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RESEARCH ARTICLE

ADENOMATOID TUMOR IN THE FALLOPIAN TUBE - A RARE CASE-INCIDENTAL FINDING

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Abstract

Adenomatoid tumours are less common benign neoplasm of mesothelial origin, which originates from the lining of organs. This tumour generally presents in both male and female genital tracts. [1-9]. In males, the tumour is usually found in testis and epididymis while in females, the uterus and rarely fallopian tubes are the sites involved. Mostly, this tumour is found incidentally. Grossly, adenomatoid tumors are usually small in size (less than 2 cm) well-circumscribed, solitary masses that are tan, yellow, and solid [10]. The histopathological examination revealed features of adenomatoid tumor supported by immunohistochemical stains positive for calretinin and cytokeratin and negative for CD34. These tumours have a good prognosis upon surgical removal with no evidence of recurrence. We present a case where this rare tumour was found incidentally in the Salpingectomy specimen of a 39-year-old woman who underwent this procedure for permanent contraception as she requested the removal of tubes instead of blockage.

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Introduction:-

Initially designated as 'benign mesothelioma of the genital tract' in 1942 by Masson et al, [11] the term 'adenomatoid tumor' was originated in 1945 by Golden and Ash [12] to represent these benign, often incidental, and well-circumscribed neoplasms of mesothelial origin [13]. This tumour is diagnosed by detailed histological and immunohistochemical analysis. Adenomatoid tumors have been observed in women between 30-72 years of age (median 42 years) [14]. They are most commonly seen in the uterus and are found extremely rare in fallopian tubes, despite them being the most common benign tumour of the fallopian tube.

Microscopically, they are composed of cystic spaces or tubular gland-like structures lined by squamous to cuboidal mesothelial cells. Cells with intracytoplasmic vacuoles are also characteristic. Cytology is bland, and mitoses are absent [20]. The presence of psammoma bodies is notable in the gynecological tract (Figure 2). Adenomatoid tumours are mostly seen without any symptoms and easily treated by surgical resection. This case was reported due to its rare location in the fallopian tubes.

Case Presentation:

A 39-year-old woman married for 26 years presented to Gynecology clinic for IUCD check-up and requested for permanent sterilization. She was multiparous and had five cesarean sections with her last child born 2 years ago. She had an Intrauterine contraceptive device for contraception and had regular menstrual cycle. She didn't want to risk pregnancy in case of failure of IUCD so she requested Laparoscopic bilateral tubectomy instead of clips. She had a history of Bariatric surgery.

Upon counseling, the complications were discussed including the difficulty of entry of the ports as a result of previous adhesions that could require a laparotomy, bleeding, injury to adjacent organs and risk of abnormal uterine bleeding. In addition to that, the patient was educated about blood glucose control as she was a known case of type 2 diabetes mellitus with uncontrolled blood sugar due to lack of drug compliance.

Upon investigation, her pap smear was negative for CIN two years ago. Her preoperative hemoglobin was 10.4 gms/dl. and fasting blood sugar was 134 mg/dl.

She was operated for permanent sterilization by laparoscopic bilateral salpingectomy with removal of IUCD under general anesthesia. Operative findings were periumbilical omental adhesions, right hemorrhagic ovarian cyst 4x4 cm and left simple ovarian cyst of 3 cm which burst during manipulation. Both fallopian tubes were intact. The left fallopian tube showed solitary fibrotic white nodule of about 1 cm (Figure 1) while right fallopian tube was normal looking with no pathology. Cystectomy, adhesiolysis and bilateral salpingectomy was done. No evidence of endometriosis was seen.

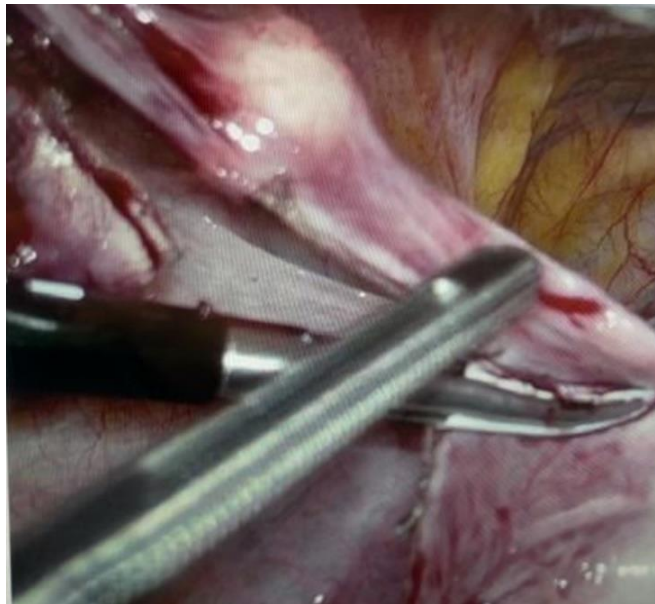


Figure 1:- White nodule in left fallopian tube.

