



SMU
Sikkim Manipal University



SMU Medical Journal

ISSN : 2349 – 1604 (Volume – 1, No. 2, July 2014) Case Report

A Serous Borderline Tumor of the Fallopian Tube Detected Incidentally

Imrana Tanvir, Ghania Ali, Haseeb Ahmed Khan and Ahmed Nasir Hanifi*
Dept. of Histopathology, FMH College of Medicine & Dentistry , Lahore, Pakistan

*Corresponding author

Email: haqqani261@yahoo.com, Mobile Number: +92 3320592245

Manuscript received : 29.05.2014

Manuscript accepted: 27.06.2014

Abstract

Serous borderline tumor of the fallopian tube is a very rare entity and is usually diagnosed incidentally. We present here such a case which is incidentally diagnosed during lower segment cesarean section. Patient is a 31 year old lady who presented at 38 wks of gestation, underwent Lower Segment Caesarean Section (LSCS). A 3.5 cm thin walled benign looking cyst protruding from the fimbrial end of the left tube was found. The contralateral fallopian tube and ovaries were unremarkable. Exploration of the abdomino-pelvic cavity has showed no other abnormal finding. Cystectomy was performed. On histopathology diagnosis of serous borderline tumor (SBT) of the fallopian tube was made which was further confirmed by Wilm's Tumor 1 (WT1) staining. In literature, only 9 cases have been reported. And the current case is the first report in Pakistan as far as we know. Treatment for SBTs of fallopian tube is complete excision like borderline ovarian tumor. Recurrence has not been reported with up to 6 years follow up in 9 cases.

KEY WORDS: Serous borderline tumor, Fallopian tube, WT1, Low malignant potential.

Introduction

Diagnosis of Borderline papillary serous tumor of the fallopian tube was comprehensively established by Zheng in 1996 supported mostly by a histological similarity to its ovarian counterpart. [1] Serous borderline tumors of the fallopian tube are rare with only 13 previously reported cases in literature [2]. Serous borderline tumors of the ovary are fairly common, making up between 4 and 14% of ovarian epithelial tumors, these tumors do not generally occur in the fallopian tube [2]. Consequently, ovarian borderline tumors are a well defined entity in literature when compared to borderline tumors of the fallopian tube, whose clinical behavior is not clearly understood due to limited numbers of cases reported in literature. As we are aware of only 10 cases of serous borderline tumor of fallopian tube have been reported, in addition only one case of paratubal borderline tumor is reported(2) . Paratubal cyst is common incidental finding during gynecological operations (3) so their clinicopathological characteristics and treatment is very unclear. We herein report a case of serous borderline tumor of the fallopian tube presented incidentally.

Case Report

A 31-year-old primigravida underwent lower segment cesarean section at our Institution. Her gynecologic history was unremarkable and included menarche at the age of 12 and regular menstrual cycle.

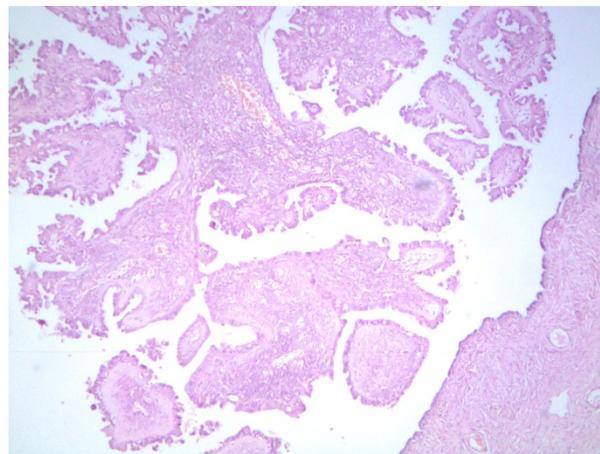


Fig 1: Papillae with complex architecture covered by an epithelium of the serous type (H&E stain 100x)

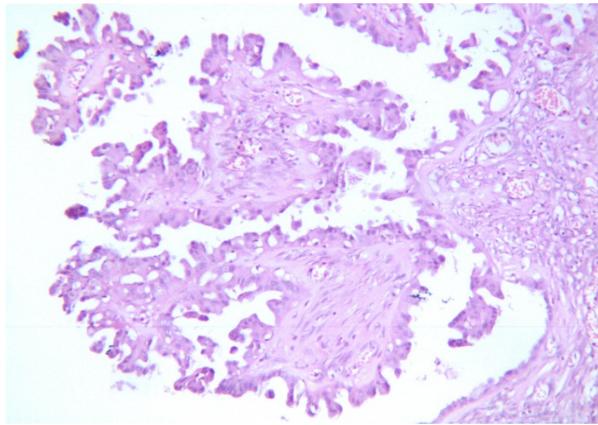


Fig 2: Epithelium showing stratification and budding with nuclear atypia (H&E stain 400x)

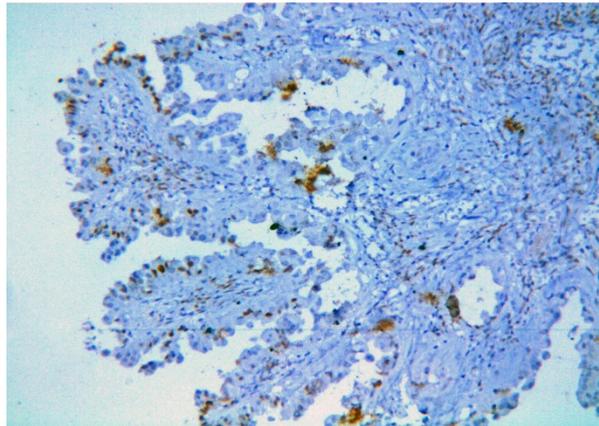


Fig 3: WT1 immunohistochemical stain (400x)



During her LSCS her left fallopian tube revealed a 3.5 cm cystic mass at the fimbrial end. Left ovary was unremarkable. Excision of the cyst was performed. Right ovary and fallopian tubes were examined and found unremarkable.

