FREE PAPERS

A-1
Use of n-butyl-2-cyanoacrylate (Heroseal-Biau) in the Treatment of Bleeding Esophageal and Gastric Varices - Indian Experience. AMIT MAYDEO, HEMANT VADEYAR, Jaslok Hospital and Medical Research Center and Shalina General Hospital, Bombay

In patients with variceal bleeding due to portal hypertension, no single treatment modality can achieve immediate, reliable and permanent hemostasis with a low mortality.

We report our initial experience of treating 13 patients with esophageal (n=6), gastric (n=6) or combined (n=1) varices over the last 7 months, using the cyanoacrylate glue for achieving hemostasis as well as for obliteration of the varices. Except for two patients with gastric varices, the remaining were treated during active bleeding. Six patients were in Grade 2 to Grade 3 hepatic coma at the time of presentation; four of these had alcoholic cirrhosis. One patient with isolated gastric varices had associated achalasia cardia.

Immediate and reliable hemostasis with cyanoacrylate glue was achieved in all patients. Early rebleeding from small residual gastric varices was seen in only one patient. In this patient pneumatic dilation of the achalasia was also done successfully after obliteration of the gastric varix. Of the six patients in hepatic coma, four regained consciousness after obliteration the bleeding varix. We could successfully obliterate even large gastric varices in all the six patients treated. Two patients died within 30 days, both due to irreversible hepatic coma but without any bleeding. The overall follow-up is only between one and eight months, but our initial results are very encouraging.

We conclude that this therapy can be used for a large number of patients with a high degree of reliability and safety.

A-2
Sclerotherapy for Esophageal Varices - When to Stop? B K AGARWAL, A SUMAN, V SINGH, P KUMAR. Indira Gandhi Institute of Medical Sciences, Patna

Endoscopic injection sclerotherapy (EIS) is an accepted mode of therapy to prevent variceal bleeding. Realising that total obliteration of varices was not always possible, we decided to stop EIS on reaching Grade II (white) varices. We have analyzed our data regarding interval bleed to see whether our policy is justified.

From 1985 till date, 566 cases of portal hypertension were enrolled in the EIS program. Only 266 (M 228, F 38) who had five or more EIS sessions were analyzed. These comprised 147 cirrhotics, 51 NCPF and 68 EHPVO patients with the mean follow up time of 18.4 (range: 2-72) months. As per our policy, EIS was successful in 232 (87.2%) cases. A total of 51 patients had interval bleed. Of these, only one (2%) bled after reaching Grade II varices while the rest bled with Grade III or IV varices. Of these 232 successful EIS cases, 212 were followed up for a mean period of 12.2 (3-48) months. Sixty seven of these patients showed recurrence/increase in varix grade and 17 (25%) of these bled, needing resumption of EIS.

Achieving Grade II (white) varices after EIS is an acceptable end point for prevention of bleed. However, endoscopy is needed to detect a subset of patients likely to have recurrence of varices, where bleeding can be controlled by further EIS.

A-3
Manometric Evaluation of the Lower Esophageal Sphincter following Endoscopic Variceal Sclerotherapy, ARUNAVA RAY, DILIP R KARNAD, PHILIP ABRAHAM. Departments of Medicine and Gastroenterology, KEM Hospital, Bombay 400 012

The effects of variceal sclerotherapy with 3% phenol in water on the dynamics of the lower esophageal sphincter (LES) were studied using an open tipped infusion system for esophageal manometry. The LES was identified by the slow pull-back method. The subjects consisted of 10 controls and 20 patients of portal hypertension newly recruited into the elective sclerotherapy (SCT) program. Basal (day 0) manometry was done in all subjects. SCT was done in patients on days 1, 4, 7 and 30, and manometry was done within six hours after each session of SCT.

Basal LES pressure was significantly higher in patients than in controls (p<0.0001; Student's t test)

INASL MID-TERM CONFERENCE ABSTRACTS

INDIAN J GASTROENTEROL JULY 1992 Vol 11 No 3 A1
Serial manometry in patients showed a significant fall in post-SCT LES pressure (p < 0.0001) between days 0 and 1, followed by a significant rise (p = 0.0049) between days 1 and 4. A progressive rise in LES pressure (p = ns) was shown subsequently till basal pressures were attained by day 7 and maintained till day 30.

Thus, basal LES pressures are higher in patients with esophageal varices as compared to controls. These pressures fall after the first SCT session, but rise with subsequent sessions to basal levels. Their relationship to gastro-esophageal reflux remains to be determined.