Resected segments of both tubes were sent for histopathology examination.

Gross description:

Left fallopian tube segment with fimbrial end measuring 5.5 cm in length and 0.8 cm in external diameter. The left Fallopian tube piece has a rounded well-defined white area measuring 0.8 cm on cross section and right

fallopian tubal structure measuring 8.0 cm in length and 0.5 cm in external diameter. Two para-tubal cysts are identified measuring 0.5 cm and 0.4 cm in diameter.

Histology revealed an adenomatoid tumour in left fallopian tube.

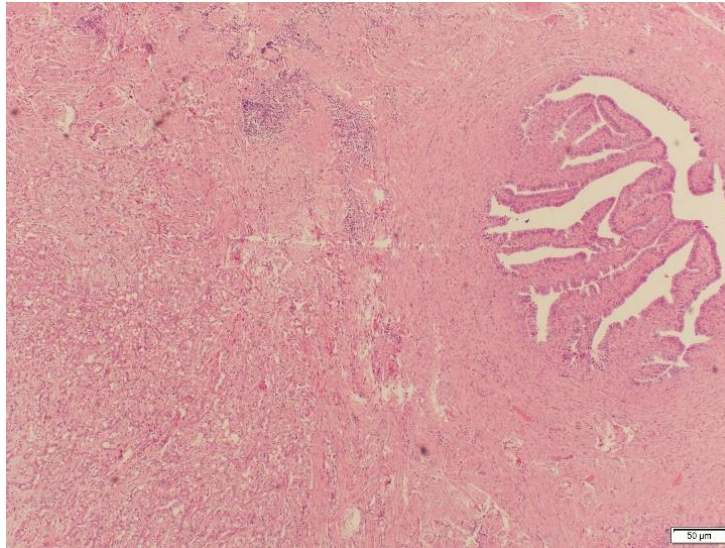


Figure 2:- Low power view showing normal fallopian tube lumen on the right side and tumor on the left side.

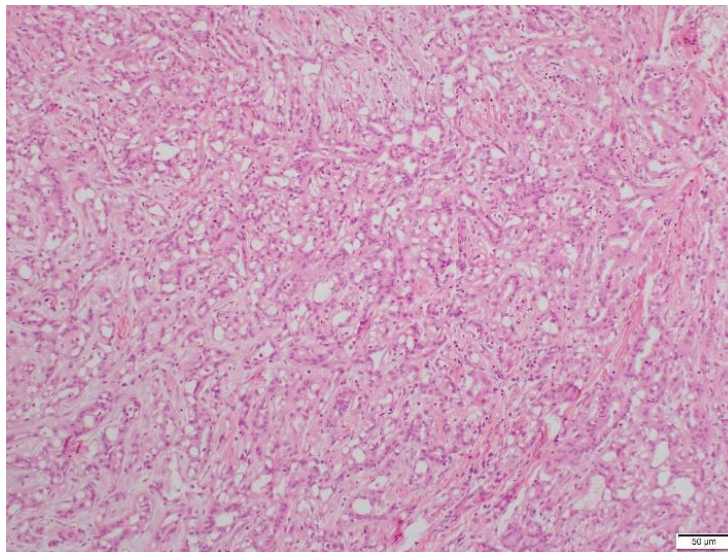


Figure 3:- High power view of tumor.

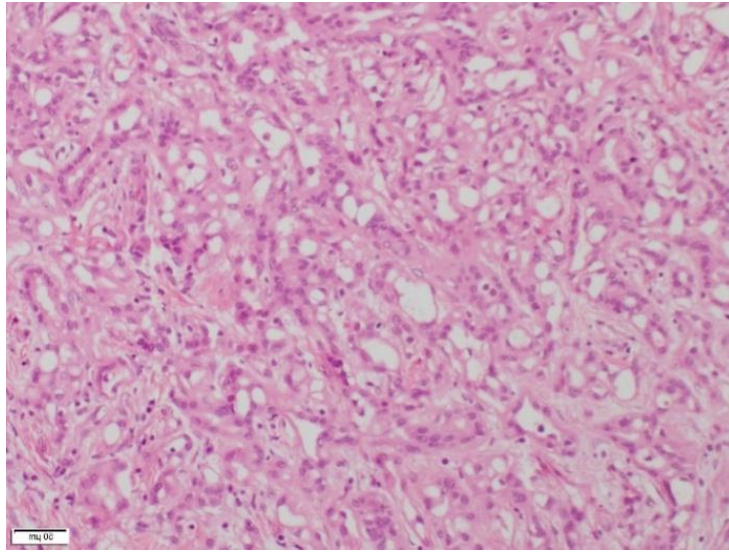


Figure 4:- High power view of tumor.

