The neoplastic lesions were 21 metastatic and 10 primary hepatic malignancies. Majority of metastatic lesions were adenocarcinomas arising from GIT. Non neoplastic lesions included liver abscesses, cysts, tuberculous inflammation and cirrhosis. CONCLUSION: The overall accuracy of FNAC diagnosis was 100% in which follow up was available. There was no false positive case in our study. The positive predictive value was 100%. Hence USG guided FNAC is safe, reliable and accurate method when adequate sample is obtained. It can be used as primary diagnostic procedure in SOL of the liver.

A-33

Diagnostic and prognostic significance of serum alpha-fetoprotein in hepatocellular carcinoma. S Prakash, PK Garg, G Singh, RK Tandon. Department of Gastroenterology and Human Nutrition, AIIMS, Ansari Nagar, New Delhi

BACKGROUND: Scant data are available from India regarding the value of alpha fetoprotein (AFP) in
hepatocellular carcinoma (HCC). OBJECTIVE: To define the role of AFP in the diagnosis and management of liver cancer. PATIENTS AND METHODS: Four groups of patients were studied: Group (i) Cirrhosis with HCC (ii) Cirrhosis (iii) Hepatitis B carrier (iv) Other GI malignancies. Ten healthy controls were also studied. The diagnosis of cirrhosis and HCC was made on the basis of clinical features and the results of biochemical, imaging and histological investigations. AFP levels were measured in all groups and healthy individuals using AFP EIA kit (Diamedix International Inc, San Carolos, California).

RESULTS:

<table>
<thead>
<tr>
<th>Health</th>
<th>Cirrhosis</th>
<th>HBsAg</th>
<th>Other GI carriers</th>
<th>HCC carriers</th>
<th>HCC malignancies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (n=10)</td>
<td>(n=18)</td>
<td>(n=27)</td>
<td>(n=14)</td>
<td>(n=15)</td>
<td></td>
</tr>
<tr>
<td>Mean AFP level (ng/ml)</td>
<td>12.9</td>
<td>30.43</td>
<td>17.92</td>
<td>20.6</td>
<td>19.96</td>
</tr>
</tbody>
</table>

The results show that the levels of serum AFP were not significantly raised in patients with HCC. Only 9 of 18 patients with HCC had AFP levels >20 ng/ml (P < 0.01). CONCLUSION: The results are consistent with data from the western countries, we found that the levels of serum AFP were not raised in Indian patients with HCC and AFP level was not significantly higher specific to diagnose HCC in them.

A-34

Primary biliary cirrhosis: a report of five cases. R Bajjal, S Agal, PP Kulshreshtha, DN Amarapurkar, HG Desai. Departments of Gastroenterology, Jagiivan Ram Hospital and Bombay Hospital, Mumbai

Primary biliary cirrhosis (PBC) is an extremely rare cause of liver disease in India. We report five cases who presented with the classical features of PBC during the years 1996-97.

Age/sex | Complaints | Duration | Associated illness (mg%) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>30F</td>
<td>Jaundice</td>
<td>2.5 y</td>
<td>nil</td>
</tr>
<tr>
<td>36F</td>
<td>Low grade fever</td>
<td>2 y</td>
<td>nil</td>
</tr>
<tr>
<td>42F</td>
<td>Jaundice</td>
<td>10 mo</td>
<td>nil</td>
</tr>
<tr>
<td>41F</td>
<td>Jaundice</td>
<td>3 mo</td>
<td>nil</td>
</tr>
<tr>
<td>52F</td>
<td>Hematemesis</td>
<td>1 day</td>
<td>nil</td>
</tr>
</tbody>
</table>

Anti-nuclear and anti-mitochondrial antibodies were positive in all patients. So far only six cases of PBC have been reported in India of which only one case had pruritus preceding jaundice, while the others had an atypical presentation. This report emphasises that the classical presentation of PBC does occur in Indian patients and should not be overlooked.

A-35

Does the presence of esophageal varices impair esophageal motility? P Mehrotra, SK Dhadich, S Gambhir, A Mishra, VA Saraswat. Department of Gastroenterology and Nuclear Medicine, SGPGIMS, Lucknow

INTRODUCTION: Endoscopic variceal ligation (EVL) is now an effective method of treatment of esophageal varices (EV) with few sequelae and complication compared to sclerotherapy. Effect of EVL on esophageal motility is not widely reported. AIM: Prospective analyse effect of eradication of EV by EVL on esophageal motility. METHOD: 10 patients with grade III to IV EV (large varices) were included in the study. Mean age of the patients was 32.5±15.2 (range 18-55); six were males. Evolution of portal hypertension was posthepatitic in 4, alcoholic in 3, extrahepatic portal venous obstruction in 3. All patients were Child A-B and free of ascites at the time of study. EV eradication was achieved by EVL in all patients with grade III to IV EV. Ten patients with small varices were also included who did receive any endoscopic therapy. Esophageal manometry was done in all the patients before and after EV eradication. RESULTS: LES pressure by RFT in patients with large varices was not significantly different when compared with eradicated varices (22.8 mmHg vs 18.5 mmHg). Amplitude (distal 5 cm of esophagus), duration, and velocity of peristaltic waves was significantly higher pre-eradication compared with post eradication (29.2 mm vs 53.5 mm, p<0.003; 2.3 sec vs 3.3 sec, p<0.04; and 1.7 cm/sec vs 2.5 cm/sec, p<0.05). Amplitude when compared at different level in same group show no significant difference. Patients with small varices had higher amplitude (distal esophagus), velocity and duration of peristaltic waves when compared to those with large varices (29.2 mm vs 57.9 mm; 1.78 cm/sec vs 3.19 cm/sec; 2.31 sec vs 4.50 sec). LES pressure by RFT was not significant. CONCLUSION: Presence of large varices affects esophageal motility. Varical eradication by EVL may improve esophageal motility.