A-4

Congestive Jejunopathy in Portal Hypertension. AABHA S NAGRAL, AMITA S JOSHI, SHRIGNA J BHATIA, PHILIP ABRAHAM, ILA M VORA. Departments of Gastroenterology and Pathology, KEM Hospital, Bombay 400 012

Twenty six patients with portal hypertension [age (mean ± SD) = 36.7 ± 15.4 yr; 19 M, 7 F] of different etiologies (EH 9, cirrhosis 15, NCPF and Budd-Chiari syndrome 1 each) were studied for endoscopic congestive gastroduodenopathy and histologic evidence of congestive gastropathy and jejunopathy. Five patients had not bled from varices; the rest were on regular sclerotherapy. From records, normal biopsies from the gastric antrum (26) and fundus (10) and the jejunum (26) were used as controls. Biopsies of jejunum were taken by Watson’s capsule.

On endoscopy, congestive changes were seen in the fundus (17 cases), antrum (17) and duodenum (4). Gastropathy correlated with changes in the fundus but not in the antrum. On histology, congestive jejunopathy [defined as increase in size and number of vessels] was seen in 22 patients. These correlated with the histologic evidence of gastropathy in the fundus but not in the antrum. In cirrhotes, the incidence of congestive jejunopathy increased in patients with a higher Child-Pugh score. The incidence of jejunopathy did not correlate with the number of sclerotherapy sessions.

Congestive jejunopathy is a part of the spectrum of congestive gastroenteropathy. Its clinical significance remains to be elucidated.

A-5

Prevalence of Subclinical Portal-Systemic Encephalopathy among Cirrhotic Patients. R K DHIMAN, V A SARASWATI, M VERMA, S R NAIR. Department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, P B 375, Lucknow 226 007

Fifty eight patients with cirrhosis of liver without overt encephalopathy were evaluated to find out the prevalence of subclinical portal-systemic encephalopathy (SPSE) using various psychometric tests, viz picture completion (PC), block design (BD), picture arrangement (PA), object assembly (OA), digit symbol (DS), number connection test (NCT) trial A and B, and figure connection test (FCT). Trial A and B is a new test which we developed for evaluation of mental state. Abnormal values were defined as those beyond mean ± SD values obtained in 68 healthy volunteers.

The frequency of abnormal tests in patients was as follows: PC 28.6%; BD 28.6%; OA 19%; DS 16.6%; PA 14.3%; NCT A1-A4 12.5%; NCT B1-B4 14-20.1%; FCT A1-A4 22.4-27.6%; FCT B1-B4 13.5-19.7%. SPSE was thus diagnosed in 61.8% of patients when all these tests were taken together, and in 52.4% when PC, BD and NCT or FCT were taken together. PC, BD and NCT or FCT were easy to execute and required 15-20 min for completion.

We conclude that nearly two-thirds of cirrhotes have evidence of SPSE, PC, BD and NCT or FCT appear adequate to diagnose this condition.

A-6


Forty two patients (35 M, 7 F; aged 15-30 years, mean 37.2) with chronic liver disease (CLD) were subjected to electroencephalographic (EEG), visual evoked responses (VER) and brainstem evoked responses (BAER) examination to assess the role of these investigations in the detection and quantification of subclinical and early stages of overt hepatic encephalopathy (HE).

They were divided into two groups after detailed neuropsychiatric examination. Group I (28 patients) had no clinical evidence of HE; Group II (14 patients) had Grade I-II encephalopathy. Group I showed EEG abnormalities in 3 (10.7%) cases, increased latency of P100 (VER) in 3 (10.7%) cases and abnormal BAER in 5 (17.9%) cases. In Group II, EEG evidence of encephalopathy was seen in 9 (63.3%) cases, VER were abnormal in 3 (21.4%) cases and interpeak latencies of BAER were prolonged.
in 6 (42.9%) cases.

In the second phase of the study, 13 patients of CLD without neuropsychological evidence of HE were subjected to provocative measures like dietary protein challenge or large volume paracentesis. EEG, VER and BAER were performed before and after the provocation. None of the patients progressed to overt HE. The mean interpeak latencies of BAER increased slightly after the provocation procedure, but the results were not statistically significant.

The study suggests that abnormalities in evoked potentials are common in CLD, especially in cases with HE. The high incidence of BAER abnormalities implies a subcortical lesion.

