

Primary Endometroid Carcinoma of Fallopian Tube - A Case Report

Summaya Sohail, Ahmareen Khalid and Asma Khattak

Department of Pathology, Pakistan Institute of Medical Sciences, Islamabad

Background: Reported cases of primary carcinoma of fallopian tube can be numbered. Owing to the emerging importance of this “small organ” in the previous few years as a precursor lesion of many gynecological malignancies, the need of the hour is to understand all the pathophysiological aspect of this uncommon neoplasm

Case Presentation: Keeping in mind the above-mentioned rationale we hereby take the opportunity to present a case Primary Endometroid Carcinoma of fallopian tube in a 60 years old patient Stage pT2a, who presented with the complains of Abdominal swelling and pain. As with nearly all the cases reported of fallopian tube carcinomas its always the pathologist who first diagnose the case of primary carcinoma of fallopian tube. The patients radiological findings were consistent with adnexal mass with inseparable plane between ovary and fallopian tube. Extensive sampling of both the fallopian tube, ovary and were done keeping in view the set criterion for diagnosis of primary fallopian tube cancer

Keywords: Endometroid carcinoma, Primary Fallopian Tube carcinoma, endometriosis, CA-125

Introduction

As the domain of histopathology is leaping into a generation of cytogenetic, the lesions of fallopian tube still needs to be studied thoroughly. There is a considerable dearth of reported cases of fallopian tube neoplasm (1-5) The updated reported incidence of Primary fallopian tube cancers is 0.14 -1.8 %. Various hypothesis have been proposed in the last decade emphasizing the importance of extensive sampling and search of precursor lesion for female genital tract malignancies in fallopian tube epithelium(5). As the literature is highlighting the STIL and STIC lesions of the fallopian tube as precursor lesion of High grade serous carcinoma.(6) endometriosis has been hypothesized to undergo neoplastic transformation, most frequently endometrioid and clear cell types.(6-8)

Case Presentation

A 60 years old postmenopausal patient presented with progressively enlarging abdominal swelling and pain. She is gravida 4, para 3 married, with no significant personal or family history. She had been postmenopausal since past 16 years. The abdominal pain was a dull ache in the right lower abdomen which propagated to the back.

Her past medical history is insignificant, she is normotensive, normoglycemic. Her hemogram, Urine analysis hepatic and renal functions were normal. On physical examination Uterus was 6 weeks in size with a right sided adnexal mass. Radiological findings showed a well-defined lobulated mass involving right adnexa. The lesion was causing mass effect on the bladder. Few sub centimeter lymph nodes were also appreciated. Serological workup showed raised CA-125 levels of 59.73 U /ml (normal <35U/ml) A CT guided biopsy from adnexal mass labeled as ovarian mass showed Endometroid carcinoma of the ovary.

Patient underwent Pelvic clearance (TAH + BSO + partial omentectomy) Per operatively, both ovaries and left fallopian tube is normal looking, Right tube is dilated with a mass. Moderate ascites is also seen.

Grossly specimen received in formalin consists of uterus with bilateral adnexa and fragment of omentum. 11 cm long right fallopian tube contained 10 x 5 x 3.8 cm tumor. (Fig .1) The 11 cm right fallopian tube contained 10 x 5 x 3.8 cm tumor. Both the ovaries were normal. 2.3 x 2 x 1.2 cm right ovary was clearly separated from the fallopian tube mass. The left ovary, tube and the uterus were unremarkable.

Correspondence Author:

Dr. Summaya Sohail

Department of Pathology,

Pakistan Institute of Medical Sciences, Islamabad



Fig 1: Tubal mass, right ovary green arrow completely separable from the fallopian tube mass.



Fig 2. Cut surface of the tubal mass

On microscopic examination sections from cervix showed chronic nonspecific cervicitis. The sections from endomyometrium revealed superficial endometrium exhibiting estrogen effects overlying unremarkable myometrium. Right fallopian tube mass was extensively sampled which revealed a malignant neoplasm composed of cells arranged in glandular structures of variable sizes. The lumen contains colloid like secretion. (Fig 3)

