CASE REPORT

Primary Fallopian Tube Serous Adenocarcinoma

Swasti,Urvashi P. Jha, Sumaid Kaul*

Abstract

Tumours of the fallopian tube can be suspected pre-operatively with current radiological facilities. Aggressive search should also be made for a concomitant primary or as an isolated metastatic secondary of another primary cancer. Presentation and management on the lines of ovarian cancer in a 79 year old with primary fallopian tube cancer is described.

Key Words

Primary, Fallopian Tube, Cancer, Adenocarcinoma

Introduction

Primary tumours of fallopian tube cancer is a rare gynaecological malignancy (1).Both benign and malignant forms account for 0.1-1.8% of all gynaecological cancers (2).Overal incidence recorded is one study was 0.41 per 100,000 women (3). Secondary malignant lesions of the fallopian tube usually arise from the adjacent ovary or uterus, occasionally from the gastrointestinal tract and rarely the breast or peritoneal carcinomatosis (4). An association is seen in those with BRCA-1 gene (5). When secondary, these are single and localized in less than 50% of cases.

These cases should be managed aggressively at primary surgery in view of the poor outcome – reportedly worse than that of ovarian cancer, stage for stage (6).

Case Report

A 79 year old woman, menopausal for 29 years, was referred for management of ovarian malignancy with 2 episodes of postmenopausal bleeding, 8 months apart. She had undergone a dilatation and curettage two weeks before presentation at a private clinic in which no tissue was obtained. On presentation, her general physical and abdominal examination was unremarkable. On vaginal examination, the uterus was normal in size, mobile with a 9X10 cm mass felt through the left fornix and placed anteriorly in the pelvis. The right fornix was free.

Routine investigations were within normal limits. Serum CA-125 was 70.0 U/ml, CA 19.9 5.74 U/ml and CEA was 1.97 U/ml. An ultrasound and contrast enhanced CT examination (Figure 1) suggested an irregular solid lesion of 89 mmX48 mm in the pelvis adjacent to the left of the uterus with a fat plane between the mass and the uterus. The endometrial thickness measured 1.8mm.

At staging laparotomy peritoneal washings were sent for cytological examination. Intra-operatively an irregular, oval shaped, hard, mobile mass measuring 7 cmX4 cmX4 cm was seen in the mid-segment of the left fallopian tube (Figure 2). The uterus, right tube and both ovaries appeared normal. The omentum was gritty in consistency. The rest of the abdomino-pelvic cavity had no evidence of disease. A radical hysterectomy with bilateral pelvic and para-aortic lymphadenectomy, supracolic and infracolic omentectomy was performed.She had an uneventful post-operative recovery. She was discharged home from hospital on the 4th post-operative day. Peritoneal washings were negative for malignant cells. Histopathology (Figure 3) confirmed a poorly differentiated serous adenocarcinoma of the left fallopian tube with infiltration of tumour into the subserosa but not penetrating the serosa. No tumor emboli were seen. There

From the Departments of Obstetrics & Gynaecology & *Pathology- Indraprastha Apollo Hospitals, Sarita Vihar, New Delhi-India
Correspondence to : Dr. Urvashi Prasad Jha, Senior Consultant Gynecological Laparoscopic and Gynae-Oncosurgeon, Academic Co-ordinator, Indraprastha Apollo Hospitals, Sarita Vihar, New Delhi-110076, India

was no evidence of tumor metastasis elsewhere. The patient was diagnosed to be a case of primary fallopian tube carcinoma stage 1a grade 3. Post-operatively, the patient was advised chemotherapy in view of the high grade of the lesion but did not take it. At two years follow up, she is well and continues to be asymptomatic with no recurrence of disease.