On gross examination, the cyst showed a smooth external surface. On opening the internal surface revealed multiple raised papillary areas which measured 5mm in maximum dimension. Rest of the internal surface was smooth. Microscopic examination of the sections from the raised solid papillary areas showed papillae with complex architecture covered by an epithelium of the serous type (Fig.1), displaying stratification and budding with nuclear atypia (Fig. 2). There was no invasion of the stroma of the papillae. WT1 immunohistochemical stain (Fig. 3) was performed and showed nuclear positivity which is consistent with the morphological features of SBT.

Discussion

Our literature search revealed 12 documented reports of serous borderline tumor of the fallopian tube. The average age of the patients was 31 years old (range 19–49). These tumors were unilateral, generally located in ampullary region and fimbriated end. Symptoms were non-specific, mainly of pelvic pain. In the majority of cases, these were diagnosed incidentally during routine gynecologic examination or during an elective surgery [1,2,5 ,6]. In our case report, it's an incidental finding during LSCS.

On gross examination it is typically a 3.5 cm cyst with a smooth glistening external surface. On opening gelatinous yellow fluid oozed out. Histological characteristics of SBT of the fallopian tube include the presence of papillary projections, cellular stratification, nuclear atypia and mitotic figures [7]. The hallmark of low malignant potential lesions is the absence of stromal invasion [2].

SBTs are treated by surgery, mostly by unilateral salpingectomy. As per literature review complete staging/restaging was performed only in one case [1, 3], where in addition to salpingo-oophorectomy, contralateral ovarian biopsy, partial omentectomy and appendectomy were performed. Peritoneal and pelvic washing were obtained and pelvic lymph nodes sampling was done.

As SBT of the fallopian tube is such a rare condition and less well studied therefore optimal management of these tumors must be extrapolated from their ovarian counterparts. The prognosis of stage I serous borderline ovarian tumors is excellent. Rare late recurrences may occur. The clinical behavior of advanced disease depends on the presence or absence of invasive implants. However, foci of microinvasion and pelvic and aortic lymph node involvement do not adversely affect the prognosis [8].

As SBT of the fallopian tube are mostly unilateral, confined to the fallopian tube and occur mostly in young patients, conservative surgical treatment with preservation of fertility is the therapy of choice [9].

Conclusion

Serous borderline tumors of the fallopian tube are usually discovered incidentally during routine gynecologic examination or an elective surgery. To date, there are no reports in the literature regarding recurrence or metastatic disease of SBT of the fallopian tube. Conservative fertility-sparing surgery is safe and effective treatment for patients.

Reference

1. Zheng W, Wolf S, Kramer EE, Cox KA, Hoda SA. Borderline papillary serous tumour of the fallopian tube. *Am J Surg Pathol.* 1996;20:30-5.
2. Vilella JA, Pauli SA, Wang J, Intengan M, Lele S. Tumors of low malignant potential arising in the fallopian tube: case reports. *Eur J Gynaecol Oncol.* 2005;26:327-9.
3. Scully R E, Young R H, Clement P B. In: Scully RE, Young RH, Clement PB, editor. *Atlas of Tumor Pathology, Third Series, Fascicle 23.* Washington DC: Armed Forces Institute of Pathology; 1998. Tumors of the ovary, maldeveloped gonads, fallopian tube, and broad ligament. pp. 477–498.
4. Seamon LG, Holt CN, Suarez A, Richardson DL, Carlson MJ, O'Malley DM. Paratubal borderline serous tumors. *Gynecol Oncol.* 2009;113:83-5.
5. Acs G. Serous and mucinous borderline (low malignant potential) tumors of the ovary. *Am J Clin Pathol.* 2005;123 Suppl:S13-57.

6. Gatto V, Selim MA, Lankerani M. Primary carcinoma of the fallopian tube in an adolescent. J Surg Oncol. 1986;33:212-4.
7. Haratz-Rubinstein N, Fromberg E, Lederman S. Sonographic diagnosis of a serous tumor of low malignant potential of the fallopian tube. J Ultrasound Med. 2004;23:869-72.
8. Tempfer CB, Polterauer S, Bentz EK, Reinthaller A, Hefler LA. Accuracy of intraoperative frozen section analysis in borderline tumors of the ovary: a retrospective analysis of 96 cases and review of the literature. Gynecol Oncol. 2007;107:248-52.
9. Morice P. Borderline tumours of the ovary and fertility. Eur J Cancer. 2006;42:149-58.

Authors Column



Dr. Ahmed Nasir Hanifi did MBBS from Nishtar Medical College, Multan, Pakistan in the year 2004. He was House Physician in the departments of Medicine and Cardiology of the same hospital. Thereafter he shifted to Agha Khan University Hospital, Karachi and Shaukat Khanum Memorial Cancer Hospital & Research Center, Lahore to undertake trainings in Pathology and Histopathology respectively. He was a PG Trainee in Histopathology, FMH, Lahore and passed FCPS-1 (Histopathology) in 2012.

Dr. Hanifi is skilled in the work of pathology, histopathology, biochemistry and microbiology and published few papers in research journals. He has also clinical skill in CPR (BLS, ACLS), endotracheal intubation, nasogastric intubation, male urethral catheterization, lumbar puncture as well as pleural and arterial tap.