International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Bhatia R et al. Int J Reprod Contracept Obstet Gynecol. 2026 May;15(5):1829-1831
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20261296

Case Report

Malignant Brenner tumour with mucinous cystadenoma in a post-menopausal woman: a rare case presentation

Ruby Bhatia, Vaibhavkumar Maheshbhai Trentiya*, Mahak Singaal, Komal Bansal, Vidushi Tewari

Department of Obstetrics and Gynaecology, Maharishi Markandeshwar Institute of Medical Science and Research, Ambala, Haryana, India

Received: 06 March 2026
Revised: 08 April 2026
Accepted: 09 April 2026

***Correspondence:**
Dr. Vaibhavkumar Maheshbhai Trentiya,
E-mail: vaibhav.mtrentiya13@gmail.com

ABSTRACT

Brenner tumour is a relatively uncommon epithelial ovarian neoplasm accounting for 1.4–2.5% of ovarian tumours. Malignant variants are rare (<5%). A 65-year-old postmenopausal woman presented with abdominal pain, distension, weight loss and postmenopausal bleeding. RMI was 1098. MRI suggested malignant epithelial ovarian tumour. Staging laparotomy was performed. Histopathology confirmed malignant Brenner tumour (FIGO IA) with mucinous cystadenoma. Malignant Brenner tumour is rare and requires histopathological confirmation. Early-stage disease has favourable prognosis.

Keywords: Brenner tumour, Malignant Brenner tumour, Ovarian tumour, Mucinous cystadenoma, Postmenopausal bleeding

INTRODUCTION

Brenner tumour is a relatively uncommon epithelial ovarian neoplasm; Brenner tumours account for approximately 1.4–2.5% of all ovarian tumours.[1] The majority are benign, while a small proportion are borderline/proliferative, and malignant Brenner tumours are rare (<5%).[1,2] It is typically diagnosed in middle-aged to older women, with the average age around 50 years, and most patients are >40 years.[3,4]

CASE REPORT

65 years postmenopausal women presented to gynecology outpatient department of tertiary care center with chief complaints of weight loss of around 6-7 kilograms in last 2 months, pain in abdomen and increase size of abdomen for 2 weeks and post-menopausal bleeding for 2 days. However, there is no loss of appetite and patient is taking normal diet as before. Pain in abdomen is generalised and dull aching and persist throughout the day and not associated with any aggravating and reliving factors. Patient has noted enlarging size of abdomen since then, patient also complaint of post-menopausal bleeding for 2 days for which she used to change 1-2 pad/day, bleeding is not associated with dysmenorrhea or passage of clots. Patient had no significant medical and surgical history. No family history of tuberculosis and genital malignancy. General physical examination: On examination patient was conscious and oriented to time, place and person. Mild pallor +, No icterus no unilateral or bilateral oedema, lymphadenopathy, cyanosis, clubbing were present

Pulse rate :80 bpm, Bp: 130/76 mm hg, Rr: 16 cycles/min, Spo2: 99% on room air.

CVS: s1+, s2+, chest: equal b/ l air entry +.

Per abdomen

Tense, an ovoid solid cystic mass up to lower border of umbilicus, deviated more on left side of abdomen, margin irregular, variable consistency, non-tender with restricted mobility.

Per speculum examination

Cervix high up, flushed with vault, bleeding at external OS present.

Bimanual pelvic examination

Cervix anterior, high up, large abdominopelvic mass of around 20 x 20 cm occupying anterior and lateral fornices, with solid cystic variable consistency, irregular margin and restricted mobility, uterus cannot be defined separated. Investigation is shown in the Table 1.

Tumour markers

CA-125: 122 U/ml; CA 19-9: 156 U/ml; CEA: 9.46 ng/ml. RMI=1098 (high risk). CEMRI ABDOMEN AND PELVIS Figure 1.