Figure 1. Contrast Enhanced CT Scan Showing Fallopian Tube Carcinoma Depicting a Left Adnexal mass

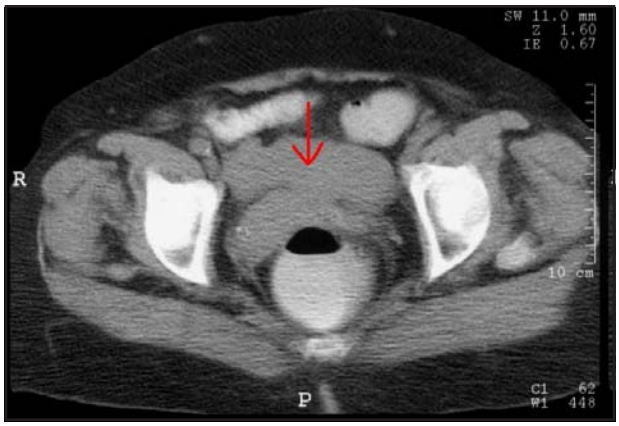


Figure 2. Showing the Opened up Uterus and the Mass in the Left Fallopian Tube after being Fixed in Formalin

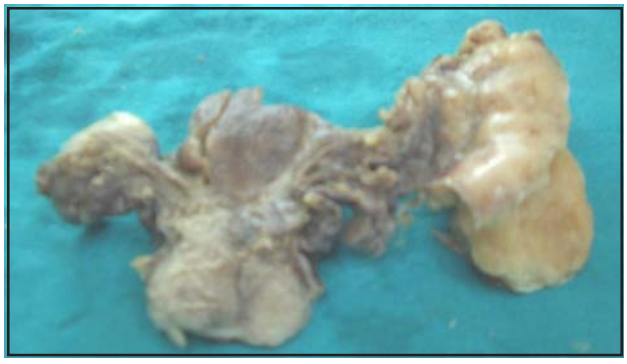
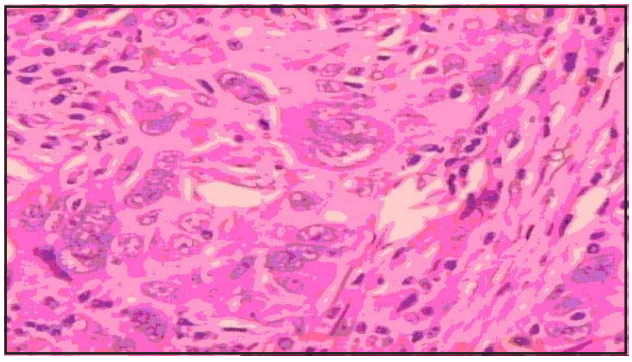


Figure 3. Histopathological Examination of Fallopian Tube Carcinoma Showing the Tumor Cells in Nests, Sheets and Ill-defined Glands (200X,H X E)



Discussion

Fallopian tube cancer was first described 1847. Since then, over 2000 cases have been reported in literature.Fallopian tube carcinoma is typically an incidental diagnosis in patients undergoing an exploratory laparotomy for a presumed ovarian malignancy. Common presenting symptoms are abnormal vaginal bleeding-perimenopausal or postmenopausal followed by abdominal pain and abnormal vaginal disharge (1), as seen in our case. Rarely episodes of profuse watery discharge or *hydrops tubae profluens* are seen. Reported unusual presentations have included torsion, features of paraneoplastic syndrome like dermatomyositis (7) with cutaneous necrosis of palmar fascitis (7), sinus in the posterior part of the cervix, a vesico-vaginal fistula-amongst others. Synchronous reports exist of a second primary – a breast carcinoma (8) and tuberculous salpingitis(9), unlike our case.

Tumor markers such as serum Ca-125 may be raised. Features on ultrasound that suggest a fallopian tube malignant lesion include neo-vascularization in tube (10), the presence of an irregular tubal wall (10), papillary protrusions and pseudosepta. Vascular architecture may accurately demonstrate arteriovenous shunts, microaneurysms, tumoural lakes, blind ends and dichotomous branching on a three-dimensional static and power doppler sonography. Ultrasound and MRI can today localize the fallopian tube lesions, though in this case it was obviously missed, emphasizing the importance of the "man behind the machine".

Fallopian tube cancers are surgically staged as per the updated staging classification published by the International Federation of Gynaecology and Obstetrics (FIGO) Oncology Committee.

Surgical and post-surgical management of a woman with fallopian tube carcinoma is based on the lines of that of epithelial ovarian cancer. Radical pelvic and para-aortic lymphadenectomy in tumors of equal size has shown to markedly prolong survival (11) compared to

only lymph node sampling. Patients with early stage low risk incompletely staged disease and those with early stage high risk disease should receive adjuvant single agent carboplatin therapy. Chemotherapy and radiotherapy have similar efficacy for stage 1 and 2 fallopian tube cancers, but chemotherapy is preferred to radiotherapy (12). Five year survival has shown improvement with adjuvant treatment for even stage 1 disease when compared to no treatment.The most important prognostic factor in fallopian tube carcinoma is its surgical stage.