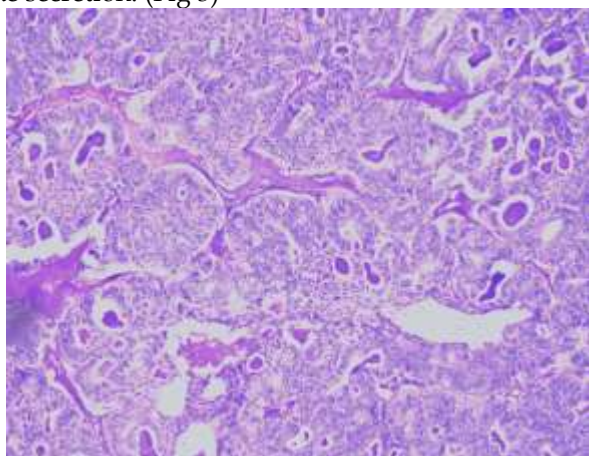


Fig 3: Endometroid carcinoma of fallopian tube

Individual cells have hyperchromatic to vesicular, pleomorphic nuclei with high N/C ratio and prominent nucleoli (Histological grade III) Scattered mitotic figures were also seen. The fimbrial and fundal ends were free of tumor however a few scattered foci of tubal lining epithelium showed mild atypia. There were also a few foci of dystrophic calcification. Scattered hemosiderin laden macrophages were seen at multiple foci. (Fig 4&5).

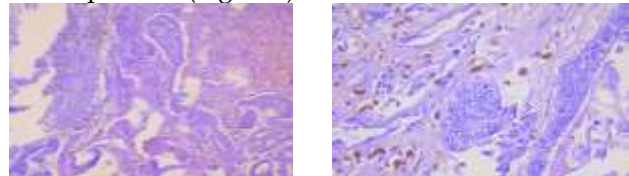


Fig 4 & 5: Scattered hemosiderin laden macrophages.

Entire of the right (ipsilateral) ovary was embedded, no evidence of malignancy seen in the all sections examined from right ovary. The section from the contralateral left ovary showed ovarian stroma containing variable sized follicles and a tiny focus of neoplastic cells tending to be arranged in glandular structures. (Fig 6)

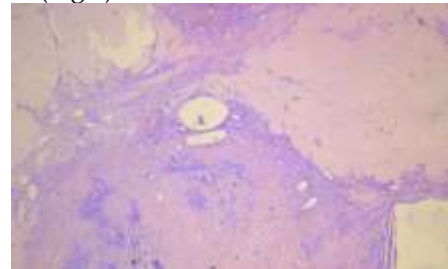


Figure 6: The contralateral ovary contained a tiny focus of neoplastic cells (Left side) and corpus callosum on the top right.

Discussion

Primary fallopian tube tumors PFTC are rare tumors.¹⁻⁷ In the previous decade much of the emphasis had been laid on extensive sampling and search for the precursor lesion in fallopian tube.^{5,6} Histologic, molecular and genetic evidence shows that from 40-60% of tumors that were classified as high-grade serous carcinomas of the ovary or peritoneum may have originated in the fimbrial end of the fallopian tube⁶ while endometroid carcinoma has been etiologically associated with endometriosis and atypical endometriosis.^{8,9} Many predisposing factors have been suggested such as nulliparity, subfertility and Pelvic Inflammatory Diseases (PID), tuberculous salpingitis and tubal endometriosis. Most patients are

post-menopausal. In our case evidence of endometriosis is seen as foci of hemosiderin laden macrophages Fig(Fig 5 & 6) .

Signs and symptoms of PFTC are nonspecific. The Latzko's triad of typical symptoms consists of intermittent profuse vaginal bleeding, abdominal pain usually colicky relieved by discharge and an abdominal or pelvic mass. This triad was reported in only 15% of PFTC cases (10). In our case the classical triad finding were not seen . The patient presented only with abdominal pain and mass thereby highlighting the fact that PFTC should be considered in differential if a postmenopausal patient presents with adnexal mass

Preoperatively the diagnosis of PFTC is always difficult with the reported range of 0-10% (8, 10) as in our case the CT scan and MRI findings suggested an adnexal mass indiscernible from the right ovary. As in our case Carbohydrate Antigen (CA 125) is invariably raised in all the cases reported however it is not a specific marker as it can be raised in many other gynecological conditions ranging from benign endometriosis to malignancies including Epithelial ovarian carcinoma (EOC). CA -125 is also raised in tuberculosis with peritoneal dissemination (10). Authors suggest serial assessment of CA-125 rather than single measurements both pre-operatively, post operatively and during treatment to assess the response to treatment

