65 ENDOSCOPIC SCLEROTHERAPY OF ESOPHAGEAL VARICES IN CHILDREN WITH EXTRAHEPATIC PORTAL HYPERTENTION (EPH).

C. Rodrigues, J. Salazar de Sousa, A. Mendes. Unit of Paediatric Gastroenterology, Department of Paediatrics, Hospital de Santa Maria, University of Lisbon, Portugal

Among the measures used to prevent bleeding from esophageal varices in children with PH, endoscopic sclerotherapy is becoming a most promising one. Nine children with a mean age of 6.7 years (range 3.4 - 9.2) with EPH were submitted to injection sclerotherapy. Before treatment, the mean number of bleeding episodes was 4.1 (range 1 - 11); and the mean lengh of time between bleedings was 5.6 months (range 0.5 - 16.8). All the children had grade III varices with red spots. A mean of 4.5 sessions (range 2 - 7) were performed at 3 to 4 weeks intervals. A volume of 0.5 to 2 ml of a 5% solution of ethanolamine oleate was injected in each varix. Following sclerotherapy, only transient mild complications were refered: fever in six children; hemoglobinuria in five; retrosternal pain in four; disphagia in one. Mean observation time after the begining of treatment was 15.4 months (range 9 - 26), during which no bleeding occurred. Endoscopies performed 6 months after last sclerotherapy session revealed grade I and few grade II esophageal varices. The differences between the means of the periods of time between bleedings before treatment and the post-treatment observation times were statistically significant ($P < 0.01$) (t test for paired samples). It is concluded that sclerotherapy is an effective measure in preventing variceal bleeding and improving the quality of life in children with EPH.

66 BLEEDING OESOPHAGEAL VARICES IN CHILDREN: AN EVALUATION OF INJECTION SCLEROTHERAPY.

Edward R Howard & Alex P Mowat
Dept.Surgery and Child Health, King's College Hosp. London

The optimum method for the prevention of rebleeding from oesophageal varices remains controversial.Conservative treatment in children is associated with frequent rebleeding and a mortality rate of approximately 12%. Rebleeding occurs in 7 to 43% after oesophageal devascularisation or portosystemic shunting which may be complicated by enceaphalopathy,even in children with good hepatic function.

To assess the long-term efficiency of injection sclerotherapy, we have evaluated 68 children - 31 with portal vein obstruction (PVO)and 37 with intrahepatic disease(IHD) - treated by one operator (ERH) between 1979 & 1984. Although all cases had bled on at least two occasions before sclerotherapy rebleeding occurred in only six (one with PVO) from 2-6 years after variceal obliteration. Mild chest pain and fever were common for 48hrs after injection and 5 children developed oesophageal strictures which were relieved by simple dilatation.Abnormal oesophageal motility caused intermittent dysphagia in 2 cases. Five died from progression of their liver disease.

Sclerotherapy is a safe and effective means of preventing rebleeding from oesophageal varices, particularly in children with PVO.It is also useful in IHD where its use does not increase the difficulty of liver transplantation,should this become necessary later.

67 ORTHOTOPIC LIVER TRANSPLANTATION IN CHILDREN

R.Tormo,D.Infante,V.Martínez Ibáñez,C.Margarit,J.Broto,J.Lloret,J.Iglesias,F.Barranco,J.Boix-Ochoa, P.Domínguez,A.Ballabriga.
Hospital Infantil "Vall d´Hebrón",Barcelona, Spain.

Orthotopic liver transplantation(OLT) is a therapeutic option for children with end-stage liver diseases. Once the OLT has been completed immunosupression with prednisolone(P) and cyclosporine(C) is started. The two major problems in the post-operative period(POP)are related to rejection and drug induced hepatotoxicity(DIH) both manifested by similar byochemical and clinical symptomatology. To evaluate both problems is the aim of this paper.

METHODS: The POP of 13 children that underwent OLT with succes, has been reviewed. The evidence of rejection or DIH, have been searched for.

RESULTS: All patients presented in the POP a coagulopathy rise in serum transaminases, gamaGT,alkaline phosphatase and bilirrubin . 12 of them improved with P bolus, and later on, C levels and liver biopsy, proved to be a rejection crisis.Other one did not improve with P bolus, and subsequent C dosage and liver biopsy, confirmed DIH.

CONCLUSIONS: If ther is doubt on rejection or DIH, P bolus must be administered in order to treat a possible rejection crisis, till the liver biopsy and other byochemical paramenters stablish the diagnosis with accuracy.

