

Case Report / Olgu Sunumu

Endometrioma mimicking ovarian cancer with unusual high levels of serum CA 125 and CA 19-9

Çok yüksek serum CA 125 ve CA 19-9 düzeyleri ile yumurtalık kanserini taklit eden endometrioma

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Abstract

A 35 year-old nulliparous woman was referred to our clinic with left ovarian mass (6x7 cm in size) accompanied by excessive free fluid at pouch of Douglas and elevated levels of serum CA 125 and CA 19-9 as 1061 IU/mL and 896 IU/mL, respectively. Laparotomy was performed with the suspect of ovarian cancer. Left ovarian endometrioma adherent to the sigmoid colon was observed and enucleated. Histopathological examination confirmed the diagnosis of endometrioma. Adnexal mass with free peritoneal fluid and high levels of tumor antigens; CA 125 and CA 19-9 mimicking ovarian cancer has been rarely diagnosed as endometrioma.

Keywords: CA 125, CA 19-9, endometriosis

Özet

Otuz beş yaşında, nullipar bir kadın adneksial kitle nedeni ile kliniğimize sevk edildi. Douglas boşluğunda belirgin sıvı birikimi ve yüksek CA 125 (1061 IU/mL) ve CA 19-9 (896 IU/mL) seviyeleri ile birlikte 6x7 cm boyutlarında sol over kitlesi vardı. Over kanseri ön tanısı ile laparotomi yapıldı. Sol yumurtalıkta sigmoid kolona yapışık endometrioma bulundu ve çıkartıldı. Histopatolojik inceleme endometrioma tanısını doğruladı. Asit ve yüksek CA 125 ve CA 19-9 düzeyleri ile birlikte olan yumurtalık kanserini taklit eden endometrioma nadir saptanan bir durumdur.

Anahtar sözcükler: CA 125, CA 19-9, endometrioma

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Introduction

CA 125 and CA 19-9 are high-molecular-weight glycoproteins elevated in patients with benign and malignant tumors [1]. Serum CA 125 is commonly used in gynecologic practice to differentiate the benign and malignant ovarian masses. Moreover serum CA 125 is elevated in many physiological situations such as menstrual bleeding and pathological situations such as endometriosis, tuboovarian abscess, pelvic inflammatory disease and uterine fibroids [1, 2]. Serum CA 125 levels are rarely elevated more than 100 IU/mL in patients with endometriosis [2]. Serum CA 19-9 is another tumor marker mainly elevated in patients with gastro-intestinal and pancreatic carcinoma [3]. Furthermore CA 19-9 concentrations may be elevated in patients with benign and malignant ovarian masses [3, 4]. In this case; we reported left ovarian mass with free peritoneal fluid accompanied-by-excessively elevated levels of serum CA 125 and CA 19-9 mimicking ovarian malignancy.

Case Report

A 35-year-old, nulliparous woman was referred to our clinic with a 6x7 cm left adnexal mass accompanied-by-excessive free peritoneal fluid and elevated levels of serum tumor antigens CA 125 and CA 19-9. Pelvic examination was normal except minimal tenderness on the left side. Rectal examination revealed a fixed and elastic left adnexal mass. Abdominopelvic ultrasonography revealed 6x7 cm left ovarian cystic mass with homogenous tissue echogenicity and regular surface wall accompanied-by-free fluid at the pouch of Douglas. Right ovary and uterus was normal. We investigated the visceral organs with ultrasonography and did not view any pathological findings. She had regular menstrual cycle and she was at the late luteal phase of her menstrual period. She had no gynecologic disorder in her past medical history.

Regarding laboratory tests; complete blood count, urinalysis, C-reactive protein, liver and renal functional tests were normal. Serum CA 125 and CA 19-9 concentrations were 1061 IU/mL 896 IU/mL, respectively. Serum CA 125 and CA 19-9 were measured by enzyme immunoassay [EIA]. Endoscopy and colonoscopy was performed to exclude gastro-intestinal malignancy and revealed normal. Minilaparotomy was performed and 6 cm left ovarian endometrioma adherent to sigmoid colon was seen. Uterosacral ligament, posterior corpus uteri, and peritoneal surfaces. Approximately 300-mL free fluid was aspirated at the pouch of Douglas. After peritoneal washing and adhesiolysis, endometrioma was aspirated and cyst capsule was enucleated. Histological examination confirmed the diagnosis of endometrioma. Rapid decrease was recognized at serum levels of CA 125 and CA 19-9 and counted 66.7 IU/mL and 56.89 IU/mL, respectively a week later.

