

CASE REPORT

CLINICAL AND HISTOPATHOLOGICAL DIAGNOSIS OF OVARIAN FIBROMA IN AN 18 YEAR OLD UNMARRIED FEMALE PATIENT : A RARE CASE REPORT

M. Ramani¹, O.H. Radhika Krishna², P.V. Ramana Bai³, N. Amulya⁴, Puja Deshmukh⁵.

1. Professor, Department of Pathology, Niloufer Hospital, Institute Of Child Health, Hyderabad.
2. Assistant Professor, Department of Pathology, Niloufer Hospital, Institute Of Child Health, Hyderabad.
3. Professor and H.O.D, Department Of Obstetrics & Gynaecology, Niloufer Hospital, Institute Of Child Health, Hyderabad.
4. III Year, Undergraduate, Osmania Medical College, Hyderabad.
5. Post Graduate, Department Of Pathology. Niloufer Hospital, Institute Of Child Health.

CORRESPONDING AUTHOR:

Dr. M. Ramani,
Department of Pathology,
Niloufer Hospital Institute of Child Health,
Red Hills, Hyderabad, Andhra Pradesh.
E-mail: drmmramani@sify.com

ABSTRACT: Ovarian tumors in childhood and adolescence are rare, accounting for approximately 1% of all malignant neoplasms in the age range of 0-17yrs. Ovarian fibromas are rare in women under 20 years of age, accounting for approximately 4% of all ovarian neoplasms. We report a case of 18year old unmarried female patient with ovarian fibroma. The patient presented with constipation, increased frequency of micturition and distention of abdomen since 4 months. This case is presented because of its rarity.

KEY WORDS: Ovarian fibroma, abdominal distension, adolescents

INTRODUCTION : An ovarian fibroma is a benign ovarian tumor of sex cord - stromal (mesenchymal) origin. They are rare in women under 20 years of age, occur usually in women above 30 years. Ovarian tumors in childhood and adolescence are also rare, accounting for approximately 1% of all malignant neoplasms in the age range of 0-17 yrs. The tumor belongs to the same histopathologic spectrum as an ovarian thecoma/ ovarian fibrothecoma.

CASE HISTORY : An 18 yr old unmarried female patient presented with constipation, frequency of micturition and distension of abdomen since 4 months. The patient attained menarche at the age of 13 years, regular periods 3-4/30 days, scanty flow. Systemic examination of CVS, CNS, Respiratory systems were normal, abdomen was distended.

Lab investigation revealed normal CA-125 levels. CT abdomen showed large heterogeneously enhancing mass in pelvis and abdomen. There was no free fluid in the abdomen. No pleural effusion was noted.

Salpingo-oophorectomy was done and we received a soft tissue mass measuring 20X15X12 cm. On gross examination, the surface was smooth with fallopian tube attached to the mass and the capsule was not adherent to it. It was rubbery in consistency. Cut surface showed lobulated grey white areas with whorled pattern. (Fig.1)

CASE REPORT

Microscopy revealed variably cellular bundles and intersecting swathes of collagenous fibrous tissue (*Fig.2*). The fibroblastic cells were arranged in storiform pattern having spindle shaped nuclei and luteinized areas were seen.

IMMUNOHISTOCHEMISTRY: The tumor tissue showed strong positivity for Vimentin.

Based on the above histopathological and immunohistochemical findings, the diagnosis of ovarian fibroma was confirmed.

DISCUSSION: An ovarian fibroma is a benign stromal tumor composed of spindle, oval or round cells producing collagen ⁽¹⁾. Ovarian fibromas account for approximately 4% of all ovarian neoplasms^(2,3) They are rare in women under 20 years of age and occur usually in women above 30 years. They are bilateral in about 5% of cases. The size ranges vary from few millimeters to >20cm.

Fibromas are usually solid, spherical, slightly lobulated, encapsulated, grey-white masses covered by a glistening intact ovarian serosa. Tumour is composed of spindle shaped cells forming variable amounts of collagen (*Fig.-2*). Sectioning of a fibroma typically reveals a chalky-white surface that has a whorled appearance (*Fig.1*), similar to that of a uterine fibroid. Areas of oedema, occasionally with cyst formation, are also relatively common.

Comparing our case to a case report by Sugiyama. A et al, who had a case of ovarian fibroma in a young girl we noted that their patient presented with marked ascites and elevated serum CA-125 levels. ⁽¹⁰⁾

There was also a report by Aruna Nigam et al in a young nulliparous married female with a twisted ovarian fibroma with raised HCG levels and ascites mimicking ruptured ectopic pregnancy. ⁽¹¹⁾

VARIANTS OF FIBROMA:

- Ovarian fibromatosis- diffuse dense thickening of the cortex of ovary.
- Cellular fibromas - contain 1-3 mitotic figures/10 HPF.
- Fibrosarcomas- have a mitotic rate of >4/10 HPF. Cellular fibromas and fibrosarcomas tend to be large and show areas of hemorrhage and necrosis.
- Occasionally fibromas may present with minor sex cord elements.
- Fibroma that exhibit aggregates of lipid-laden lutein like cells are termed "Luteinized thecomas".
- Fibromas are hormonally inactive.

ASSOCIATED FEATURES:

- Fibromas >10 cm in diameter sometimes associated with ascites and hydrothorax, relieved by removal of the fibroma.
- Only 1% of fibromas can present as Meig's syndrome.
- Meig's syndrome is the triad of ovarian fibroma with ascites and pleural effusion. It is a rare but well known syndrome. Pleural effusion and ascites resolve with successful resection of the ovarian tumor.