B-1
Rule of Hepatitis C Virus Infection in Alcoholic Liver Disease. D N AMRAPURKAR, P DHAWAN, R H KALRO, H G DESAI, ANITA KUMAR, PREMA MUKTI. Departments of Gastroenterology and Microbiology, B Y L Nair Ch Hospital, Bombay 400 008

Only one third of chronic alcoholics develop liver cirrhosis, and in some liver damage progresses despite abstinence from alcohol, suggesting that factors other than alcohol contribute to continuing liver damage. To assess the role of hepatitis C virus (HCV) in alcoholic liver disease (ALD), 55 consecutive patients of ALD (consuming >80 g of alcohol per day for >5 years) were evaluated. Patients were followed up clinically, with biochemical parameters and ELISA tests for HbsAg and anti HCV antibodies (anti-HCV) for one year. Of 55 patients, 3 (14.3%) were positive for anti-HCV (Group 1), 15 (27.3%) for HbsAg (Group 2) and 3 (5.5%) for both (Group 3). 30 had none of the viral markers positive (Group 4). All the HbsAg positive patients were negative for anti delta antibodies.

Clinical decompensation and mortality were higher in patients positive for viral markers compared to those who were negative but the differences were not statistically significant.

<table>
<thead>
<tr>
<th>Group</th>
<th>1</th>
<th>2</th>
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<th>4</th>
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<tr>
<td>n</td>
<td>8</td>
<td>15</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Previous hospitalization (%)</td>
<td>37.5</td>
<td>13.3</td>
<td>100</td>
<td>23.3</td>
</tr>
<tr>
<td>Previous blood transfusion</td>
<td>25</td>
<td>6.7</td>
<td>33.3</td>
<td>100</td>
</tr>
<tr>
<td>Clinical &amp; biochemical decompensation (%)</td>
<td>50</td>
<td>40</td>
<td>66.6</td>
<td>33.3</td>
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<tr>
<td>Mortality at 1 year (%)</td>
<td>25</td>
<td>26.6</td>
<td>33.3</td>
<td>20</td>
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B-2
Long Term Follow up in Patients of Hepatitis E Infection in an Epidemic from North India. KARTAR SINGH, J B DILAWARI, Y K CHAWLA, ASHOK CHAUHAN, C K NAID. Departments of Gastroenterology and Hepatology, Post-Graduate Institute of Medical Education & Research, Chandigarh 160 012

Following an epidemic of hepatitis E in Karaol where 1273 cases had acute hepatitis, we studied the clinical spectrum in 477 patients. A four year follow up was done in 70 patients; none of these patients showed any evidence of residual clinical or biochemical abnormality to suggest chronic liver disease. Thus, patients with epidemic hepatitis E infection do not end up with chronic liver disease.

B-3
Large Volume Paracentesis in High Risk Cirrhotics with Tense Ascites. V A SARASWAT, ROHIT GUPTA, S R NAIR. Department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow

Large volume paracentesis (LVP) and even single total paracentesis supplemented with albumin or other plasma expanders have been found to be safe in patients with "stable" cirrhosis. However, a large number of patients are excluded in most series because of some high risk factors or contraindications, viz coagulopathy, renal failure, encephalopathy, etc. As these patients may also need urgent relief from the effects of massive ascites, we undertook a study to evaluate the effect of large volume paracentesis in these "high risk" patients.

Fourteen patients were included in the study. Risk factors included renal failure in four (one had hepatorenal syndrome), encephalopathy in three and coagulopathy in seven. All patients underwent LVP with a peritoneal catheter placed below the umbilicus, and the fluid removed was replaced intravenously with either albumin (n=8; 6 g/L) or dextran-70 (n=6; 100 mL/L). The mean amount of ascitic fluid removed was 9.3±2.8 liters. There were minor leaks in three patients, managed by suturing the peritoneum and skin.

All patients were started on diuretics on day 2 after the procedure. Pre- and post- procedure (day 2), the following parameters were studied: pulse, BP, urinary sodium, creatinine and osmolality; serum creatinine, urea, bilirubin, transaminases, alkaline phosphatase, prothrombin time, albumin, total protein and electrolytes. There was no significant difference in the mean values pre and post paracentesis. However, two patients developed renal failure, ie rise in serum creatinine by more than 0.5 mg/dL, hyperkalemia and hypouricemia. Both these reverted to normal with conservative measures. All except...
one patient (with HRS) left the hospital. There was no deterioration in the test for subclinical echocardiopathy (NCT-FCT) after the paracentesis.

We conclude that large volume paracentesis supplemented by albumin or dextran-70 is a safe method for removing large volumes of ascitic fluid without significant morbidity and mortality.

