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Large Benign Brenner Tumour of Ovary: - an Incidental Findings Case Report

Case Report

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Abstract

Brenner tumour is a rare, mostly benign, unilateral solid ovarian tumour that is a part of the surface epithelial group of ovarian neoplasms. It is usually asymptomatic an incidental pathological finding. Although most of the benign Brenner tumours are small but the case presented here had a large size of tumour and was diagnosed radiologically as sub serous fibroid.

Introduction

Ovarian tumours area common form of neoplasia in female's accounting for about 30% of female genital cancers [1,2]. These tumours behave in diverse ways however due to their anatomical location they can remain asymptomatic for a long period till they attain a large size to be detectable clinically. Brenner tumour of ovary is a relatively uncommon neoplasm constituting 1.4 - 2.5% of all ovarian tumours with predilection for postmenopausal age group average of presentation being 50 yrs with 71% of female bring more then > 40 yrs [1,3]. Brenner tumour is composed of transitional epithelial cell nests similar to bladder epithelium. Brenner tumour is mostly small, solid, firm, unilateral and benign. Bigger ones are rare < 2% [2]. Radiological imaging modalities (USG and computed tomography) are less sensitive for diagnosing it due to its non specific appearance. Histopathology remains the gold standard for confirming the diagnosis microscopically it is characterized by abundant dense fibrous stroma with epithelial cell nests with grooving suggestive of coffee bean shaped nucleus.

Case Report

A 49 yrs old P10 L10 female presented in OPD of OBG department of ASIAN HOSPITAL FARIDABAD with complaints of polymenorrhagia, pain and lump in abdomen since few months. Her vitals were stable. Systemic examination was suggestive of large 5 x 5 cm para umbilical hernia with a palpable firm to hard 18 weeks size mass arising from pelvis, mobile, non tender on left side of abdomen. Per speculum examination was normal. Per vaginum examination also suggested a large firm to hard 18 weeks mass towards the left side of uterus, non tender, moving with cervical movements. Ultrasound findings were suggestive of cholelithiasis with para-umbilical hernia with large lobulated iso to hypoechoic mass in pelvis 10 x 8 cm size suggestive of a sub serous fibroid. MRI Pelvis/lower abdomen again suggested large well circumscribed exophytic sub serous pedunculated leiomyoma arising from uterine fundus of 11.2 x 10.5 x 8.6 cm size with multiple sub centimeter intramural leiomyoma.

She wished to retain her reproductive/menstrual function. So, Laparoscopy for planned myomectomy was started however preoperatively the mass was found to be involving left side ovary, hard in consistency approx. 10 x 10 cm in size. Uterus was parous in size with normal right sided ovary and tubes.

Grossly there was a circumscribed, multilobulated, glistening white mass with nodular surface. Left sided salpingo-oophorectomy was done with peritoneal wash cytology. Tumour was removed in endobag by morcellation. Histopathological examination showed well circumscribed epithelial cell nests with a surrounding abundant fibromatous stroma. Epithelial cells were ovoid to polygonal with pale cytoplasm and oval nuclei. Some of nuclei were found with central longitudinal groove (coffee bean appearance) (Figures 1-3).

All feature suggesting benign Brenner tumour of ovary. Peritoneal fluid cytology was negative for malignant cells. Post operatively patient's recovery remained uneventful.

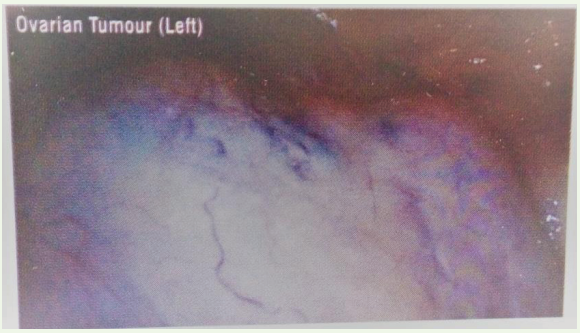

Figure 1: Laproscopic appearance of tumor.

