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Case Report

Primary squamous cell carcinoma of the fallopian tube masquerading inflammatory mass

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ABSTRACT

Ovarian pregnancy is rare and a conspicuous variant of ectopic pregnancy and an accurate preoperative diagnosis is very challenging various advances in diagnostic modalities like Transvaginal ultrasonography has evolved in identifying an ovarian pregnancy. We report here one such case of 30 years old with severe lower abdominal pain and bleeding per vaginum following six weeks of amenorrhea confirmed as ovarian ectopic pregnancy consistent with Spiegelberg's criteria on ultrasonography. This case highlights the significance of 3D ultrasonography in the diagnosis. Histopathological report concluded it to be an ovarian ectopic pregnancy.

Keywords: Ovarian pregnancy, Ectopic pregnancy, Transvaginal ultrasonography, Spiegelberg's criteria

INTRODUCTION

Primary squamous cell carcinoma (SCC) of fallopian tube is exceedingly rare.¹ Till date less than 10 cases have been reported to the best of our knowledge.²⁻¹⁰ Serous adenocarcinoma is the most common primary malignancy arising from the fallopian tube. Primary SCC of fallopian tube is diagnosed after excluding invasion from the rest of the genital tract and metastasis. We are reporting this rare carcinoma in a 62 year old female who was taken for laparotomy with pre-operative diagnosis of tubo-ovarian abscess.

CASE REPORT

A 62 year old, postmenopausal woman (Para 4) presented with complaints of pain lower abdomen with increasing severity since one year. She also gave history of foul smelling vaginal discharge off and on for the last one year. On per vaginum examination, uterus was normal size; a hard fixed mass of approximately 10x10 cm was

felt posterior to the uterus and extending towards the left pelvic wall. Her pelvic ultrasonography (USG) and magnetic resonance imaging (MRI) revealed a solid cystic mass suggestive of pyosalpinx and adjacent inflammatory phlegmon. Serum CA-125 was 14.3U/ml (Normal <35). The patient was taken up for laparotomy with pre-operative diagnosis of inflammatory tubo-ovarian mass not responding to antibiotics. At laparotomy there was minimal fluid in the peritoneal cavity. The uterus was small menopausal size and the right tube and ovary were normal. On the left side and posterior to the uterus there was a mass of approximately 10x10 cm size, adherent to the left pelvic peritoneum, bowel and omentum. The mass got ruptured while separating it from the surrounding adhesions and thick pus like material came out. Left tube and ovary could not be identified. Left ureter was engulfed in the mass and was dilated. Total abdominal hysterectomy with right salpingo-oophorectomy with removal of left tubo-ovarian mass was done. Liver, omentum, abdominal and diaphragmatic

peritoneal surfaces were apparently normal. Patient had uneventful postoperative recovery.

On histopathological examination the mass was necrotic and friable. Left ovary and tube were not identified grossly. Multiple sections were taken from the mass which on microscopy revealed nests of malignant squamous cells with keratin pearls (Figure 1A, B) involving the left fallopian tube along with large areas of necrosis (Figure 1C). The tumor cells were infiltrating the

muscularis and serosa. However, sections from the left ovary showed endometriotic cyst without infiltration by tumor. Lymph vascular emboli were also noted (Figure 1D) but perineural invasion was not seen. Extensive sampling was done to look for other epithelial, mesenchymal or endodermal components. Sections from the right ovary and tube were free of tumor. Sections from the cervix showed chronic cervicitis with squamous metaplasia and uterus showed atrophic endometrium with adenomyosis.

Table 1: Summary of reported cases of primary SCC of fallopian tube.