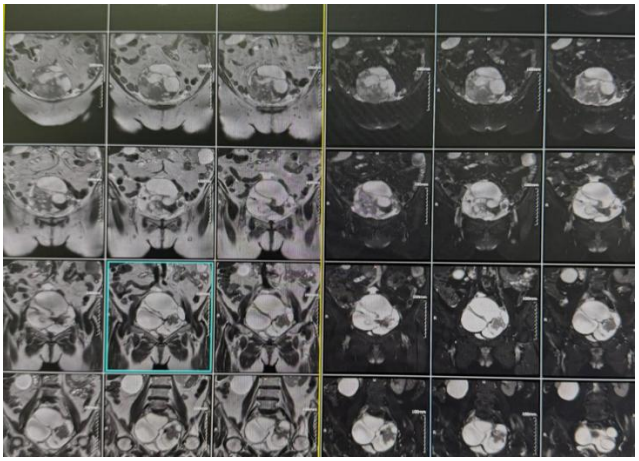

Figure 1: Contrast-enhanced MRI showing large complex solid-cystic pelvic mass measuring approximately 20 cm suggestive of malignant epithelial ovarian tumour.

Large complex solid cystic pelvic mass with both ovaries not separately visualized-likely s/o malignant epithelial ovarian tumour. Mucinous cyst/adenocarcinoma. (Advice: CA-125 levels). Ovarian lesion measuring approx. 20.1 cm x19.9 cmx10.2 cm. Mild endometrial thickening up to 6 mm. (Advice: biopsy). Multiple sub endometrial cysts-likely adenomyosis.

Patient underwent exploratory laparotomy with frozen section which was s/o a large solid cystic ovary measuring 21x20x12.5cm. Fallopian tube is stretched over surface measuring 13cm (Figure 2). The cut surface reveals a solid cystic lesion with serous fluid. Areas of necrosis and hemorrhage is identified. Imprint cytology and frozen sections are positive for malignancy. Total abdominal hysterectomy with bilateral salpingooopherectomy with infracolic omentectomy with bilateral pelvic lymphadenectomy (para-aortic lymph nodes were not palpable) along with washing of peritoneal cavity and pouch of Douglas done, sample and specimen was sent for histopathology and cytology examination. Specimen findings: (Figure 2).

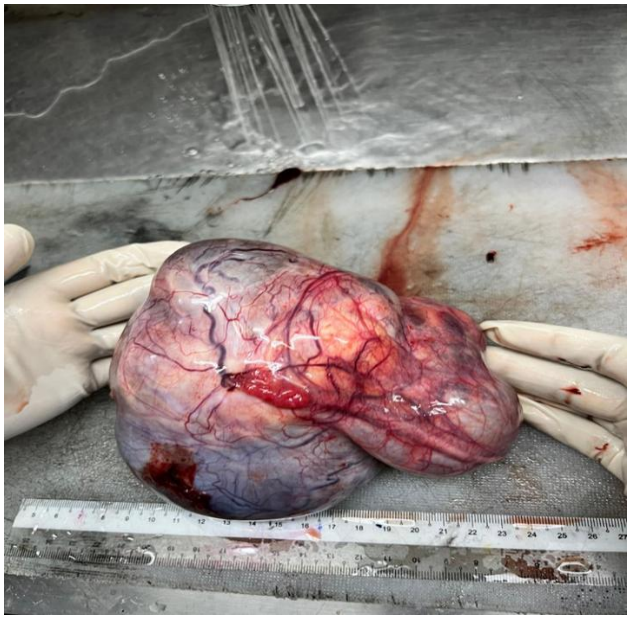

Figure 2: Intraoperative specimen showing large solid-cystic left ovarian mass measuring 21×20×12.5 cm with irregular surface and areas of necrosis.

Table 1: Bimanual pelvic investigation.

CBC	LFT	RFT	Urine routine	Special investigations
Hb:10.9gm%	SGOT/SGPT:26/29 u/l	Urea: 20mg/dl	Glucose/ protein/ ketone: negative	PT/INR: 12.2/1.13 secs
TLC:5.6*1000Cu/mm	ALP: 83u/l Total protein: 9.47gm/dl	Creatinine: 0.74mg/dl	RBC: nil Pus cell: 1-2/HPF EC:1-2/HPF	Thyroid profile: normal
Plat: 2.33 lakh	BT/BD: 0.370/0.160 mg/dl	Uric acid: 6.1 mg/dl	Bacteria: Absent	Viral markers: non-reactive

Uterus 6 weeks size, Right ovary atrophied, left ovarian mass 21×20 cm, vascular, irregular surface, left tube was stretched out due to the mass. Histopathology report confirmed malignant Brenner's tumor (p TNM: p TIA no, Figo stage IA) with mucinous cystadenoma, patient is in follow up and performing well.