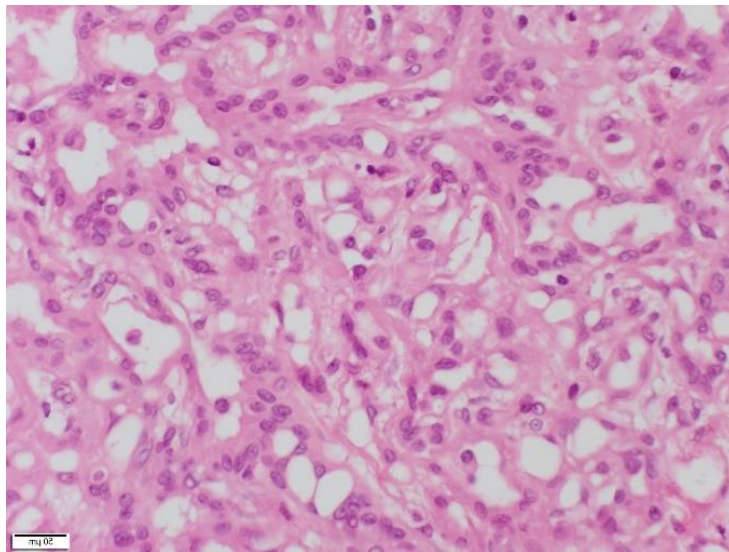


Figure 5:- High power view of tumor.

Figure 3, 4 and 5 are the high power views of tumor showing well-circumscribed lesion composed of small tubulocystic spaces lined by cytologically normal mesothelium. These tubules are lined by flattened, cuboidal epithelioid cells: scant, pale, eosinophilic cytoplasm with hairy basophilic apical surface. Bland, round nuclei, small nucleoli. Occasional signet ring-like cells. These pseudotubular spaces are crossed by thread-like bridging strands. No mitoses, necrosis or atypia.

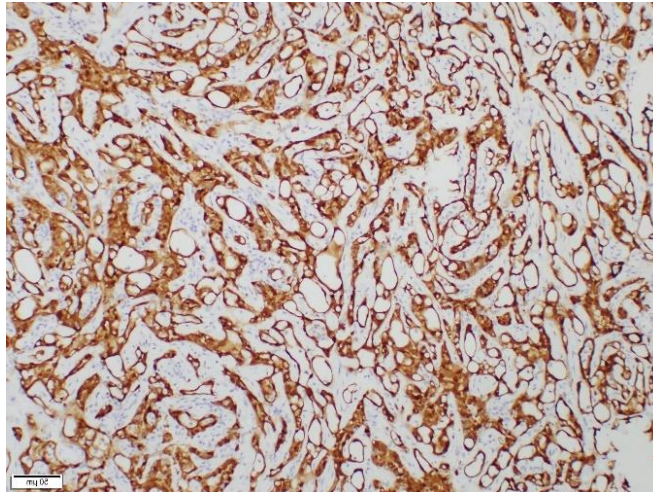


Figure 6:- Calretinin positive in tumor cells.

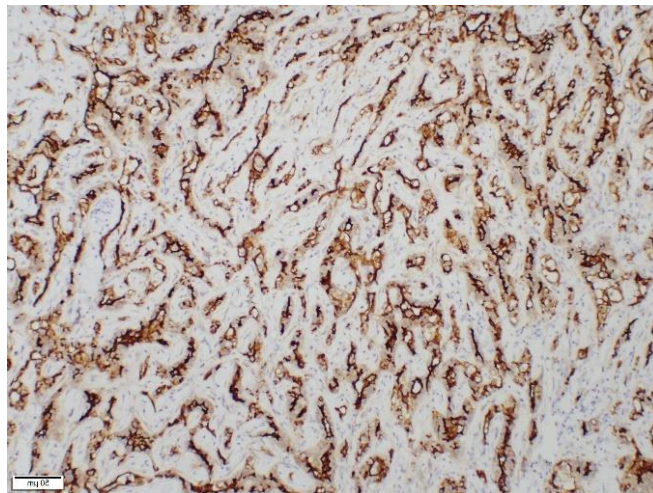


Figure 7:- D2-40 positive in tumor cells.

