Treatment of Ruptured Ovarian Endometrioma with Extremely High CA 125, Moderately High CA 19-9 and CA 15-3 Level

Çok Yüksek CA-125 ile Orta Düzeyde Yükselmiş CA 19-9 ve CA 15-3 Değerlerinde Rüptüre Endometrioma Olgusu

Özet

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Endometriozis; Endometrioma; CA-125; CA 19-9; CA 15-3

Abstract
In this case report, a ruptured ovarian endometrioma with a very high CA-125 level, moderately elevated CA 19-9, and CA 15-3 levels is presented. A 20 years old patient, complaining from pelvic pain, 5 cm adnexial mass was detected on left side. Biochemical examination was revealed very high CA-125 value (2556 IU/ml), moderately elevated CA 19-9 (134 IU/ml), and CA 15-3 (65 IU/ml) values. Laparoscopy was done and a ruptured ovarian endometrioma of 5 cm was seen during operation. After the total excision of the cyst, tumor markers fell rapidly. Very high CA-125 value, moderately elevated CA 19-9, and CA 15-3 values can be seen in cases with ruptured endometrioma. In young patients, endometrioma must be considered firstly and laparoscopy should be applied instead of more invasive methods unless there was any finding or strong suspicion about malignancy.

Keywords
Endometriosis; Endometrioma; CA-125; CA 19-9; CA 15-3
Introduction
CA-125 (Carbohydrate antigen 125) is a well-established tumor marker to monitor the effectiveness of ovarian cancer therapy and early observe its relapses [1]. In 80% of non-mucinous epithelial ovarian cancers, CA-125 level is elevated [2]. Plasma CA-125 value does increase not only in ovarian cancer, but also in benign conditions such as uterine myomas, pelvic inflammatory diseases and especially endometriosis [3]. Although many studies reveal the relation between high plasma CA-125 levels and endometriosis, very high levels (>1000 IU/ml) are rarely seen in cases with endometriosis [4].

CA 19-9 is a glycoprotein that increases in gastrointestinal tumors, benign and malignant ovarian tumors. Serum values also increase in cases with advanced stage endometriosis. Another serum tumor marker; CA 15-3 is secreted from malignant breast tumor cells and does not actually increase in endometriosis [5, 6]. In this case report, a ruptured ovarian endometrioma case with very high CA-125, moderately high CA 19-9 and CA 15-3 levels was presented and discussed.

Case Report
A 20 years old woman with regular menstrual cycles who suffers from pelvic, abdominal pain and dysuria was admitted hospital. There wasn't any pathologic sign in systemic examination. Heart rate was 92/min, blood pressure was 120/80 mmHg and body temperature was 38°C. Tenderness and rebound were detected in left lower quadrant during abdominal examination. Hemoglobin was 12 g/dl, WBC was 19200/dl and beta hCG was negative in laboratory assessment. 5x5 cm heterogeneous left adnexial mass was detected by ultrasonography. In computerized tomography, the same 5x5 cm contrast-fixing heterogeneous mass, which seemed to be originated from the left ovary was detected and minimal pelvic fluid was seen. Tumor markers were studied and following values were found: CA-125: 2556 IU/ml (<35 IU/ml), CA-15-3: 65 IU/ml (<25 IU/ml), CA-19-9:134 IU/ml (<39 IU/ml).

Laparoscopy was done under general anesthesia. Adhesions and focal endometriotic areas in pelvic peritoneum and a 5 cm ruptured endometrioma in the left ovary were seen. Adhesiolyisis was done and endometrioma was excised completely. Focal endometriotic areas were cauterized. Abdominal cavity was irrigated and cleansed with normal saline. After the operation of endometrioma, peritoneal cavity was irrigated and cleansed with normal saline. After the operation, CA-125, CA-15-3 were measured 9300 IU/ml and 6114 IU/ml respectively [18,19].

In stage 3-4 endometriosis cases CA-125 and CA 19-9 levels are significantly higher than control group. If the cut off value is assumed 20 IU/ml for CA-125 and 10 IU/ml for CA-19-9 the sensitivity of these tests are measured 72% and 59%; the specificity is 71% and 55% respectively [20]. Kurdoğlu et al.[21] were done a study to find if CA 19-9 can be used instead of CA 125 in endometriosis. They determined that CA 19-9 is an important marker especially in advanced endometriosis. Moreover Tsao et al.[21-23] showed higher CA 125 and CA 19-9 levels in their study on 19 patients with endometriosis or myoma uteri. They also found that in some patients only CA 19-9 was increased instead of CA 125. As a result it is advised to use this markers together in the diagnosis of endometriosis. Elevation of both CA-125 and CA 15-3 is rare in endometriosis cases. Muscatello et al.[24] reported that the combined usage of serum CA 125 and Ca 15-3 had no benefit on diagnosis of endometriosis. Canda and colleagues [25] reported a case of...
endometriosis which have very high levels of CA 125 and elevated levels of CA 15-3. Similarly in our case CA 125 level was very high and CA 15-3 and CA 19-9 levels were also elevated. Consequently although in the presence of adnexal mass the elevated levels of CA 125 and CA 19-9 primarily suggest malignancy, this can also be seen ruptured endometrioma or widespread endometriosis. Therefore in the young cases who had no signs of malignancy ruptured endometrioma should kept in mind and laparoscopy as a less invasive method must be preferred instead of laparotomy[26]. Usage of CA 125 and CA 19-9 together especially for the diagnosis and follow up of the high grade endometriosis is useful. CA 15-3 can increase in high grade endometriosis but it doesn’t have any value in diagnosis and follow up.

**Competing interests**

The authors declare that they have no competing interests.

**References**