
SERUM LEVELS OF CA50 IN DIFFERENT LIVER DISEASES IN CHILDREN

MOHAMED ALY ABDEL-RADY

Carbohydrate antigen CA50 is a tumour marker used in the diagnosis and evaluation of some cancers especially of the digestive tract. It is a glycoprotein in nature of 1,000,000 molecular weight in its native state. It was not cancer specific, but was found to have broad reactivity against many cancers. Abnormal results of CA 50 have been found in non-malignant liver diseases especially acute viral hepatitis and chronic active hepatitis. Our study was done to compare between the value of CA50 and other conventional liver function tests (AST, ALT, ALP, T.Bil, T.P and Albumin) in diagnosis of liver diseases and differentiation between malignant and non-malignant liver diseases. In our study, the patients are of 70 in number (45 males and 25 females). Their ages ranged between 2 and 14 years. 19 normal subjects are also included as control group. Patients were classified into one of the following groups: Acute hepatitis (12 cases), chronic active hepatitis (15 cases), bilharzial liver fibrosis (13 cases), Glycogen storage disease (6 cases), veno-occlusive disease (5 cases) and malignant liver disease (19 cases). The patients were chosen from Benha University Hospital, Cairo University Paediatric (Abu El-Reish) Hospital, Cancer Institute Cairo University and Bertha Fever Hospital. Five centimeters of venous blood were drawn by venepuncture under aseptic condition. The blood was left to clot and the rapidly separated serum was stored at 10°C for measurement of CA 50 by RIA. The following laboratory tests were done: 1-AST formerly known as SGOT, 2-ALT formerly known as SGPT, 3-Alkaline phosphatase (ALP), 4-T. Bilirubin, 5-Total protein and Albumin, 6-Serum CA 50. The results were analysed statistically in the conventional manner. In our study, we found elevated values of CA 50 in 51% of the patients with non-malignant liver diseases, so we concluded, whenever CA 50 was used in the diagnosis of liver neoplasm, a benign liver disease should be excluded because the benign liver disease per se can lead to elevation of serum CA 50. We found also that routine liver function tests as AST, ALT, ALP, T.bil, T.P and albumin are sensitive and specific in the diagnosis of different studied liver diseases. CA 50 RIA was an expensive and time-consuming test and this limited its use as a routine test in the liver disorders. We therefore recommended its applications as a confirmatory test to differentiate between different etiologies of progressive liver diseases whether malignant or non-malignant after screening by using routine liver function tests as AST, ALT, ALP, T.Bil, total protein and albumin which were shown in our study to be sensitive and specific.