Hu et al. (1950) first described the diagnostic criterion for diagnosis of Primary Fallopian tube cancers (PFTC) mainly high grade serous adenocarcinoma (HGSC). These criteria were later modified by the Sedlis. The main points that should be considered to differentiate the fallopian tube carcinoma from the ovarian primary is the 1) histological evidence of a transition between invasive malignancy and in situ carcinoma within the fallopian tube epithelium.(2) The tumor mass mainly arises from the endosalpinx.(3) The ovaries are either normal or with smaller tumor than that in the tube. Recent data suggest pathophysiological correlation between high grade serous carcinoma (HGSC) and lesions described as STIL (serous tubular intraepithelial lesions) and STIC (serous tubular intraepithelial carcinoma)(6). There is also considerable data available correlating endometriosis (typical and atypical) with endometrioid adenocarcinoma. ¹¹ We suggest in light of the clinical and histopathological evidence of hemosiderin laden macrophages affirmation the finding of Tanase Y et al that the tumor

may have arisen from foci of tubal endometriosis ultimately progressing to endometrioid carcinoma

Rutgers et al have accentuated the importance of this "Small organ takes a center stage" the lesions of fallopian tube should be continuously updated.⁵ Further attempts have been made in matching the fingerprints of ovarian and fallopian tube lesion at molecular levels. However, there is still a grey zone and exact pathogenesis of the many gynecological tumors needs to be established. As many strokes contribute to the fall of timber, there is a meager hope that this case report may contribute a small attempt to update the data in our fight against gynecological tumors.

References

1. Rexhepi M, Trajkovska E, Ismaili H, Besimi F, Rufati N. Primary Fallopian Tube Carcinoma: A Case Report and Literature Review. Open Access Maced J Med Sci. 2017 5(3):344-348. <https://doi.org/10.3889/oamjms.2017.044>
2. ShamaChaudhry et al Rare primary fallopian tube carcinoma;agynaecologist's dilemma, JPakMedAssoc 2016;66:107-110
3. Anatolii Romaniuk, Nataliya Gyryavenko, et al. Primary cancer of the fallopian tubes: histological and immunohistochemical features FOLIA MEDICA CRACOVENSIA Vol. LVI, 4, 2016: 71-80
4. Hu CY, Taynor ML, Hertig AI. Primary carcinoma of the fallopian tube. Am J ObstetGynecol 1950;59:58-67.
5. A small organ takes center stage: selected topics in fallopian tube pathology. Rutgers JK(1), Lawrence WD. Int J GynecolPathol. 2014 Jul;33(4):385-92. doi: 10.1097/PGP.0000000000000143
6. Mirjana Kessler , Christina Fotopoulou and Thomas Meyer , The Molecular Fingerprint of High Grade Serous Ovarian Cancer Reflects Its Fallopian Tube Origin Int. J. Mol. Sci. 2013, 14, 6571-6596; doi:10.3390/ijms14046571 www.mdpi.com/journal/ijms
7. RABCZYŃSKI and ZIÓŁKOWSKI, Primary Endometrioid Carcinoma of Fallopian tube, Pathology oncology research.1999;5(1):61-66
8. U. Abuzoda & J. Preston A case of bilateral primary endometrioid adenocarcinoma of the fallopian tubes Journal of Obstetrics and Gynaecology Vol. 22 , Iss. 5,2002
9. Lim D1, Oliva E Precursors and pathogenesis of ovarian carcinoma. Pathology.2013;45(3):229-42. doi: 10.1097/PAT.0b013e32835f226
10. PectasidesD , Economopoulos T . Fallopian Tube Carcinoma: A Review The Oncologist September 2006: 11(8)902-912, doi: 10.1634/theoncologist.11-8-902
11. Tanase Y, Furukawa N, Kobayashi H, Matsumoto T. Malignant Transformation from Endometriosis to Atypical Endometriosis and Finally to Endometrioid

Adenocarcinoma within 10 Years. Case Reports in
Oncology. 2013;6(3):480-484. doi:10.1159/000355282

.HISTORY	
Date Received:	16-01-2018
Date Sent for Reviewer:	20-04-2018
Date Received Reviewers' Comments:	28-04-2018
Date Received Revised Manuscript:	05-05-2018
Date Accepted:	08-05-2018

CONTRIBUTION OF AUTHORS	
Author	CONTRIBUTION
Summaya Sohail	A,B,C
Ahmareen Khalid	B,C,D,E
Asma Khattak	A,B,C

KEY FOR CONTRIBUTION OF AUTHORS:

- A. Conception/Study Designing/Planning
- B. Experimentation/Study Conduction
- C. Analysis/Interpretation/Discussion
- D. Manuscript Writing
- E. Critical Review
- F. Facilitated for Reagents/Material/Analysis