Tumour markers and cirrhosis: The CA-125 who came in from the cold

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ARTICLE

Deschenes M, Michel RP, Alpert E, Barkun JS, Metrakos P, Tchervenkov J. Elevation of CA-125 level is due to abdominal distension in liver transplantation candidates. *Transplantation* 2001;72:1519-22.

ARTICLE SUMMARY

Serum CA-125 is commonly used as a marker for ovarian cancer (1,2), although it can be elevated in nongynecological malignancy and benign gynecological disease (2). In this prospective study, serum CA-125 was measured pre- and postliver transplantation in 57 cirrhotic patients (67% men) as well as two patients with polycystic liver disease and abdominal distention without ascites. Ascitic CA-125 levels were determined in five patients who had paracentesis. Mesothelial CA-125 staining was performed in 16 hepatectomy specimens. The mean serum CA-125 level pretransplant was 352 ± 549 U/L (normal less than 37 U/L) and 46 ± 49 U/L post-transplant ($P < 0.001$). The mean ascitic CA-125 was 951 ± 322 U/L compared with the mean serum level of 619 ± 290 U/L ($P < 0.003$). The CA-125 mesothelial staining grade was 0.8 ± 1.4 and 1.5 ± 1.1 in patients with normal and elevated serum CA-125 ($P = 0.37$). The two patients with polycystic liver disease without ascites also had elevated CA-125. On multivariate analysis, ascites was the only predictive variable for elevated serum CA-125.

COMMENTARY

Despite its lack of specificity, the CA-125 is commonly used in clinical practice as a serological screen and for follow-up of ovarian cancer. Ordinarily, hepatologists do not follow the CA-125 unless an ultrasound report happens to describe an

ovarian mass. The situation is different for patients undergoing work-up for liver transplantation, because many centres include a battery of tumour markers as part of the screening process. A grossly elevated serum CA-125 in these circumstances often produces concern that an ovarian cancer, which would be a contraindication for transplantation if not curatively treated, is present. The study of the McGill University group adds to the body of evidence that the serum CA-125 can be elevated in cirrhosis in the absence of ovarian cancer. This study also strongly suggests that it is, in fact, the presence of increased intra-abdominal pressure, which results in a reactive mesothelial cell mediated increase in serum CA-125. Recently there have been other reports of an elevated serum CA-125 in the presence of cirrhosis and ascites, and some have even suggested that the serum CA-125 be used as a marker for the presence of ascites (3)! Furthermore, it has also become clear that noncirrhotic ascites (4) and peritoneal tuberculosis (5) can produce elevated serum CA-125 levels. For the transplant hepatologists confronted with an elevated serum CA-125 in a pretransplant patient, the bottom line is – if the pelvic ultrasound is normal, rest easy.

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