

Ovarian Fibroma in Young Female with Raised Serum Ca-125: A Unique Case Report

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Abstract: This paper reports a case of a 32 year, young female patient who presented with a large solid, whitish, smooth and bosselated, predominantly cystic ovarian mass with elevated CA-125 levels. Variable clinical, morphological and radiological features were more suggestive of malignant ovarian tumour. Therefore, laparotomy with frozen section was planned. Histopathological examination however revealed an ovarian fibroma with cystic change reinforcing the non specificity of CA-125 as a marker of ovarian malignancy and establishing the importance of frozen section and proper histopathological examination even in the most obvious of cases.

Keywords: CA-125, Frozen section, Ovarian fibroma, Young woman

1. Introduction

Ovarian fibroma is a most common benign solid tumor that belongs to sex-cord stromal cell tumors of the ovary and comprises spindle shape fibroblastic cells and abundant collagen^{1,2} and accounts for 4% of all ovarian tumors^{1,3} This tumor occurs generally in elderly patients. In one study, 80.9% of the women were over 40 years old, and 49.0% of the patients were postmenopausal⁴. Ovarian fibromas usually present as unilateral, solid, hard masses with a bosselated external surface. Ovarian fibroma is often difficult to diagnose preoperatively and usually misdiagnosed as uterine myoma, because of the solid nature of the mass on examination and the ultrasonographic similarities between the two anomalies. It may be associated with ascitis and hydrothorax known as Meig's Syndrome. Although rare, ovarian fibroma has been reported in young people too, in which the possibility of Gorlin syndrome, also known as nevoid basal cell carcinoma syndrome, must be considered⁵.

2. Case Report

A 32 year young Gravida 2 Para2 (G2P2) lady presented to the gynecology clinic of MMPJ hospital with pelvic discomfort and heaviness in lower abdomen for one year, which was recently exacerbated and dominantly located on right lower quadrant of the abdomen. She had no complaints of fever, vomiting, or bowel or bladder dysfunction. The patient had no medical or surgical history except history of tubal ligation. Her general physical examination was unremarkable. An abdominal examination showed a 12-14 week size, tender supra-pubic mass. A vaginal examination revealed an irregular, firm mass non separable from the uterus and felt through all fornices. Routine laboratory tests were within normal limits.

An abdominal ultrasonography was suggestive of a right adnexal mixed echo mass measuring 110*90 mm. The left ovary was mildly edematous. There was no sign of ascites or plural effusion. A subsequent magnetic resonance image (MRI) revealed enlarged edematous right ovary with a follicular central stroma and peripherally located follicles with engorged vessels with free fluid in pelvic cavity. The patient's blood CA-125 levels were raised to 174 U/ml

(normal <35U/ml). Patient was scheduled for laparotomy and resection of the lesion. On laparotomy, the right ovary contained a huge (11×9 cm) mobile and well circumscribed mass with features similar to a benign ovarian mass especially an ovarian fibroma or thecoma. We sent a sample for frozen section examination which proved the benign nature of the tumor, ovarian fibroma. We did right sided salpingo- oophorectomy as patient had completed her family and specimen were sent for histopathological examination. Left sided adnexa was unremarkable.

A gross examination revealed a right sided salpingo-oophorectomy specimen measuring 11*9 cm with fallopian tube measuring 4 cm. The capsule covering the mass was intact and the outer surface was whitish, smooth and bosselated. On sectioning, the mass was predominantly multicystic and filled with yellowish mucoid material. The cystic spaces varied in sizes from 1.0-3.0 cm. Solid areas were grey-white and firm. Normal ovarian tissue was not identified. Histopathologic examination revealed proliferation of spindle cells with blended nucleus in stratiform pattern with no pleomorphism or mitotic activity. The tumor showed a variable degree of edema and cystic change, which confirmed the diagnosis of ovarian fibroma cystic change. (Figure- 1, 2)



Figure 1: Cut section of ovarian fibroma

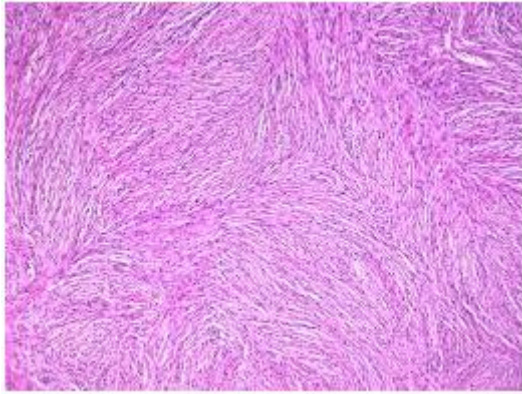


Figure 2: Histopathological feature of tumor

3. Discussion

Ovarian fibromas are stromal tumors composed of spindle, oval or round cells producing collagen.⁶ Fibromas are usually solid, spherical, slightly lobulated, encapsulated, grey-white masses covered by a glistening, intact ovarian serosa.⁷

As occurred in our case, ovarian fibroma is often difficult to diagnose and the tumor is not often diagnosed accurately until the time of surgery. It has been reported that 34% of ovarian fibromas were misdiagnosed preoperatively as uterine myoma⁸. In our case, there was a strong clinical and radiological suspicion of malignancy, so laparotomy with frozen section was planned. Unlike the guarded prognosis encountered for advanced cases of ovarian carcinoma, the surgical option in this case proved to be curative with an uneventful post-operative course.