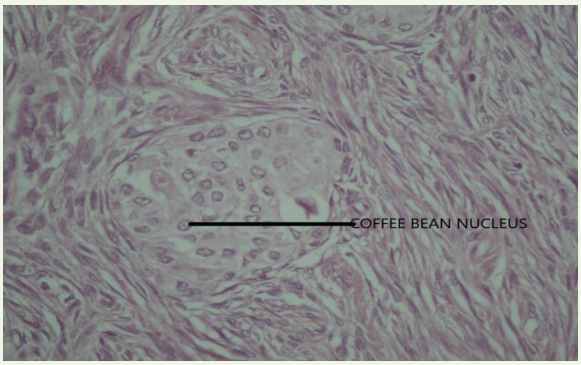

Figure 2: Histopathological finding of tumor -1.

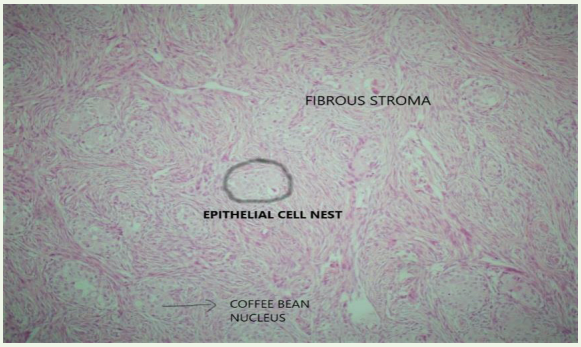

Figure 3: Histopathological findings of tumor -2.

Discussion

The ovarian lesions constitute a major burden in gynecology practice due to the fact that these remain asymptomatic for a longer period of time in view of their anatomical location. Among symptomatic patients common symptoms include vaginal bleeding, pelvic pain, pelvic mass, non specific gastric complaints of dyspepsia, flatulence. Our patient presented with polymenorrhagia, pain and lump abdomen. Brenner tumour is derived from pelvic mesothelium or surface epithelium of ovary through transitional cell metaplasia to form the typical urothelial like components [4]. It is mostly unilateral with only 5-7% being bilateral. Histological pattern is typically benign with only few reports of borderline or malignant counterparts [4,5].

Diagnosing Brenner tumour by radiological imaging modalities is difficult since the tumour has no specific appearance [6]. Brenner tumour looks similar to other solid ovarian masses e.g, fibroma, fibrothecoma, pedunculated leiomyoma in imaging techniques [7].

Grossly Brenner tumours are well circumscribed, hard with, grey white or yellow cut surface. Borderline Brenner tumour are characteristically cystic and unilocular or multi locular with papillomatous masses protruding into one or more of locules. Malignant Brenner tumour may be solid or cystic with mural nodules without any descriptive features [8].

Microscopically Brenner tumour has abundant dense fibrous stroma with epithelial nests of transitional cells. Fibrous component is less prominent in borderline or malignant component. Complex cystic tumours with varying amount of stroma often are in form of papillary solid projections are common in borderline or malignant histology pattern.

Most of the Brenner's tumours are candidates for surgical resection. Because of their vividly circumscribed nature these are easily located and do not typically affect surrounding tissue. Surgical resection is often curative and will reverse any symptoms of present. Malignant Brenner tumours may affect surrounding tissues and metastasis to other structures; however such incidents are so rare that a standard treatment has not been developed. Even malignant Brenner tumours if diagnosed early are usually candidates for complete surgical resection.

Brenner tumour expresses several immunohistochemical markers of urothelial differentiation including uroplakin-III, thrombo modulator, p63, GATA-3, cytokeratin-7 helpful in diagnosis and confirmation of Brenner tumour. However in view of high cost with not much of clinical utility especially when histopathology confirmed diagnosis of benign brenner tumor as in our case irrespective of size of ovarian mass this was not recommended.

Conclusion

To conclude benign Brenner tumor although rare and usually small ovarian tumor, can grow very large. Radiological imaging is not of much help in diagnosing these tumors due to its non specific features. Rather its solid consistency confuses it with other solid uterine and ovarian tumors like thecoma, fibroma, leiomyoma. Histopathology is hence mandatory and the gold standard for diagnosing the Brenner tumour. Surgical removal is curative for these tumours with reversal of all the symptoms. Hence clinician should be aware of possibility of Brenner tumour while coming across a patient with solid large pelvic mass.

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