CASE REPORT

- Ascites is sometimes present, and the serum CA 125 level increase, which may lead to the mistaken diagnosis of a malignant tumor of the ovary. ^(4,5)
- Meig's suggested that irritation of the peritoneal surfaces by a hard, solid ovarian tumor could stimulate the production of ascites. ^(6,7)
- Trisomy 12 is also seen with some benign cellular fibromas.
- 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.⁽⁸⁾

Surgery is the recommended treatment for ovarian fibroma. Salpingo-oophorectomy can be considered in perimenopausal or postmenopausal women, and cystectomy only can be performed in young women. Surgical removal of these solid ovarian tumors is recommended to prevent occurrence of malignancy. ⁽⁹⁾

CONCLUSION: Ovarian fibromas are uncommon but are the most common benign solid tumors of the ovary. They constitute about 4% of all ovarian tumors. Gynecologists should be aware of this type of tumor because of the difficulties in diagnosis. This tumor is often misdiagnosed as a uterine myoma in ultrasonographic findings and is sometimes mistaken for a malignant tumor of the ovary, because of its solid nature, increased tumor marker levels, and accompanying ascites. However, ovarian fibromas are benign and can be treated completely by surgical removal, and laparoscopic surgery can be an effective and safe alternative approach. This case is presented in a view of highlighting a rare case of ovarian fibroma in an unmarried 18 yr old female.

REFERENCES:

1. Tavassoli FA, Mooney E, Gersell DJ, 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, 149-51.
2. Jeong YY, Outwater EK, Kang HK, Imaging evaluation of ovarian masses, Radiographics, 20 (5): 1445-70.
3. Atri M, Nazarnia S, Bret PM et-al. Endovaginal sonographic appearance of benign ovarian masses, Radiographics, 1994; 14 (4): 747-60.
4. Sivanesaratnam V, Dutta R, Jayalakshmi P, Ovarian fibroma-clinical and histopathological characteristics-Int J Gynecol Obstet. 1990;33:243-247.
5. Patsner B. Meigs syndrome and "false positive" preoperative serum CA-125 levels: analysis of ten cases. Eur J Gynecol Oncol-2000; 21:362-363.
6. Meigs JV. Fibroma of the ovary with ascites and hydrothorax; Meigs' syndrome. Am J Obstet Gynecol- 1954; 67:962-85.
7. Terada S, Suzuki N, Uchide K, Akasofu K. Uterine leiomyoma associated with ascites and hydrothorax, Gynecol Obstet Invest-1992;33:54-8.
8. Walker JL, Manetta A, Mannel RS, Shu-Yuan L., Cellular fibroma masquerading as ovarian carcinoma, Obstet Gynecol 1990;76:523-24.

CASE REPORT

9. 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
10. Sugiyama. A et al., Ovarian fibroma with marked ascites and elevated serum levels of CA-125 in a young girl, *Journal of Pediatric surgery*, 2011 May; 46(5):1001-4.
11. Aruna nigam et al. ,From the Department of Obstetrics and Gynaecology, Lady Hardinge Medical College, Twisted Ovarian Fibroma Mimicking as an Ectopic Pregnancy, *Journal of case reports* 2011; 1(1);6-8.



FIG1- Cut-section of the tumor with lobulated, grey white and whorled appearance.

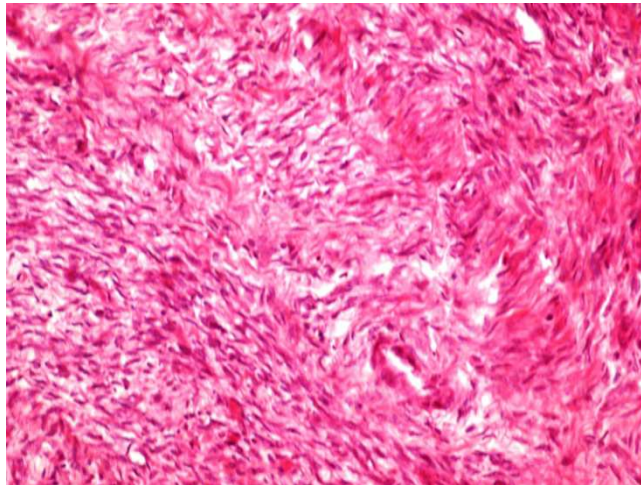


FIG2- Variable cellular bundles and intersecting swathes of fibroblastic tumor tissue. (H&E10X)

CASE REPORT

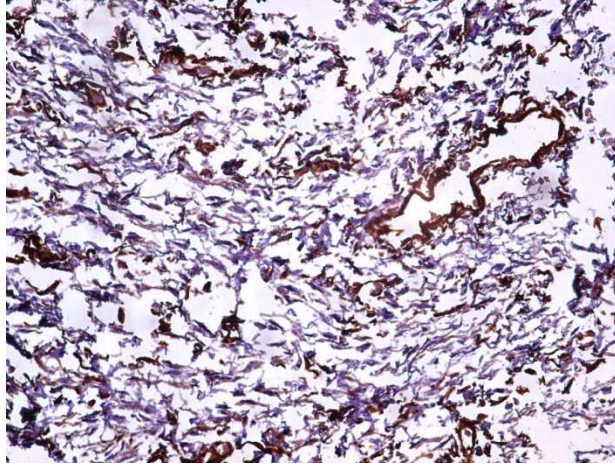


FIG.3- Immunohistochemistry: Vimentin positivity shown by tumor cells. (40X)