A 4 Study on the Alteration of Liver Hemodynamics in Focal and Diffuse Liver Diseases - Parametric Imaging of Liver. BASANT MALHANI, ABAN M SAMUEL, PRAMANATHAN, Department of Radiodiagnosis, Tata Memorial Center and Radiation Medicine Center (BhRC), Parel, Bombay 400 012

Present methods for studying blood flow changes in the liver by isotope first pass techniques are constrained by the quality of bolus, selection of regions of interest and statistical "noises". Modelling of the activity changes observed over each pixel to a first harmonic Fourier series was attempted. Two parameters, phase (denoting time sequence) and amplitude (denoting quantity) were deducted from these fitted curves. A map of regional estimates of these parameters was generated to provide a concise summary in a single image. Such an analysis was done over several time intervals using fast fourier transformation. Amplitude images representing early "arterial" and delayed "portal" flow were selected on the basis of phase images. These were further processed to provide arterial vs portal flow ratio images.

Liver dynamics data in normals (10), hepatocellular carcinoma (6), polycystic liver (2), solitary cysts (2), cirrhosis (8) and chronic hepatitis (2) were evaluated. In patients with hepatocellular carcinoma the distribution of arterial blood flow in the carcinoma, the homogeneity of the blood supply, the amount of infiltration into normal tissue and the reduction of portal blood flow could be easily assessed. Corresponding cystic lesions showed an absence of arterial and portal blood supply to the affected regions. In patients with cirrhosis the relative arterial supply was increased and distribution was often patchy, indicative of nodularity of liver. Reduction in portal flow and increase in ratio of arterial to portal flow was a characteristic feature of cirrhosis. The details of such observations could not be obtained by routine measures.

Many extrahepatic dynamic events in the lung, spleen and abdomen were recorded in such images, thus providing additional information in a single study. We believe that our new approach for presentation of liver dynamic data wherein parameters of interest can be superimposed over anatomy for easier interpretation.

B 5 Hemodynamic Studies in Portal Hypertension. A KONAR, B K DE, S CHATTERJEE, S GUPTA, D N GUHA MAZUMDER, Department of Gastroenterology, IPGM ER, Calcutta 700 029

To ascertain the relative contribution of arterial and portal venous flow towards the hepatic blood flow, these were measured non-invasively using an isotopic method. Twenty patients (cirrhosis 5, non-cirrhotic portal fibrosis (NCPF) 12, extra-hepatic portal venous obstruction (EHPVO) 3) with portal hypertension were studied. The ratio of hepatic arterial to hepatic arterial and portal venous flow (HPV) was useful in assessing the hepatic arterial contribution. HPV was around 0.3 in normal controls, 0.5 in EHPVO, 0.6 in cirrhosis and 0.79 in NCPF.

Similarly, we used echo-doppler flowmetry to estimate portal venous blood flow (PVP) in 20 patients with portal hypertension (NCPF 10, EHPVO 6, cirrhosis 4). Mean PVP in normal controls was 773±288 ml/min, in NCPF 1730±970 and in EHPVO 473±207. Blood flow was hepatoportal in all cases. A combination of isotopic methods of determining HPV and echo-doppler method of estimation of hepatic blood flow and direction of flow may be of value in assessing the outcome of patients after shunt surgery, especially in NCPF patients where hepatic functions are generally preserved.

B 6 Endoscopic Palliation of Malignant Jaundice using 10F Home Made Stents. K M MOHANDAS, V SANTHI SWARGOP, VINAY DHUR, D C DESAI, U R DAVE, P JAGANNATH, L J DESOUZA, Tata Memorial Hospital, Parel, Bombay 400012

Stent placement by ERCP is used commonly to palliate jaundice from non resectable malignancies. The cost of commercial stents is prohibitive for routine use in India. We present our initial experience with home made biliary stents in 20 patients (12 males, 8 females; aged 32-70 years). The etiology of biliary obstruction was gall bladder carcinoma (9), cholangiocarcinoma (5), ampullary carcinoma (3), pancreatic carcinoma (2) and metastatic nodes (1). ERCP revealed hilar block in 12, mid common bile duct block in 3 and low block in 5. Straight stents with side flaps without side holes were prepared from 10F polyethylene catheters. The stents were inserted over a 0.035 inch guide wire after dilating the stricture up to 10F. Precutting of the papilla using a needle knive sphincterotomy was done in 3 patients. Placement was unsuccessful in one patient due to inability to pass the guide wire across the stricture. Early stent blockage was seen in one patient.