Discussion

CA 125 and CA 19-9 are high-molecular-weight glycoproteins generally used to differentiate benign and malignant pathologies. Furthermore these tumor markers are used for monitoring the effect of therapy and detection of recurrence [1]. CA 125

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concentration rises above 35 IU/mL in more than 80% of patients with epithelial ovarian tumors [1]. Moreover, serum CA 125 level is elevated at physiologic situations such as menstruation and benign pathologies such as endometriosis, uterine fibroids and pelvic inflammatory disease. Serum CA 125 concentration commonly rises at endometriosis, however its level rarely exceeds 100 IU/mL [1].

Serum CA 19-9 is another tumor marker that might elevate at endometriosis [1; 2]. However it is controversial to use CA 19-9 as a tumor marker at endometriosis. Harada et al. [3] assessed the usefulness of CA 19-9 for the diagnosis of endometriosis and revealed that mean serum CA 19-9 levels increased with the advancement of the clinical stage of endometriosis and mean levels were significantly elevated compared with patients without endometriosis. Kurdoglu et al. [5] reported that serum CA 19-9 and CA 125 levels were significantly higher at stage 3 and 4 endometriosis.

In the literature, there are few reports showing exaggerated high levels of serum CA 125 and/or CA 19-9 at endometriosis. Kurata et al. [2] reported serum CA 125 and CA 19-9 levels as 9537 IU/mL and 15653 IU/mL, respectively in a patient with ruptured ovarian endometrioma. Takemori and Sigumira [7] also reported an endometrioma with abnormally high serum CA 19-9 level (2380 u/mL). Park et al. [8] reported markedly elevated serum CA 125 (548.1 IU/mL) and CA 19-9 (7604 IU/mL) levels with massive peritoneal fluid mimicking ovarian cancer. Yilmazer et al. [1] presented a case report of bilateral unruptured endometrioma with elevated levels of serum CA 125 and CA 19-9 on the 23rd day of menstruation as 134 U/mL and 61.96 U/mL respectively. They repeated the serum markers on the 2nd day of menstruation and found them to be elevated even more as CA 125 1741.8 u/mL and CA 19-9 170.9 u/mL.

We reported a case of left adnexal mass accompanied by peritoneal free fluid and exaggerated levels of serum CA 125 and CA 19-9. Serum CA 125 and CA 19-9 levels were 1061 IU/ mL and 896 IU/ mL, respectively. We performed laparotomy with suspected ovarian malignancy. The exact diagnosis was endometrioma. In conclusion, we should always keep in mind endometriosis during differential diagnosis in premenopausal women with adnexal masses with unusually elevated serum tumor markers.

References

1. Yilmazer M, Sonmezer M, Gungor M. Unusually elevated serum carbohydrate antigen 125 (CA125) and CA19-9 levels as a result of unruptured bilateral endometrioma. *Aust N Z J Obstet Gynaecol.* 2003 Aug;43(4):329-30.
2. Kurata H, Sasaki M, Kase H, Yamamoto Y, Aoki Y, Tanaka K. Elevated serum CA125 and CA19-9 due to the spontaneous rupture of ovarian endometrioma. *Eur J Obstet Gynecol Reprod Biol.* 2002 Oct 10;105(1):75-6.
3. Harada T, Kubota T, Aso T. Usefulness of CA19-9 versus CA125 for the diagnosis of endometriosis. *Fertil Steril.* 2002 Oct;78(4):733-9.
4. Mabrouk M, Elmakky A, Caramelli E, Farina A, Mignemi G, Venturoli S, Villa G, Guerrini M, Manuzzi L, Montanari G, De Sanctis P, Valvassori L, Zucchini C, Seracchioli R. Performance of peripheral (serum and molecular) blood markers for

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- diagnosis of endometriosis. Arch Gynecol Obstet. 2012 May;285(5):1307-12.
5. Kurdoglu Z, Gursoy R, Kurdoglu M, Erdem M, Erdem O, Erdem A. Comparison of the clinical value of CA 19-9 versus CA 125 for the diagnosis of endometriosis. Fertil Steril. 2009 Nov;92(5):1761-3.
 6. Johansson J, Santala M, Kauppila A. Explosive rise of serum CA 125 following the rupture of ovarian endometrioma. Hum Reprod. 1998 Dec;13(12):3503-4.
 7. Takemori M, Sugimura K. Ovarian chocolate cyst with markedly elevated serum CA19-9 level: a case report. Eur J Obstet Gynecol Reprod Biol. 1991 Dec 13;42(3):241-4.
 8. Park BJ, Kim TE, Kim YW. Massive peritoneal fluid and markedly elevated serum CA125 and CA19-9 levels associated with an ovarian endometrioma. J Obstet Gynaecol Res. 2009 Oct;35(5):935-9.