

Selected Abstracts

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Serum Alanine Aminotransferase of Donors in Relation to the Risk of Non-A, Non-B Hepatitis in Recipients: the Transfusion-Transmitted Viruses Study. Richard D. Aach, Wolf Szniuness, James W. Mosley and others. N. Engl. J. Med., 1981, 304: 989.

The Transfusion-transmitted viruses study prospectively followed 1,513 transfusion recipients from 1974 to 1979 in order to evaluate the incidence of post-transfusion hepatitis and factors influencing its occurrence. Patient recruitment and follow-up examinations were carried out in New York, St. Louis, Houston and Los Angeles. Eligibility criteria for each patient included no transfusions within the preceding nine months, no history of viral hepatitis or other liver disease, no recognized potential for exposure no administration or likely administration of drugs commonly associated with an elevation in serum alanine aminotransferase levels, no transfusion volume exceeding 15 units, transfusion units negative for hepatitis B surface antigen and all donors identifiable.

A total of 5,564 donors were used. The follow-up period was 21 to 40 weeks. Hepatitis was suspected if between 11 and 180 days post-transfusion there were at least two consecutive blood samples with elevated serum/alanine aminotransferase levels: one of 45+ international units and one of 90+ international units. Among donors the serum/alanine aminotransferase levels were distributed as follows: 1 to 14 international units, 66 per cent; 15 to 29 international units, 25 per cent; 30 to 44 international units, 6 per cent; 45 to 59 international units, 1.5 per cent and 60 to 284 international units, 1.6 per cent.

Among all recipients, 156 or 10 percent acquired non-A, non-B hepatitis. There were no patients with hepatitis A infection and the 15 recipients who had hepatitis B infection develop were dropped from the follow-up study. Of the 5,564 donors, 638 were donors to a recipient who later had non-A, non-B hepatitis develop. The incidence of hepatitis was directly related to the serum/alanine aminotransferase levels in blood donors. The hepatitis attack rate was six per cent or less in recipients of multiple units that had no donor serum/alanine aminotransferase level above 29 international units. At higher donor serum /alanine aminotransferase levels the attack rate increased progressively, reaching 45 per cent in recipients of units with a serum/alanine aminotransferase value of 60 international units or more. A similar relation was observed among recipients of single units of blood. In addition, hepatitis developed in 10 of 11 recipients of two units with a serum/alanine aminotransferase level of 45 international units or more. The screening of donor blood for serum/alanine aminotransferase levels was suggested as a means of reducing the incidence of non-A, non-B post-transfusion hepatitis.

-Judith S. de Nuno

Diazepam Infusion in Tetanus; Correlation of Drug Levels with Effect. Joseph F. Dasta, Kenneth L. Brier, Gregory A. Kidwell and other. South. Med. J., 1981, 74: 278.

The treatment of a patient with tetanus has in the past consisted of wound debridement, antibiotics, spasmolytic agents and supportive care. Various muscle relaxants have also been added to this treatment as a rule. These authors describe a single patient who was successfully treated with intravenous infusion of diazepam. The serum diazepam concentration was correlated with the therapeutic effect. Beneficial responses have been associated with a minimal serum diazepam concentration of 500 ng/ml. and the major metabolite of diazepam does not appear to exert any substantial activity.

This patient was treated with 10,000 units intramuscularly and 250 units directly into the offending lesion of tetanus immune globulin. He then received penicillin two million units intravenously every four hours and cimetidine, 300 mg, intravenously every six hours. A tracheostomy was done and the

patient was supported with mechanical ventilation. The authors first tried intermittent doses of diazepam, but then were forced to go to a continuous intravenous drip with the patient receiving about 10 mgm/hr. Serial blood samples for diazepam and N-desmethyldiazepam were obtained and analyzed by gas chromatography. After 16 days in the hospital, the patient was able to be -treated with oral diazepam again and was dismissed five days later on a slowly tapering regimen of oral diazepam.