A-36

A case of autoimmune hepatitis and primary sclerosing cholangitis — an overlap syndrome in a child. Nagral A, Sandeep G, Mehta S, Mohandas KM. Division of Digestive Diseases, Tata Memorial Hospital, Mumbai

INTRODUCTION: Sclerosing cholangitis and autoimmune hepatitis are uncommon diseases in India. We describe a rare case of an overlap syndrome. CASE REPORT: A 14 year old girl presented to us with fluctuating jaundice and hepatomegaly at the age of 5 yrs. Investigations then revealed mild hyperbilirubinemia, mild transaminisis, an alkaline phosphatase of 500-700 UI, strongly positive ANA, hyperglobulinemia and eosinophilia. Serological markers for HBV and HCV were negative. She was treated with prednisolone for 1 year with a presumptive diagnosis of autoimmune hepatitis. Her LFTs and immune markers
normalised and she was well for 5 yrs. In Oct. '93, her symptoms and abnormal LFTs recurred with an elevated alkaline phosphatase in the range of 900-1800 U/L. The serum, urinary and hepatic copper and serum ceruloplasmin were mildly elevated. In Dec. '93, she underwent 6 sessions of endoscopic sclerotherapy following variceal bleed. Sonography of the abdomen was suggestive of cirrhosis which was confirmed subsequently by liver biopsy. She was treated with d-penicillamine and prednisolone following which LFT improved. However, since discontinuation of treatment in March 1995, bilirubin has progressively increased till date with moderately elevated transaminases and alkaline phosphatase. She has decompensated with a PT of 19/14 sec, serum albumin 3.3 g/dl, mild ascites and platelet count 85000/cmm. With a prolonged course of an autoimmune illness marked by predominant cholestasis a diagnostic ERCP was performed which was diagnostic of sclerosing cholangitis. CONCLUSION: In the presence of predominant cholestasis in a case of autoimmune hepatitis, the possibility of an overlap syndrome should be considered and an early ERCP performed for a definitive diagnosis.

A-37
Hepatic sickling crisis mimicking cholangitis. Nagral A, Mehta S, Sucheta V, Nagral S, Sandeep G, Mohandas KM. Div. of Digestive Diseases and Dept of Medical Oncology, Tata Memorial Hospital, and Dept. of Surgery, KEM Hospital, Mumbai
INTRODUCTION: Patients with sickle cell disease can present as choledocholithiasis, cholecystitis, viral hepatitis and hepatic sickling crisis. CASE REPORT: A 22 year old male patient with homozygous sickle cell disease began having recurrent and self limiting episodes characterized by fever, vomiting, abdominal pain and jaundice from 1989. Each episode lasted for 7-10 days. Hospitalization was required every 1 to 2 months. During each episode the bilirubin varied from 2.5 - 5.0 mg/dl, alkaline phosphatase ranged from 300 - 471 U/l and transaminases were mildly elevated (<100 U/l). USG revealed chronic cholelithiasis with gallstones and a cholecystectomy was done in 1993. However his symptoms persisted. An ERCP was performed in May 1996 for cholangitis. This showed a normal CBD with a withered tree appearance of IHBR. A liver biopsy revealed cirrhosis. HBsAg and Anti-HCV were negative. By exclusion hepatic sickling crisis was considered. He was given Hydroxyurea 20 mg/kg/day to reduce HbS levels. He has responded well. The sickling episodes reduced in frequency from 2-3 per month to 1 episode in 2 months. CONCLUSION: Hepatic sickling crisis can mimic cholangitis. Hepatic crisis may be considered by excluding other hepatobiliary complications. Treatment with agents such as hydroxyurea may prevent irreversible liver damage and improve the quality of life.

A-38
Absence of rigor mortis in Indian childhood cirrhosis. SR Parekh, BD Patel. Wadia and Jaslok Hospitals, Mumbai
In this communication, the authors document hitherto unreported observation of total absence of rigor mortis for 12-36 hours postmortem in 37 cases of biopsy proven Indian Childhood Cirrhosis (ICC). The authors hypothesise that the precirrhotic symptom complex with gross steatorrhoea and excessive appetite in ICC culminate in light and electron microscopic evidence of abundant glycogen in liver and is probably associated with abundant glycogen stores in the muscles which would help resynthesis of ATP and prevent rigor from setting in. In conclusion, absence of rigor mortis is yet another profile to be added to the puzzle that is ICC and would benefit future scientists on the trail of a lost enigma.