Simultaneous Squamous Cell Carcinoma of Cervix and Fallopian Tube; A Case Report

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Introduction

We report a case of simultaneous Squamous cell carcinoma (SCC) of cervix and fallopian tube (invasive). Primary carcinoma of the fallopian tube is a rare neoplasm, accounting for only 0.3–1.1% of all gynecological malignancies [1]. Adeno-carcinoma is the predominant type and is included in the criteria established by Finn and Javert for diagnosis of primary carcinoma of fallopian tube [2]. Other cell types, including adeno-squamous, endometriod, and malignant mixed mullerian tumour, have also been reported [2].

Case Presentation

Fifty-five year old uniparous lady presented with history of postmenopausal bleeding of 2 weeks duration. Clinical examination revealed an ulcerated growth in the cervix of 2.5 cm × 2.5 cm involving the posterior lip of the cervix without any parametrial or vaginal involvement.

Biopsy taken from the lesion was reported as SCC, large cell non-keratinising type. Diagnosis of FIGO stage I b1

cancer cervix was made based on the clinical and pathological findings and radical hysterectomy with pelvic lymph node clearance was planned.

Radical hysterectomy with pelvic lymph node clearance and para-aortic lymph node sampling was done. Gross examination of surgical specimen revealed the endocervical tumour with 3.3 × 1.8 cms surface dimensions and 5 mm invasion. Histopathology of the tumour was confirmed as SCC, large cell non keratinising type with adjoining areas of the cervical epithelium showing dysplastic changes. No lymphovascular emboli was noted and both parametrium and vagina were free of tumour. Left fallopian tube showed a polypoid tumour 10 mm in size protruding into the lumen at the ampullary region. Microscopic examination revealed microinvasive SCC arising from a squamous dysplastic epithelium having high grade dysplasia, FIGO stage Ia. It was confined to mucosa with no infiltration to muscularis or serosa, and repeat cut sections showed transition from benign to metaplastic and to malignant epithelium (Fig. 1). The endometrium showed no squamous metaplasia or involvement by tumour and in-fact, was atrophic. All 29 lymph nodes were free of disease. In view of the above findings a final diagnosis of carcinoma cervix with synchronous SCC of left fallopian tube was made, where in each case the tumours were confined to the respective organs. No adjuvant radiotherapy or chemotherapy was planned, since the carcinoma cervix was stage Ib1 and fallopian tube carcinoma was confined to the mucosa.

Discussion

Primary carcinoma of the fallopian tube is very rare [1]. A thorough PUBMED search revealed only five cases of primary SCC (invasive) of the fallopian tube [3, 4].

Simultaneous occurrence of tumours of similar histology at different sites of Mullerian system can be explained by

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Fig. 1 **a** H&E 40X, Cervix showing CIN3 (broad arrow) and invasive squamous cell carcinoma (line arrow). **b** H&E 100X, Cervix showing invasive squamous cell carcinoma. **c** H&E 40X, Section from left fallopian tube showing normal tubal epithelium (line arrow) along with metaplastic and dysplastic squamous epithelium (broad arrow) progressing to invasive squamous cell carcinoma (broad arrow head). **d** H&E 100X, Left fallopian tube showing invasive squamous cell carcinoma

(i) contiguous spread- cervical primary extending across endometrium into fallopian tube or vice-versa, (ii) metastasis from the other neoplasm or (iii) the ‘field effect’ of HPV infection resulting in the concomitant development of primary SCC in various sites of the female genital tract. [4]. In our case the invasive tumors were independent primaries, and arose at two separate locations with an uninvolved intervening organ i.e. endometrium. 15 cases of simultaneous SCC (either *in situ* or invasive) in the cervix and fallopian tube have been reported but [4] all these cases showed continuous cervico-endometrial and tubal involvement. Therefore, the SCC of the fallopian tube was thought to be the result of a direct, superficial spread from the cervix. Wang Z et al. [4] reported a rare case of indolent SCC of the fallopian tube with concurrent cervical SCC *in situ*, in which they detected HPV 16 and p16^{INK4a} (surrogate biomarker of HPV infection) at both sites. They put forward a strong argument in favor of HPV in the carcinogenesis of both the tumours. This strengthens the hypothesis of the ‘field effect’ of HPV infection, resulting in the concomitant development of primary SCC in various sites of the female genital tract. In our case there were no histopathological features suggestive of HPV infection and DNA or surrogate biomarker study could not be done as facilities were not available.

The case reported here shows discontinuous involvement of the cervix and oviduct with intervening atrophic

endometrium. The cervical tumor was more advanced than the fallopian tube neoplasm, but did not show lymphovascular emboli or margin positivity. In addition, the fallopian tube neoplasm arose from the endosalpinx, where transition from benign to malignant tubal epithelium was demonstrable. All these factors seem to point toward independent primaries arising in two separate locations in the mullerian system, possibly due to a common etiologic factor, which warrants further molecular and genetic studies.

References

1. Baekelandt M, Jorunn Nesbakken A, Kristensen GB, Tropé CG, Abeler VM (2000) Carcinoma of the fallopian tube. *Cancer* 89 (10):2076–2084
2. Cheung AN, Ngan HY, Cheng D, Collins RJ, Gwi E, Wong LC et al (1994) Primary squamous cell carcinoma of fallopian tube. *Int J Gynecol Pathol* 13(1):92–95
3. Mekni A, Doghri R, Bel Haj Salah M, Tounsi H, Chelly I, Khadija B et al (2008) Simultaneous squamous carcinoma involving the fallopian tube and the uterine cervix. *Arch Gynecol Obstet* 278 (2):157–159
4. Wang Z, Dong J, Eyzaguirre EJ, Tang WW, Eltorkey MA, Qiu S (2009) Detection of human papilloma virus subtypes 16 and P16 (ink4a) in invasive squamous cell carcinoma of the fallopian tube and concomitant squamous cell carcinoma *in situ* of the cervix. *J Obstet Gynaecol Res* 35(2):385–389