68 VACCINATION OF NEWBORNS OF HBsAG CARRIER MOTHERS WITH SK-RIT rec-DNA HBV VACCINE.

S. CADRANEL, S. ZEGHLACHE, A. SAFARY & F.E. ANDRE
UNIVERSITY OF BRUSSELS AND SK-RIT.

VACCINATION OF NEWBORNS FROM HBV-CARRIER MOTHERS IS CONSIDERED AS THE MOST EFFECTIVE METHOD TO PREVENT THE INFANTS TO BECOME CHRONIC CARRIERS OF HBV. SINCE DECEMBER 1985, 35 HEALTHY NEWBORNS FROM HBV-CHRONIC CARRIER MOTHERS HAVE BEEN VACCINATED , AFTER INFORMED CONSENT OF THEIR PARENTS, WITH SK-RIT rec-DNA HEPATITIS B VACCINE: 20 mcg DOSES OF THE VACCINE WERE GIVEN IM IN THE DELTOID REGION AT BIRTH, 1st AND 2nd MONTHS. HBsAG MARKERS WERE ASSAYED IN CORD BLOOD AND AT THE AGES OF 1, 2, 4 AND 6-9 MONTHS.

RESULTS	BIRTH	1m	2m	4m	6-9m
VACCINATION	1st	2nd	3rd		
SEROCONVERSION		8/16	12/13	11/11	3/3
%		50	92	100	100
GEOM.MEAN TITER	<1	9.2	37.8	295.0	331.7

NO ADVERSE REACTIONS WERE RECORDED. SIBLINGS OF THESE NEWBORNS ARE ALSO CHECKED FOR HBV MARKERS AND SERVE AS A HISTORICAL CONTROL GROUP. CONCLUSION: SAFETY AND IMUNOGENICITY OF rec-DNA SK-RIT VACCINE ARE HIGH. A LONGER PERIOD OF OBSERVATION (WITH A BOOSTER INJECTION AT THE AGE OF 12M) IS NEEDED TO EVALUATE THE PROTECTION EFFICACY OF THIS NEW VACCINE.

69 INVASIVENESS OF ESCHERICHIA COLI IN HEp-2 AND HUMAN COLONIC EPITHELIAL CELLS.

S. Knutton and A.S. McNeish. Institute of Child Health, University of Birmingham, Birmingham, U.K.

Epithelial cell invasiveness is an important pathogenic mechanism of some enteric bacteria including E. coli. Enteroinvasive E. coli (EIEC) invade the large bowel mucosa and cause dysentery-like diarrhoeal disease indistinguishable from Shigellosis. Invasiveness is demonstrated by the Serény test or in tissue culture cells. In this study we examined the ability of diarrhoeagenic E. coli isolates to invade cultured HEp-2 and human colonic epithelial cells. 8 Serény-positive E. coli isolates invaded HEp-2 cells whereas enterotoxigenic and enteropathogenic E. coli isolates were non-invasive. In each case invasiveness was greatly increased (from ~1% up to ~40% cells invaded) when bacteria were centrifuged (1,000 rpm, 10 min.) onto cell monolayers. The HEp-2 invasiveness assay was subsequently adapted to assess the ability of EIEC to invade human colonic epithelial cells. Bacteria were centrifuged onto cultured human colonic biopsies following removal of the mucus layer and biopsies cultured for up to a further 12 hours. Invasiveness was assessed histologically or by phase contrast microscopy of epithelial cells isolated from the biopsies. By both criteria colonocyte invasion of the 7 EIEC strains tested was demonstrated. We believe this to be the first reported in vitro demonstration of invasiveness of human intestinal mucosa by a human enteropathogen.

70 THE VALUE OF ELECTROPHEROTYPE (EP) IN HOSPITAL OUTBREAKS OF ROTAVIRUS INFECTIONS.

J Clark, S Hill, JA Walker-Smith, AD Phillips
Queen Elizabeth Hospital for Children, London.

Hospital outbreaks of rotavirus may require ward closure thereby wasting bedspaces and manpower. Rotavirus RNA EP patterns may indicate whether a cluster of cases is a common source outbreak or represents a collection of sporadic infections from the community.

We studied two wards, A: an infectious diseases ward, where 9 patients had rotavirus over a 13 day period, and B: a general infant ward where 11 patients had rotavirus over an 18 day period. In both wards some infections appeared hospital acquired. Sodium dodecyl sulphate treated stool suspensions were run overnight on 7.5% polyacrylamide gels at 16 mAmps and silver stained. Repeat runs for the same stool gave consistent results. Ward A showed two pairs of identical patterns, and 5 other individual EP's; when cross infection was clinically suspected EP's were different implying community-based infection. Ward B showed identical RNA EP's in 10/11 and the clinical pattern suggested cross infection. EP's thus indicated that in ward A most rotavirus infections were sporadic cases, but those in ward B represented a hospital outbreak.

In conclusion electropherotyping can aid the investigation of hospital acquired rotavirus infections and can indicate where ward closure may be required.