We conclude that home made 10F biliary stent is a
cost effective palliative therapy for jaundice from advanced malignancies.

POSTERS

C-1
Hepatitis C Virus Antibodies in Patients With Chronic Hepatitis B. D N Amarpurkar, P Dhawan, S S Parikh, K Chopra, R H Kalra, H G Desai, Prem Murti. Departments of Gastroenterology and Microbiology, BYL Nair Ch Hospital, Bombay 400 008

Superinfection or coinfection with hepatitis delta virus causes a more severe form of liver injury in chronic hepatitis B. Since there are epidemiological similarities between hepatitis B virus (HBV) infection, hepatitis C virus (HCV) infection and hepatitis D virus (HDV) infection, this study was done to find out the prevalence of anti-HCV antibodies (anti-HCV) in chronic HBV liver disease with or without HDV infection. Fifty four consecutive patients with chronic HBV liver disease were included in the study.

Clinical examination, biochemical parameters and ELISA tests for presence of anti-HCV and anti-HDV antibodies (anti-HDV) were done in all patients. Nine (16.7%) patients were positive for anti-HCV (Group 1) and nine (16.7%) for anti-HDV (Group 2); 36 (66.6%) patients were negative for both (Group 3).

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
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<tr>
<td>(n = 9)</td>
<td>(n = 9)</td>
<td>(n = 36)</td>
</tr>
<tr>
<td>CAH without cirrhosis</td>
<td>11.1%</td>
<td>44.1%</td>
</tr>
<tr>
<td>Cirrhosis</td>
<td>88.9%</td>
<td>55.5%</td>
</tr>
<tr>
<td>Clinical &amp; biochemical decompensation</td>
<td>33.3%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Mortality</td>
<td>11.1%</td>
<td>22.2%</td>
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</table>

Our data suggest that the incidence of cirrhosis and clinical decompensation were higher in anti-HCV positive patients than in those with chronic HBV related liver disease with or without HDV infection, and mortality was higher in HDV infection. However, these differences were not statistically significant.

C-2
Infection with Hepatitis A, B, Delta and Human Immunodeficiency Viruses in Children Receiving Cytotoxic Chemotherapy. G S Rana, R Majhottar. Liver Pathology Unit, Department of Pathology, KG Medical College, Lucknow 226 003

Serological markers of hepatitis A, B and delta and human immunodeficiency viruses were studied in 25 children receiving cancer chemotherapy. Twenty two children (88%) had pre-existing HAV infection while HIV was conspicuous by its absence. Active HBV infection, observed in 19 children (76%), was asymptomatic in the majority and was accompanied by a high incidence of HBs antigenemia (57.9%) and its persistence. Pre-existing anti-HBs failed to prevent HBV infection recurrence, which was however transient and self-limiting. Multiple blood transfusions and repeated parenteral exposures appeared to be the possible sources of HBV acquisition. Transmission to close contacts was also observed.

The study suggests that although HBV vaccine may not be protective against HBV infection in patients receiving cancer chemotherapy, it may prevent its persistence and thereby help in reducing chronic liver disease-related morbidity and a highly infectious reservoir. Strict HBV screening of blood donors, exclusive use of disposable equipment, and vaccination of close contacts of cancer patients is recommended, particularly in HBV endemic third world countries.

C-3
A Prospective Study of the Prevalence of Hepatitis C Virus in Acute and Chronic Liver Diseases and Blood Donors and Recipients. P Karia, Ashwani Narang, Anita Chakravarty. Gastroenterology Division, Department of Medicine, Maulana Azad Medical College, New Delhi

Hepatitis C virus (HCV) accounts for about 95% of hepatitis infections in recipients of multiple blood transfusions and 50% of cases of sporadic non A non B (NANB) hepatitis. This study was designed to evaluate the prevalence of HCV antibodies in patients of acute and chronic liver diseases and in blood donors and recipients of multiple blood transfusions. These patients and subjects who were negative for HAV and HBV infection were screened for anti-HCV by ELISA kit (Abbott).

