

**HUGE BRENNER TUMOUR OF THE OVARY: A RARE TUMOUR WITH AN UNCOMMON PRESENTATION**

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**ABSTRACT**

Brenner tumour is a rare epithelial tumour of the ovary. It is usually asymptomatic and mostly an incidental finding on routine pelvic examination or laparotomy. The tumour is usually of small size. We present a case of huge abdominal mass that gradually increased in size over a period of 20 years in a 65 year old postmenopausal woman. She presented to us on account of worsening pressure symptoms. Abdominal examination revealed a mass that was about 34 weeks uterine size. She had total abdominal hysterectomy and bilateral salpingoophorectomy on account of an ovarian mass that measured 38 x 26 x 24cm. Histology revealed a benign Brenner tumour. Although, huge, solid and symptomatic ovarian tumours are likely to be malignant, the possibility of benign disease including Brenner tumour should still be entertained.

**KEYWORDS:** Brenner, Huge, Benign.

**INTRODUCTION**

Brenner tumour of the ovary is a rare tumour of epithelial origin.<sup>[1]</sup> It is mostly benign but may be malignant in less than 1% of cases.<sup>[2,3]</sup> The tumour constitute 1-2% of all ovarian tumours.<sup>[4]</sup> In majority of cases of benign Brenner tumour, it is unilateral. They are usually asymptomatic and mostly found incidentally during pelvic examination or laparotomy.<sup>[5,6]</sup> Ovarian Brenner tumour usually occurs in women between the ages of 40 to 60 years. Treatment is achieved by surgical removal of the tumour.<sup>[6]</sup>

**Case Presentation**

A 65 year old multiparous woman who was 10 years postmenopausal presented to our gynecological clinic with complaint of abdominal mass that progressively increased in size for 20 years duration. The patient presented to us on account of increasing abdominal discomfort, anorexia, weight loss and increase in urinary frequency. She had an abdominal mass that was about 34 weeks uterine size with solid and cystic areas. The mass appeared separate from the uterus on bimanual examination.

Abdomino-pelvic ultrasound scan revealed a huge multi-loculated solid mass with some cystic parts but it was too large to be measured. The uterus was normal on ultrasound. The Intravenous urography revealed functioning kidneys with bilateral moderate hydronephrosis and hydroureter. The full blood count,

renal function test, liver function test and CA 125 were within normal limits. Chest X-Ray revealed normal findings.

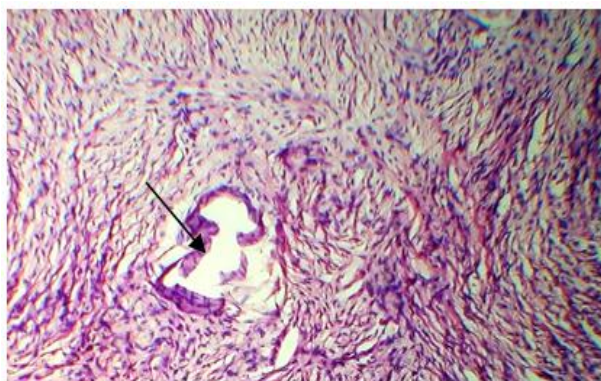
We made a provisional diagnosis of ovarian tumour with suspicion of malignant transformation. She had total abdominal hysterectomy and bilateral salpingoophorectomy. There was non-bloody ascites that was negative for malignant cells. A huge left ovarian tumor that measured 38x26x24cm with solid and cystic component was noted. Fig 1 The capsule was intact and there was no tumor deposit on the capsule. It had a pedicle that twisted twice. The right ovary was atrophic, both fallopian tubes, and uterus were grossly normal. Histology revealed section of endometrium shows atrophy and the myometrium shows regular smooth muscle. The cervix shows chronic inflammation. The fallopian tubes and right ovary show atrophic changes. Histologically, sections of the left ovary shows a tumor composed of few nests of cells that are uroepithelium-like with central cystic change. The cytoplasm is pale with small nucleoli. These are embedded in an abundant fibrous stroma. Fig 3.



**Fig. 1: Left ovarian mass at surgery.**



**Fig. 2: Cut surface of the ovarian mass shows solid and cystic areas.**



**Fig. 3: Microscopic section of the left ovary shows cystic space lined by urothelial epithelium, fibrous stroma.**

## DISCUSSION

Brenner is a rare form of ovarian tumour derived from surface epithelium of the ovary. Only about 1-2% of all ovarian tumours are Brenner types.<sup>[4]</sup> They are rarely malignant and more than 99% are benign.<sup>[7]</sup> In a 10 year review of genital cancers in Sokoto, Brenner tumour was not seen during the study period.<sup>[8]</sup> The tumour usually occurs in women between 40-60 years of age. The average of is 50 years.<sup>[9,10]</sup> The tumour is usually symptomless, hence diagnosis is usually incidental at laparotomy for different indications.<sup>[5,6]</sup> They are commonly small in size, but as was observed in the case presented Brenner tumour may be huge, and 39cm was

the largest documented size.<sup>[11]</sup> Therefore our case is the second largest benign Brenner tumour to be reported. Large tumour may cause abdominal discomfort/or pain. The tumour commonly affects one ovary and is bilateral in only about 6% of cases.<sup>[4]</sup> Ultrasound imaging is the method of choice for imaging of Brenner tumour. Ultrasound usually shows solid structure that may be multilocular with calcifications.<sup>[10]</sup> The sonographic features are very unspecific therefore Brenner tumours can be confused with other ovarian neoplasm.

They are classically firm, well circumscribed and rubbery with a smooth or slightly bosselated surface. The cut surfaces are typically solid and fibrous, usually gray, white, or yellow and may be whorled or lobulated but may be cystic.<sup>[9]</sup> Hyalinised areas are common and dystrophic calcification is present in 50% of cases. Microscopically, nests of uroepithelium-like cells surrounded by abundant dense, fibrous stroma. The epithelial cells have sharp outlines, with coffee bean nucleus, nuclear grooves, distinct nucleoli and moderate to abundant gray/pale cytoplasm.<sup>[12]</sup>

Treatment of Brenner tumour usually involves surgery to remove the mass.<sup>[6]</sup> The age of the patient may be a factor in deciding the extent of the operation. Surgical resection is usually curative and reverses symptoms if present.

## CONCLUSION

Although, huge, solid and symptomatic ovarian tumours are likely to be malignant, the possibility of benign disease including Brenner tumour should still be entertained.

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