-John M. McKain

Emotional Stress in Childbirth and its Modification by Variations in Obstetric Management; Epidural Analgesia and Stress in Labor. Peter C. Buchan. Acta Obstet. Gynecol. Scand., 1980, 59: 319.

Twenty Primigravidas were studied before, during and after labor by serial measurements of their plasma corticosteroids and by successive stress assessment interviews. Ten patients received narcotics for labor analgesia - while ten other patients received epidural analgesia for relief of labor pain. Compared to narcotics, epidural analgesia reduced the corticosteroid response of mothers to the first and second stages of labor, but did not blunt the postsurgical delivery rise in plasma 11-hydroxycorticosteroids. Stress assessment interviews also supported the plasma analyses in showing that mothers who had epidurals experienced less subjective stress both during labor and in retrospective review of their birth experiences.

-Susan K. Palmer

Distal Splenorenal Shunt for Portal Hypertension. 1.1Kalio and M.M.Lempinen. Ann. Chn.GynaecoL, 1981, 70:1.

A Distal Splenorenal shunt was the treatment of choice for endoscopically verified variceal bleeding and was performed upon 25 patients from November 1972 through December 1978. Sixteen patients had alcoholic cirrhosis, six had postne&otic cirrhosis and three had other diseases. The operative mortality was 16 per cent.

Three of the operative deaths were due to hepatic coma in Child's C patients. One patient had a splenic vein thrombosis develop with postoperative pancreatitis and had to undergo a side-to- side portal caval shunt. Three patients died two to four years after their shunt. One patient rebled. Sixty-five per cent of the patients continued their previous occupations postoperatively. Hepatic coma developed in two patients. The shunts were all patent in 16 patients who were studied postoperatively and in six patients who were studied at autopsy.

Child's C patients, poor B patients and patients who continue to drink alcohol are now excluded from selection for distal splenorenal shunt.

-Robert D. Sigley

Diagnosis of Deep Venous Thrombosis in Obstetrics and Gynecology by Impedance Phlebography. Daniel L. Clarke-pearson and William T. Greasman. Obstet.Gynecol., 1981,58: 52.

Venous thrombosis and pulmonary embolism are common causes of morbidity and mortality in the fields of obstetrics and gynecology. The accurate diagnosis of deep vein thrombosis and treatment are fundamental in reducing the morbidity and mortality from thromboembolism. As the clinical diagnosis of deep vein thrombosis is unreliable, the authors attempted to evaluate a noninvasive diagnostic technique of occlusive cuff impedance phlebography. The test is based upon blood volume changes in the leg produced by inflation and deflation of the thigh cuff.

One hundred and sixteen patients were evaluated by occlusive cuff impedance phlebography with an over-all diagnostic accuracy of 95.6 per cent, sensitivity, 87.5 per cent and specificity, 93.8 per cent. Of 91 patients who had symptoms suggestive of deep vein thrombosis, the diagnosis was confirmed in only 26.3 percent. Patients at high risk of having deep vein thrombosis develop postoperatively were screened before and after operation by occlusive cuff impedance phlebography and 1-fibrinogen

scanning. The diagnosis of pulmonary embolism was made either by lung ventilation-perfusion scan or by pulmonary arteriography.

There were three false-positive examinations. Two were associated with extrinsic venous-obstruction by retroperitoneal hematoma and a large sarcomatous uterus and congestive heart failure and lymphedema. False-negative occlusive cuff impedance phlebography results were not noted when a verifying test was also obtained. None of the 80 patients with negative occlusive cuff impedance phlebography results had clinical symptoms of thromboembolism during the three months of follow-up examinations. It was concluded that occlusive cuff impedance phlebography is ideally suited as a diagnostic method in the fields of obstetrics and gynecology because it is accurate, noninvasive, non-radiologic and it may be done at the bedside of the patient.

-Edward A. Dainko