The study included 72 patients of acute and chronic liver diseases, 36 blood donors and 13 recipients of multiple blood transfusions. Seven of 18 cases (38.8%) of acute viral hepatitis were due to NANNB infection but none was found to be positive for anti-HCV. Of 12 patients of acute liver failure, 8 (66.6%) were due to NANB infection and none was positive for anti-HCV. Five of 8 cases of subacute hepatic failure were screened for anti-HCV and none was positive. There were 29 cases of cirrhosis of liver and of 10 cases of NANNB infection, one was found to be positive for anti-HCV. Of the 3 cases of chronic active hepatitis due to NANNB infection, none was positive for anti-HCV. There were 2 cases of hepatocellular carcinoma; one was positive for HBV infection and the other was negative for anti-HCV. Thirty
of 36 blood donors were screened for HCV infection and none was positive for anti-HCV. Nine of 13 (69.2%) recipients of multiple blood transfusions were positive for anti-HCV.

The observations made need to be confirmed in larger series of cases to resolve the issue whether hepatitis C infection is a major etiological agent for liver diseases in India.

C-4
Hepatitis B Surface and e Antigens in Pregnant Women. H H GILL, P MAJUMDAR, H G DESAI. Jaslok Hospital and Research Center, Bombay

Two thousand pregnant women were screened for the presence of hepatitis B surface antigen (HBsAg) by the HBsAg Colognost kit. The HBsAg incidence in this group was 5% (100/2000). HBsAg carrier rate increased with each pregnancy, ie 4.07% with first pregnancy to 8.14% with more than three pregnancies. All HBsAg positive women were screened for HBeAg by the ELISA technique. The incidence of HBeAg was 12%. We conclude that routine screening of HBsAg is necessary in all antenatal clinics in the third trimester. All HBsAg positive mothers should be screened for HBeAg. Restriction of prophylaxis to infants of HBsAg positive mothers would be economical.

C-5
Acute Viral Hepatitis in Cancer Patients: A Prospective Study. VINAY DHIR, V SANTHI SWAROOP, K M MOHANDAS, D C DESAI, U R DAVE, S R DAMLE, S H ADWANIL. Department of Medical Gastroenterology, Tata Memorial Hospital, Parel, Bombay 400 012

Cancer patients are at higher risk of acquiring viral hepatitis and this influences the therapeutic modalities. Forty four consecutive cancer patients with acute viral hepatitis were studied prospectively. Their clinical, biochemical and serological features were studied. History of transfusion was obtained in 36 (81.8%) patients. Twenty seven (61.3%) patients had asymptomatic anicteric hepatitis. The etiology of hepatitis was hepatitis B virus in 16 (36.3%), NANB viruses in 24 (54.5%), delta virus in 3 (6.8%) and A virus in one patient. Fifty nine percent of patients had evidence of previous or recent hepatitis B infection. Two patients with D hepatitis and one with NANB hepatitis died of liver failure.

We conclude that a majority of hepatitis episodes in cancer patients were transfusion related. Acute NANB hepatitis was most common. There is a high prevalence of B hepatitis. Regular biochemical testing will be necessary to diagnose a large majority of asymptomatic acute hepatitis patients.

C-6
Epidemiology of HBsAg Carriers in Jaipur. SANDEEP NIJHAWAN, KESHAV JOSHI, V NAMWARI, M L SHARMA, R R RAJ, D S POHITARNA. Departments of Pathology and Gastroenterology, SMS Medical College, Jaipur

Hepatitis B virus (HBV) infection is responsible for significant morbidity and mortality. The incidence of HBV infection in a community depends on the prevalence of HBV carriers. The carrier state of HBV was studied in the healthy population of Jaipur. Blood samples were collected from voluntary and replacement blood donors and hospital staff. Hepatitis B surface antigen (HBsAg) was detected by using RPHA technique; all the positive cases were confirmed by ELISA.

Over a span of three years, of 36,840 healthy donors screened for HBsAg, only 78 (0.2%) were found to harbor it. Thus, the HBV carrier rate in the general population in Jaipur district is low. One hundred and fifty subjects working in different departments of SMS Medical College and Hospital were also tested. The females had a higher positivity rate than males (10.3% vs 4.1%). HBV carrier state was highest among technical staff (9.2%), followed by doctors (5.8%) and nursing staff (3.2%). HBsAg positivity was maximum in persons who were employed for more than 5 years (9%), followed by those employed for 3 to 5 years (4%) and those employed for less than 3 years (1.6%). Laboratory workers had the highest carrier rate (8.6%), followed by staff working in the dialysis unit (7.1%), blood bank (6.4%), intensive care unit (6.2%), medical college (5.8%) and operation theater (3%).