The 5 year survival of fallopian tube carcinoma is 50.8% (8) at stage 1 & 2 fares worse when compared to 77.5% (8) in ovarian malignancy.Pre- and post-operative protocols should include amongst others-surveillance for distant lesions of the bone, cerebral lesions, local, intra-abdominal and thoracic disease. Investigations should include search for primary sites or sites of a concomitant second malignancy-breast and gastrointestinal tract.

Conclusion

In our opinion it would be reasonable to offer prophylactic salpingectomy to women undergoing hysterectomy with or without oophorectomy. Excising the tubes flushed at their mesenteric attachment prevents vascular compromise to the ovaries. The risk of malignancy from the intra-uterine portion of the fallopian tube would still remain.

References

1. Lialis A, Bakalianou K, Mpolsa E, *et al*. Fallopian tube malignancies.A retrospective clinical pathological study of 17 cases. *J Obstet Gynecol* 2008; 28 (7) : 93-95.
2. Benedet JL, Bender H, Jones H 3rd, Nagan HY and Pecorelli S. FIGO staging classifications and clinical practice guidelines in the management of gynaecological cancers. FIGO Committee on Gynecologic Oncology. *Int J Gynaecol Obstet* 2000; 70: 209-62.
3. Stewart SL, Wlke JM, Faster SL. The incidence of primary fallopian tube cancer in the united states. *Gynecol Oncol* 2007; 107 (2) : 392-97
4. Colgan TJ. Challenges in the early diagnosis and staging of Fallopian tube carcinomas associated with BRCA mutations. *Int J Gynecol Pathol* 2003; 22: 109-20.
5. Klein M, Rosen A, Lahousen M, Graf AH, Rainer A. The relevance of adjuvant treatment in primary carcinoma of fallopian tube stage 1 & 2: irradiation v/s chemotherapy. *Int J Radia Oncol Biol Phys* 2000; 48(5):1427-31.
6. Sedlis A. Carcinoma of the fallopian tube. *Surg Clin North Am* 1978; 58: 12-19.
7. Denschlag D, Riener E, Vaith P, Tempfer C and Keck C. Palmar fascitis and polyarthritis as a para-neoplastic syndrome associated with tubal carcinoma: a case report. *Ann Rheum Dis* 2004 ; 63(9): 1177-78.
8. Levine DA, Argenta PA, Yee CJ, *et al*. Fallopian tube and primary peritoneal carcinomas associated with BRCA mutations. *J Clin Oncol* 2003; 21: 4222-27.
9. Wiskind AK, Dudley AG, Majumdar B, Masterson KC. Primary fallopian tube carcinoma with co-existent tuberculous salpingitis : a case report. *J Med Assoc Ga* 1992; 81: 77-81.
10. Kurjak A, Kupesic S, Jacobs I. Preoperative diagnosis of the primary fallopian tube carcinoma by three-dimensional static and power Doppler sonography. *Ultrasound Obstet Gynecol* 2000; 15:246-51.
11. Klein M, Rosen A, Lahousen M, Graf AH, Rancin A. Lymphadenectomy in primary carcinoma of fallopian tube. *Cancer Lett* 1999; 147(1-2):63-6.
12. Finn WF and Javert CT. Primary and metastatic cancer of the fallopian tube. *Cancer* 1949; 803-14.

GUIDELINES FOR ARTICLES TO BE SUBMITTED UNDER EACH CATEGORY TO *"JK SCIENCE"* JOURNAL OF MEDICAL EDUCATION & RESEARCH

Article Type	Summary: No. of Words	Key Words: No. of Words	Text : No. of Words	Sub-Headings	Tables: Max. No.	Figures: Max. No.	No. of References
ED	NR	NR	600-800	NR	NR	NR	< 10
RA	NR	NR	3000	Variable	2	2	30-35
OA	200	3-5	2000	Standard	4	2	20-25
SC	100	3-5	1200	Standard	2	1	10-15
CR	< 50	3-5	600-800	Standard	1	3	< 10
DR	NR	NR	1000	NR	1	1	< 10