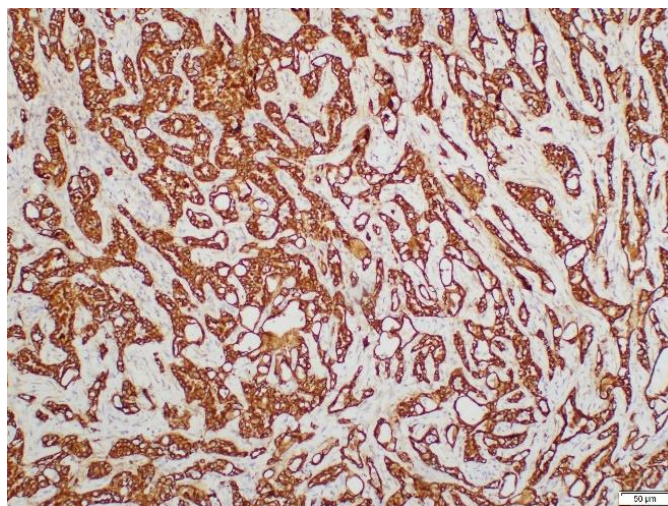


Figure 8:- CK positive in tumor cells.

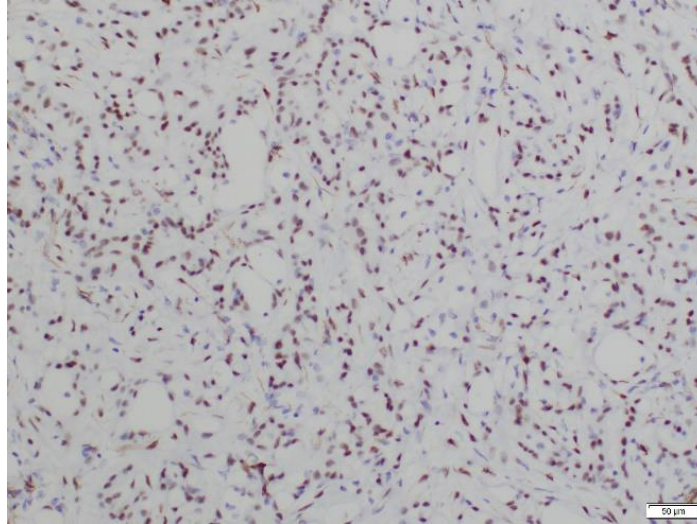


Figure 9:- WT-1 positive in tumor cells.

Discussion:-

Adenomatoid tumors are benign mesothelial tumors of genital tract, most commonly found in uterus, rarely in fallopian tube. The true incidence of these tumors is unknown. These are incidentally seen in the females of reproductive age especially between ages of 26 and 55 years [15,16] as in our case the female was 39 years.

The tubal adenomatoid tumour is always asymptomatic and tubal functions are not affected by tumour. My patient, multiparous, who underwent laparoscopic bilateral salpingectomy for permanent sterilization, was also not symptomatic.

The tumour size ranges from 1 mm to 3 cm [17]. As in my patient, the tumour size was 8 mm.

It is usually a solitary mass [18,19]. In present case, the tumour was a single nodule in the left fallopian tube.

Immunohistochemically, the tumor cells are strongly positive for cytokeratin, vimentin, HBME-1 (anti-human mesothelioma antibody), and calretinin but negative for EMA, factor VII-1, Ber-EP4, and carcinoembryonic antigen (CEA). These characteristics are all presented in normal mesothelium and in the cells of mesotheliomas.

Calretinin and D2-40 demonstrate a higher sensitivity in genital tract adenomatoid tumors. D2-40 is the most useful marker for adenomatoid tumors in the female genital tract because of its combined high sensitivity and limited background staining.

Reactivity for Calretinin, CKAE1/AE3, D2-40 and WT-1 as shown in Figures 6-9 and Negativity for CD31, CEA and BerEP4 in our case study suggests a mesothelial origin for adenomatoid tumor, which is also proven by literature.

Conclusion:-

Adenomatoid tumours are benign tumors that are very rare in the fallopian tube or perhaps are under-reported as a consequence of their asymptomatic nature. They are usually found incidentally during surgeries for other reasons and have an excellent prognosis upon surgical resection without any recurrence.

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