CA-125 Testing in Females with Ascites: A Red Herring
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Sir,

CA-125 is a commonly used tumour marker in clinical medicine. It is most commonly used as a marker of epithelial ovarian cancer.¹ However, this biomarker may be elevated in some benign conditions too. Hence, as the case below demonstrates, judicious use of this test is recommended.

We present the case of a 54 year old woman who presented to her GP with ascites. As a part of the initial investigations, a CA-125 assay was done which was found to be very high (1400 IU/L) (N :< 35 IU/L). The woman was told about the possibility of cancer and she came to our hospital, extremely depressed and distraught.

However, at our institution, a CT scan of the abdomen showed only ascites with no evidence of any tumour or peritoneal mass. A transvaginal sonography was also negative for any ovarian mass. The ascitic fluid study revealed high-SAAG fluid with cell count of 50/cmm. The fluid was negative for malignant cells. Blood test revealed hemoglobin of 7.4 gm/dl. Liver function test revealed bilirubin 2 mg/dl, SGOT 60 IU/L, SGPT 82 IU/L, albumin 2.7 gm/dl and globulin 5 gm/dl. Prothrombin time was 19 seconds with INR of 1.6. Upper GI endoscopy showed early esophageal varices. Thus, the patient was diagnosed as a case of chronic liver disease. She responded to oral diuretics and after one year of follow up till now, has not developed any feature of malignancy. Her CA-125 level remains elevated at 470 IU/L.

We report this case to highlight the devastating effect of a spuriously high CA 125 level on the patient. She had searched the internet and had also been told about the possibility of ovarian cancer as a result of this report. This affected her psyche a lot.

Chronic liver disease with ascites is an established cause of high CA-125 levels.² In fact, elevated CA-125 is a sensitive marker of ascites in cases of cirrhosis.² This test can predict the onset of ascites even before ultrasonographic detection in some cases.³ Awareness about this fact by clinicians can avoid unnecessary tests and anxiety for the patient. As a raised CA-125 level may lead to a decision for exploratory laparotomy or even hysterectomy, extra care is needed in interpreting the test result.

Some studies have found a correlation between the volume of ascitic fluid and serum CA-125 levels.³ Also, there is no upper limit of the elevation of CA-125 levels in ascites due to any cause, benign or malignant. As published case reports show, CA-125 may be elevated even up to 4000 IU/L due to benign ascites.⁴ In severe myxedema too, ascites with raised CA-125 may be found.³

However, sometimes, CA-125 may be elevated long before the appearance of the macroscopic features of ovarian cancer. Hence, although an alarmist approach is to be avoided once elevated CA-125 is found, regular follow up is needed to look for appearance of new features that may suggest malignancy.

The main point of this letter is to highlight the fact that in middle aged or post-menopausal women, CA-125 should not be the first line test for ascites, unless other benign causes have been ruled out. A spuriously elevated level in benign conditions like chronic liver disease may lead to unnecessary anxiety (as in our patient) and surgical interventions.

References