Case	Author (year)	Age Years	Symptoms	Tumor size (cm)	Associated lesion/ malignancy	Metastasis	treatment
1	Block E	56	Pain in right lower abdomen, fever	Goose egg sized		Liver, para-aortic lymph node	1.SO 2.RadioTx
2	Malinak LR et al	60	Lower back pain, weight loss	10x10		Uterine serosa, rectum	1.TAH+BSO 2.ChemoTx
3	Cheung AN et al	58	Progressive swelling of right leg	1.5x0.7x0.5		Right ovary, broad ligament uterus	1. TAH+BSO + omentectomy
4	Cormio G	67	Fixed mass in left inguinal region	2.6x1.4x1.2		Inguinal node	1.TAH+BSO+Lymphadenectomy 2. ChemoTx
5	Mekni A et al	43	Vaginal bleeding	0.5	SCC of cervix	-	1.TAH+BSO 2. RadioTx 3.ChemoTx
6	Wang Z et al	49	Incidental	5x0.8	SCC in situ of cervix	-	1. TAH+BSO 2. Lymph node resection
7	Giordano G	77	Abdominal distension	3.2x2x2.3	Serous carcinoma of omentum	-	Exploratory laprotomy
8	Satoh H et al	71	Vaginal spotting, back pain	1.7x1.2x0.7	Pyloric metaplasia of endocervix	-	1.TAH+BSO+Lymphadenectomy + omentectomy
9	Kuriakose S et al	55	Vaginal bleeding	1x1x1	SCC of cervix	-	1.TAH+BSO+Lymphadenectomy 2.
10	Present case	62	Pain lower abdomen, foul smelling vaginal discharge	10x8x4		-	1.Exploratory laprotomy, TAH+BSO 2. ChemoTx

Immunohistochemistry (IHC) was performed for p63 (Dako, clone: DAK-p63) and WT1 (BioGenex, clone: CAN-R9 [IHC]-56-2) which showed strong nuclear positivity for p63 (Figure 2) and negative for WT1 (Figure 3). Based upon the characteristic histological features and IHC results a diagnosis of primary SCC of fallopian tube was made. Positron emission tomography of whole abdomen done in the post-operative period revealed residual growth of size two centimetres near vault and no other abnormal findings confirming the

diagnosis of primary SCC of fallopian tube. Patient received 6 cycles of platinum based combination chemotherapy and was on regular follow up till one year after surgery.

DISCUSSION

Primary fallopian malignancy is rare and accounts for approximately 1% of the all gynaecological malignancies.¹ Serous adenocarcinoma is the commonest

type (70%) followed by endometrioid adenocarcinoma (10%) and transitional cell carcinoma (10%).¹ Other histological variants described include clear cell carcinoma, squamous cell carcinoma and mixed mullerian tumor. Primary SCC arising from the fallopian tube is exceedingly rare, therefore its behavior, management and prognosis is not well established.

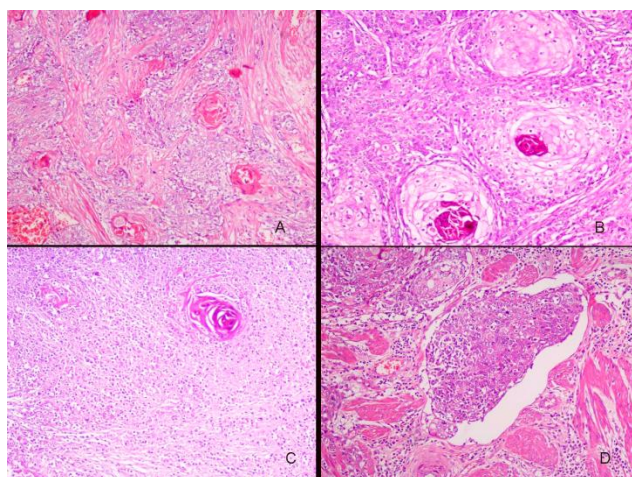


Figure 1: (A) Low power photomicrograph showing nests of squamous cells infiltrating the muscle; H&E, x100. (B) High power keratin pearls in the squamous nests; H&E, x400. (C) Necrotic areas; H&E, x200. (D) Lymphatic emboli of tumor; H&E, x200.