C-7
Correlation of Splenomegaly with Esophageal Varices in Patients of Liver Cirrhosis. D N ANURAGBAK, S S PARKHI, R SHANKAR, KAPIL CHOPRA, P DIHAWAN, H H KAMBO, H G DESAI. Department of Gastroenterology, BYL Nair Ch Hospital, Bombay 400 008

Though splenomegaly is a well recognised sign of portal hypertension, it is often believed that spleen size does not correlate with severity of portal hypertension, ie the size of varices and the hepatic venous pressure gradient (WHVP). To assess the possibility of a relationship between splenomegaly and the size of esophageal varices, 130 patients of histologically proven cirrhosis of liver were studied (101 males, 29 females; age range 13-69 years; etiology alcohol 46, B virus 18, alcohol + B virus 4, others 33). Of the 130 patients, 106 had splenomegaly (86 (66.1%), >5 cm below costal margin; 20 (15.4%), >5 cm). Splenomegaly was detected by palpation in 71
Randomised Controlled Trial of Liv 52 versus Placebo in Cirrhosis. SHIVDHA J BHATIA, NIRMALA N REGE, FERROSOR P MISTRY, PHILIP ABRAHAM, Departments of Gastroenterology and Pharmacology, KEM Hospital, Bombay 400 012

Liv 52 (Himalaya Drugs) is a commercially available combination of herbal substances reputed to have beneficial effect in liver disease. We evaluated the effect of Liv 52 and placebo in a randomised, double blind trial in 45 consecutive patients of cirrhosis (47 M, 8 F; mean age 40.6±13.5 years; 16 alcoholic, 12 HBsAg positive). Twenty two patients received two tablets of Liv 52 thrice daily (Group I) and 23 patients received identical placebo (Group II) in similar dose for 6 months. Patients were evaluated clinically every month, and biochemical parameters were estimated and Child-Pugh score calculated every 3 months. There was no difference in the clinical parameters in the two groups at entry. Six, 14 and 2 cases in Group I versus 4, 13 and 6 cases in Group II belonged to Child class A, B and C respectively.

During the trial period, two patients in Group I and 4 in Group II died. Twelve patients in Group I and 8 in Group II completed the trial. The rest were lost to follow up. In Group I, though the improvement in biochemical parameters was not statistically significant, the Child score improved from a median (range) of 8.0 (5-11) to 7.0 (5-8) (p<0.05, Mann-Whitney test), with 4 and 8 cases in Child A and B class respectively. In Group II, the Child score changed from 8.0 (5-10) to 7.5 (6-12) (p=n.s) with six cases in Child class B and one each in A and C.

We conclude that Liv 52 given over six months improves the Child score in cirrhosis.

C-9


Of the 212 patients with portal hypertension we studied over the last four years, 85 were cirrhotics, 99 had non-cirrhotic portal fibrosis (NCPF) and 28 extrahepatic portal venous obstruction (EHPVO). The age range in NCPF patients was 16-50 years, in EHPVO 9-38 years and in cirrhosis 12-60. There was male preponderance (21:1) in non cirrhotic patients. More than 60% of our non cirrhotic patients came from a poor socioeconomic background. More than 60% of non-cirrhotic cases came from rural areas but a majority of cirrhotics were from urban areas. Over 80% of non-cirrhotic patients presented with upper GI bleeding; about 60% of cirrhotic patients bled in presentation. Four of the EHPVO cases had history of umbilical hernias. Three cases with cirrhosis had alcoholic etiology, while two hepatitis etiology was found in 24 cases.

Intraspinal pressure was measured in 12 patients with EHPVO and 34 with NCPF. It ranged from 35-52 cm of saline in EHPVO and 38-72 in NCPF.

Thirteen patients who had long history of arsenic exposure from drinking water were also studied. Five of them had features of portal hypertension, though all had features of portal zone fibrosis on histology.

C-10

Comparative Value of Ultrasound and Nuclear Scan in Patients with Cirrhosis of Liver. V K DIXIT, P N RAO, NAYANA JOSHI, K KUMAR, S N SUBRAMANIAM, Departments of Gastroenterology and Nuclear Medicine, Nizami's Institute of Medical Sciences, Hyderabad

This study includes 40 cirrhotic patients admitted at this institute between 1989 and 1990. There were 34 males with mean age of 41.1±20.5 years (range 10-85) and 6 females with mean age of 41.07±18.6 years (range 8-45). The diagnosis of cirrhosis was based on clinical and biochemical features, and liver biopsy wherever possible. All the patients were subjected to ultrasonography (USG) and Te sulphur colloid scan of the liver and spleen. On USG, 20 patients (50%) had features of cirrhosis with or without portal hypertension, 7 patients (17.5%) had equivocal findings, while 13 patients (32.5%) had no apparent abnormal features. Te sulphur colloid scan was suggestive of cirrhosis in 14 patients (85%), normal in 5 (12.5%) and equivocal in 1 patient (2.5%). Nine patients with normal and the 7 with equivocal USG findings were found to have cirrhotic changes on colloid scan. Only one case with normal colloid scan showed features of cirrhosis on USG.
This study suggests that colloid scan is a better non-invasive diagnostic modality than USG in patients with cirrhosis and may be useful particularly with negative or equivocal USG findings.

