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Pathology

# A RARE CASE REPORT OF OVARIAN FIBROMA IN A TEENAGE GIRL

KEY WORDS:

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**ABSTRACT**

Ovarian fibromas are mostly benign tumors comprising spindle-shaped fibroblastic cells within a variable collagenous stroma. They are mostly seen in women of menopausal or perimenopausal age group and are uncommon before 30 years of age. Here we report a rare case of ovarian fibroma in a 17 years old female who presented with primary amenorrhea.

## INTRODUCTION

Ovarian fibromas are sub-classified under sex cord stromal tumors of the ovary according to WHO histopathological classification of ovarian tumors. Sex cord stromal tumors of the ovary also includes tumors composed of granulosa cells, theca cells, Sertoli cells, Leydig cells, and fibroblasts of stromal origin, singly or in various combinations[1]. They are mostly seen in women of menopausal or perimenopausal age group and are uncommon before 30 years of age[2]. In approximately 25% of the patients they are associated with nevoid basal cell carcinoma known as Gorlin syndrome[3]. Here we report a case of ovarian fibroma in a 17 years old female who presented with primary amenorrhea.

### Case Presentation

A 17 yr old female, with no known co-morbidities, reported to our hospital gynecology out-patient department with complaints of primary amenorrhea and pain lower abdomen for past two months. The systemic examination was clinically unremarkable. She underwent basic hormonal and serological investigations in the form of urine for pregnancy test, thyroid function test, serum luteinizing hormone, follicular stimulating hormone, testosterone and prolactin levels which were essentially inconspicuous. On abdomino-pelvic ultrasonography, a large heterogenous mass was detected in right adnexa displacing the uterus superiorly.

On magnetic resonance imaging, a well-defined encap sulated enhancing mass measuring 88x87x77 mm was seen in the right adnexa filling the cul-de-sac completely likely to be originating from right ovary. Tumor markers investigation revealed marginally raised CA-125(value- 55.6 U/ml, lab reference normal value -<35 U/ml) and CA-19.9 (value-48U/ml, lab reference normal value -<37 U/ml) levels with a normal range of CEA, AFP, beta-hCG and LDH levels.

The patient underwent excision of the adnexal mass laparoscopically which was then sent for histopathological examination. On gross examination, the specimen measured 12cm in the longest axis and was soft to firm in consistency, grey-white in appearance with a glistening capsule on the external surface (Figure 1). Microscopically, the tumour was well circumscribed and was composed of spindled cells with ovoid nuclei and pointed ends having eosinophilic cytoplasm merging with the intervening stroma. Areas of interspersed collagenous stoma was seen in the adjoining fields (Figure 1). No atypical cells or increased mitotic activity was noted. No Verocay-like areas were seen. Keeping in view of these clinical and pathological findings, diagnosis of ovarian fibroma was made.

## DISCUSSION

Ovarian fibromas are mostly benign tumors comprising spindle-shaped fibroblastic cells within a variable collagenous stroma[4]. It accounts for 4% of all ovarian tumors[5]. They are usually unilateral but can be bilateral in about 5% of the cases. Size usually varies from 3 to 15 cm[6].

Patients are usually asymptomatic to begin with or present with complaints of a palpable and progressive swelling in the lower abdomen associated with dragging pain or abdominal discomfortassociated with increased urinary frequency. Menstrual irregularities can occur sometimes if it is a functioning ovarian tumor. In about 1% of cases it is characterized by the triad of adnexal mass, ascites and pleural effusion known as Meigs syndrome[7].

Grossly, they are usually solid, spherical, slightly lobulated, encapsulated, grey-white masses covered by a glistening intact ovarian serosa. Cut surface shows a firm, chalky-white to tan yellow surface that may have a whorled appearance similar to that of a uterine fibroid[8]. Ovarian fibromas should be differentiated from other sex cord stromal tumors of the ovary. Most important is diffuse adult granulosa cell tumor which typically shows the other histological patterns such as microfollicular pattern and macrofollicular pattern, trabeculae and cords etc. Thecomas usually shows yellow cut surface in contrast to fibromas which have chalky white appearance. In Sclerosing stromal tumors, there are alternating cellular and paucicellular areas with prominent staghorn vasculature.

Ovarian fibromas should also be differentiated from various non-neoplastic ovarian conditions like ovarian stromal hyperplasia, massive edema and fibromatosis. Ovarian stromal hyperplasia is bilateral and reveals diffuse or multinodular proliferation of stromal cells in absence of collagenous stroma. In fibromatosis and massive edema there is absence of well defined ovarian mass and ovarian follicles, corpus luteum or albicans are entrapped within stromal proliferation.

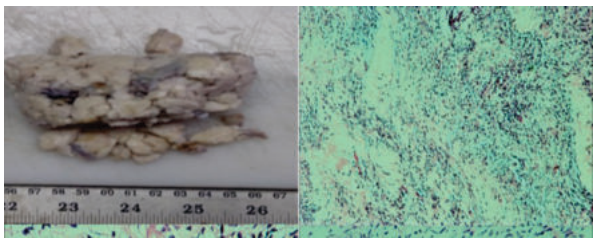

**Figure 1 (Clockwise from top left) –**
Gross appearance of adnexal mass; On histopathological examination, the tumour was composed of spindled cells with ovoid nuclei having pointed ends and eosinophilic cytoplasm blending with surrounding stroma. Areas of interspersed collagen seen within the tumour.

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