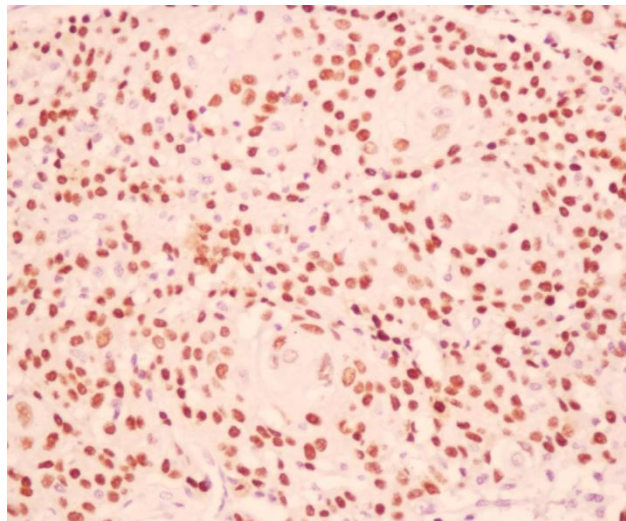


Figure 2: Tumor cells showing strong nuclear positivity for p63 antibody; IHC, x400.

First case of SCC of tubal origin was reported by Block in 1947.² Most SCC of the fallopian tube have been reported in post-menopausal women although couple of cases are also reported in middle aged patients [Table 1]. The mean age of patients is 59.8 years. Most common presenting symptom is abdominal or back pain and vaginal bleeding. Most of the cases reported a small sized mass except for the case reported by Malinak et al and the present case.³

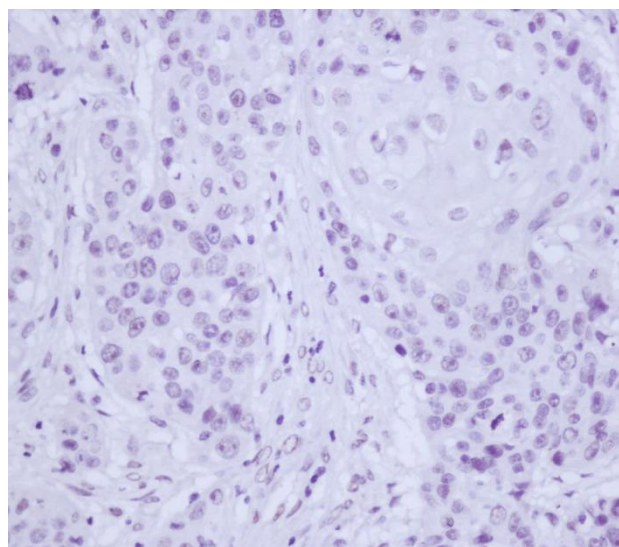


Figure 3: WT1 antibody was negative; IHC, x400.

In most of the reported cases there was simultaneous ovarian involvement [Table 1]. Two cases reported concurrent presence of cervical SCC and in-situ SCC respectively.^{5,6} In one of the case associated omental serous carcinoma was also identified.¹⁰ Wang et al have reported association with high risk HPV subtype 16 and expression of p16^{INK4a} in their case.⁷ Our patient was a 62-year-old postmenopausal and clinical as well as radiologic diagnosis was of inflammatory tubo-ovarian mass. However, on histopathological examination a diagnosis of primary SCC of fallopian tube was made. The tumor was infiltrating the muscularis and reaching into serosa of the tube. Invasion from adjoin ovaries, endometrium and cervix was excluded. It is important to distinguish primary carcinoma of fallopian tube from metastatic carcinoma secondary from the ovary, uterus or gastrointestinal tract which more commonly involves the fallopian tube.¹¹ In a case of primary SCC, IHC for p63 and WT1 may be helpful to establish diagnosis.¹⁰ SCC is usually positive for p63 while WT1 is usually negative in tubal malignancies and positive in ovarian tumors.

The current recommendation for surgery is a total abdominal hysterectomy, bilateral salpingo-oophorectomy, omentectomy and lymphadenectomy.¹¹ Post-surgery chemotherapy is given in most of the patients while role of radiotherapy is in advanced stage patients.¹¹

Our patient received 6cycles of platinum based combination chemotherapy and at one year follow up her general condition is not good.

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