C-11
Primary Hepatic Carcinoid (A Case Report). S K Mathur, A N Supe, S S Nagral, C V Kantharia, I M Vora. Departments of Surgery and Pathology, KEM Hospital, Bombay 400 012

A fifty year old male was referred for a tumor of the left lobe of the liver discovered incidentally during emergency surgery for a perforated gastric ulcer. He had history of being investigated for the same two years prior and had refused treatment since it was asymptomatic. A CT scan revealed a large tumor occupying segments 2, 3 and 4, with small hypodense areas in the right lobe with air-fluid levels. Alpha fetoprotein was normal and FNAC was suggestive of an adenoma. S-HIT and urinary S-HIAA levels were raised. The patient underwent a left hepatectomy and absolute alcohol was injected in the right lobe lesions with the help of intraoperative ultrasound. The rest of the organs including the appendix, small bowel and pancreas were normal. The final pathology revealed a carcinoid tumor with a positive argyrophilic reaction. The patient remains symptom free at the end of one and a half years.

Primary carcinoid tumor of the liver is extremely rare with only six cases reported in literature. Most of these have been hepatocellular carcinomas with a carcinoid component. This is the second case with a pure carcinoid of the liver reported so far.

C-12
Fibrolamellar Hepatocellular Carcinoma - Report of Two Cases. AMITA S Joshi, Ila M Vora, Jaya Deshpande, S K Mathur. Departments of Pathology and Surgery, Seth G S Medical College & K E M Hospital, Bombay 400 012

We present two cases of fibrolamellar hepatocellular carcinoma, with unusual presentations.

Case 1: A 17 year old boy presented with right sided hemiplegia of some duration and hepatomegaly with a hard nodular liver. He died due to left ventricular failure within 24 hours after admission. At autopsy, the liver showed a 10 cm x 8 cm x 6 cm tumor mass in the right lobe which histologically was fibrolamellar hepatocellular carcinoma. The aortic and mitral valve showed large, thrombotic, grey white vegetations which showed a few tumor cells. There were metastases in the pericardial cavity as well. The brain showed an old cortical infarct in the left temporalparietal lobe involving the cuneate, putamen and part of the insular cortex. No tumor was found in the brain. However, there may have been small tumor emboli in the past which caused the cortical infarct.

Case 2: A 25 year old female presented with a mass in the left lobe of the liver. Ultrasongram and CT scan suggested a diagnosis of hepatoma, whereas selective celiac and superior mesenteric angiogram suggested a benign hepatic neoplasm. Alpha fetoprotein levels were not elevated (10.5 ng/mL). FNAC showed benign looking hepatocytes. Left lobe hepatectomy was performed. The specimen weighed 550 g and histologically showed a fibrolamellar hepatocellular carcinoma with normal adjacent liver parenchyma. The post-operative recovery was uneventful.

C-13

Hepatitis C virus (HCV) is known to be one of the causative agents of post-transfusion non-A, non-B hepatitis. Patients with chronic renal failure and undergoing renal transplantation are at high risk, as they receive repeated blood transfusions and are chronically on hemodialysis prior to the transplant. To determine the prevalence of HCV infection among these patients, a preliminary study was undertaken.

Over a period of 18 months, 83 renal transplant cases and 55 hemodialysis cases were studied. We used a second generation EIA kit (Abbott, USA) incorporating both structural and non-structural antigens, for testing for antibodies to HCV.

Twenty five percent of renal transplant cases and 36% of hemodialysis cases were found to be positive for anti-HCV antibodies. Of 9 patients who were studied from the time of dialysis till the transplant, 6 remained negative for anti-HCV antibodies, 2 who were reactive remained reactive, and one seroconverted from negative to positive.

Our data are comparable to those from other countries, and hence we recommend that transfused blood should be screened routinely for antibodies to HCV. Also, hemodialysis patients and kidney donors should ideally be tested and essential precautions taken.