DISCUSSION

Malignant Brenner tumours are rare epithelial ovarian neoplasms, accounting for approximately 1.4–2.5% of all ovarian tumours, with only a small proportion being malignant.[1,2] The present case describes a postmenopausal woman presenting with abdominal pain, distension, weight loss, and postmenopausal bleeding, which are consistent with previously reported clinical features of ovarian malignancies.[3,4] In our case, tumour markers including CA-125, CA 19-9, and CEA were elevated, and the Risk of Malignancy Index (RMI) was significantly high (1098), suggesting a strong suspicion of malignancy. Imaging also revealed a large complex solid-cystic pelvic mass. These findings are in accordance with previous studies, where tumour markers and imaging aid in preoperative diagnosis, although definitive diagnosis requires histopathological confirmation.[4,5] When compared with the study by Abbas and Amin, a similar association of Brenner tumour with mucinous cystadenoma was observed.[6] In their study, a 70-year-old postmenopausal woman presented with abdominal pain and a massive abdominopelvic mass, later diagnosed as benign Brenner tumour with mucinous cystadenoma.

The tumour reached an enormous size (52×41×36 cm, weighing 20.7 kg), indicating that such tumours may remain asymptomatic for long durations and attain large sizes before diagnosis.[6] In contrast, our case was diagnosed at an earlier stage (FIGO IA), with a comparatively smaller tumour size (~21 × 20 cm), likely due to earlier presentation and timely intervention. Additionally, while their case was benign, our case demonstrated malignant transformation, highlighting the importance of early diagnosis and careful evaluation. Histopathologically, both cases showed coexistence of Brenner tumour with mucinous cystadenoma, which has been reported in approximately 10% of cases, suggesting a possible histogenetic association.[6] Surgical management remains the mainstay of treatment. In our case, staging laparotomy with total abdominal hysterectomy and bilateral salpingo-oophorectomy with omentectomy was performed, consistent with standard management protocols.[3,4] Prognosis depends on stage at diagnosis, with early-stage disease having favourable outcomes, as seen in our case.[3,4] This case highlights the importance of considering malignant Brenner tumour as a differential diagnosis in postmenopausal women presenting with adnexal masses.

CONCLUSION

Malignant Brenner tumours account for approximately 1.4–2.5% of all ovarian tumours. It is characterized histologically by malignant epithelial components, often arising from a background of benign or borderline Brenner tumor. Due to its rarity, diagnosis can be challenging and often requires comprehensive histopathological and immunohistochemical evaluation. Management typically involves surgical resection, followed by chemotherapy in advanced cases. Prognosis depends on the stage at diagnosis, with early-stage tumors having a more favorable outcome and long term follow up. Continued research and case reporting are essential to always keep it as differential diagnosis and to better understand its clinical behavior and optimize treatment strategies.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. WHO Classification of Tumours Editorial Board. Female genital tumours. 5th ed. Lyon: IARC. 2020.
2. Kurman RJ, Ellenson LH, Ronnett BM. Blaustein's pathology of the female genital tract. 7th ed. New York; Springer. 2019.
3. Berek JS. Berek and Novak's gynecology. 16th ed. Philadelphia: Wolters Kluwer. 2020.
4. Cunningham FG, Leveno KJ, Bloom SL, Dashe JS, Hoffman BL, Casey BM, et al. William's gynecology. 4th ed. New York: McGraw-Hill. 2020.
5. Young RH. Brenner tumours of the ovary: a review. Int J Gynecol Pathol. 2014;33(2):193-208.
6. Abbas AM, Amin MT. Brenner's tumor associated with ovarian mucinous cystadenoma reaching a huge size in postmenopausal woman. J Cancer Res Ther. 2015;11(4):1030-2.

Cite this article as: Bhatia R, Trentiya VM, Singaal M, Bansal K, Tewari V. Malignant brenner tumour with mucinous cystadenoma in a post-menopausal woman: a rare case presentation. Int J Reprod Contracept Obstet Gynecol 2026;15:1829-31.