On the other hand, up to 67% of these patients suffered from ascites, even in a very small-sized tumor. Also, high levels of serum CA125 in many of these cases may frequently cause misdiagnosis of malignant ovarian neoplasia⁹. Ovarian fibromas are almost always benign. Very rarely, fibromas without any atypical features are associated with peritoneal implants.

Surgical removal of these solid ovarian tumors is recommended because of the low probability of malignancy¹⁰. Salpingo-oophorectomy can be considered in perimenopausal or postmenopausal women, and cystectomy should be performed in young females. We should not forget the role of laparoscopy as a diagnostic procedure even in suspicious cases of ovarian fibroma with solid tumor, ascites, and plural effusion.

CA-125 as an ovarian carcinoma tumor marker has been suggested as a valuable tool to assist in distinguishing between benign and malignant neoplasms. Unfortunately, it has not proved to be a reliable predictor of ovarian cancer as normal values do not exclude the presence of carcinoma and elevated levels can be associated with a benign diagnosis.¹¹ Spinelli, *et al.*¹² also reported a case of benign ovarian fibroma with elevated CA-125 levels.

4. Conclusion

Though ovarian fibromas are most commonly found in elderly women and are benign in nature but in our case, it was presented in a young woman with elevated CA 125 and variable clinical, morphological and radiological features with benign characteristics.

References

- [1] Chechia A, Attia L, Temime RB, Makhlof T, Koubaa A. Incidence, clinical analysis, and management of ovarian fibromas and fibrothecomas. *Am J Obstet Gynecol.* 2008;199(5):473.e1-4.
- [2] Nocito AL, Sarancone S, Bacchi C, Tellez T. Ovarian thecoma: clinicopathological analysis of 50 cases. *Ann Diagn Pathol.* 2008;12(1):12-6.
- [3] Gargano G, De Lena M, Zito F, Fanizza G, Mattioli V, Schittulli F. Ovarian fibroma: our experience of 34 cases. *Eur J Gynaecol Oncol.* 2003;24(5):429-32.
- [4] Son CE, Choi JS, Lee JH, Jeon SW, Hong JH, Bae JW. Laparoscopic surgical management and clinical characteristics of Ovarian fibromas *JLS.* 2011;15(1):16-20.
- [5] Ball A, Wenning J, Van Eyk N. Ovarian fibromas in pediatric patients with basal cell nevus (Gorlin) syndrome. *J Pediatr Adolesc Gynecol.* 2011; 24(1):e527.
- [6] Tavassoli FA, Mooney E, Gersell DJ, McCluggage WG, Konishi I, Fujii S, et al. Sex-Cord Stromal Tumors. In: *World Health Organisation Classification of Tumors. Pathology and Genetics of Tumors of the Breast and Female Genital Organs.* Lyon, France: IARC Press; 2003. p. 149-51.
- [7] Crum CP. The Female Genital Tract. In: Kumar V, Abbas AK, Fausto N, editors. *Robbins and Cotran Pathologic basis of disease.* 7th ed. Philadelphia: WB Saunders Company; 2004. p. 1059-117.
- [8] Leung SW, Yuen PM. Ovarian fibroma: a review on the clinical characteristics, diagnostic difficulties, and management options of 23 cases. *Gynecol Obstet Invest.* 2006; 62(1):1-6.
- [9] Moran-Mendoza A, Alvarado-Luna G, Calderillo-Ruiz G, Serrano-Olvera A, Lopez-Graniel CM, Gallardo-Rincon D. Elevated CA125 level associated with Meigs' syndrome: case report and review of the literature. *Int J Gynecol Cancer.* 2006;16 Suppl 1:315-8.
- [10] Leung SW, Yuen PM. Ovarian fibroma: A review on the clinical characteristics, diagnostic difficulties and management option in 23 cases. *Gynecol Obstet Invest* 2006;62:1-6
- [11] Walker JL, Manetta A, Mannel RS, Shu-Yuan L. Cellular fibroma masquerading as ovarian carcinoma. *Obstet Gynecol* 1990;76:530.
- [12] Spinelli C, Gadducci A, Bonadio AG, Berti P, Micolli P. Benign ovarian fibroma associated with free peritoneal fluid and elevated serum CA 125 levels. *Minnerva Ginecol* 1999;51:403-7.