

Case Report

A rare case report of double synchronous primary neoplasm of the cervix and ovary

Hardik Gandhi^{1*}, Nehal Tiwari¹

¹Resident Doctor, Pathology Department, SBKS MI & RC, Sumandeep Vidyapeeth, Vadodara, Gujarat, India

*Corresponding author email: hardik1140@gmail.com

	International Archives of Integrated Medicine, Vol. 5, Issue 11, November, 2018. Copy right © 2018, IAIM, All Rights Reserved. Available online at http://iaimjournal.com/ ISSN: 2394-0026 (P) ISSN: 2394-0034 (O)
	Received on: 24-09-2018 Accepted on: 16-10-2018 Source of support: Nil Conflict of interest: None declared.
How to cite this article: Hardik Gandhi, Nehal Tiwari. A rare case report of double synchronous primary neoplasm of the cervix and ovary. IAIM, 2018; 5(11): 89-92.	

Abstract

Synchronous primary neoplasms are defined when two or more neoplasms take place concurrently in the same patient. Double synchronous primary gynaecological neoplasms are relatively uncommon and the incidence rate ranges from 0.6% to 5.4%. Synchronous malignancies of the ovary and the uterine cervix are rare situations in which the prognosis is established not only by clinical stage but also by the histological grade of the adenomatous component. Here we have presented the case of a 60 year old patient who presented for diffuse abdominal pain and weight loss that was diagnosed with synchronous cervical and ovarian carcinoma on histopathology. This case report of double synchronous primary neoplasm of the cervix and ovary is presented here because of its rarity.

Key words

Double synchronous, Primary neoplasm, Cervical carcinoma, Ovarian carcinoma.

Introduction

Double synchronous primary gynaecological neoplasms are relatively uncommon and the incidence rate ranges from 0.6% to 5.4% [1-6]. Synchronous malignancies of the ovary and the uterine cervix are rare situations in which the prognosis is established not only by clinical stage but also by the histological grade of the adenomatous component [7]. However it has been predetermined that these patients do not

have a poorer prognosis as compared to patients diagnosed with single neoplasia while cases in which a single primary tumor with metastatic disease a poorer outcome is expected [7]. Here we have presented the case of 60 years old patient who was presented with diffuse abdominal pain and weight loss and was diagnosed as synchronous cervical adenocarcinoma and right ovarian papillary serous cystadenocarcinoma on histopathology.

Case report

A 60-year-old female came to the Outdoor patient Department of Obstetrics and Gynecology Department of Dhiraj General Hospital, Vadodara due to complaint of the pain in the abdomen and weight loss since 2 months. On palpation a mass is felt in lower abdomen. All the hematological, biochemical and serological examinations were normal. Ultrasonography (USG) was done and an impression of right sided ovarian mass measured 12 x 8 x 6 cm was given. Hysterectomy with bilateral salpingo-oophorectomy was done and the specimen was sent for histopathological examination in the Pathology Department. On gross examination, hysterectomy specimen comprising of uterus with cervix and bilateral adnexa measured 15x9x6 cm. Right sided ovarian mass measured 10 x 7 x 6.5 cm. The cut surface of right ovarian mass showed multilocular cysts, filled with hemorrhagic fluid having thin and thick walls at places. Inner surface revealed numerous papillary projections (**Photograph - 1, 2**).

Photograph – 1: Specimen of uterus with left ovary and omentum.



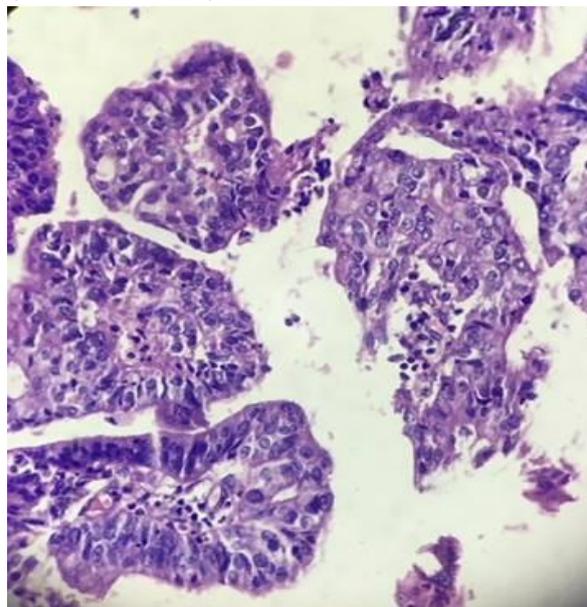
On microscopic examination of right ovarian mass hematoxylin and eosin stained sections demonstrated that there was presence of branching papillary architecture. The papillae were complex and lined by malignant cells. There was also presence of stromal invasion. From overall histopathological findings diagnosis of papillary serous

cystadenocarcinoma (T1aNxMx) (Stage 1A) was given. The sections from cervix showed glandular pattern and the cells showed pleomorphism, high N:C ratio and hyperchromatism. From overall histopathological findings diagnosis of cervical adenocarcinoma (T1A2NxMx) was given (**Photograph - 3, 4, 5**). The sections from endomyometrium and left ovary were unremarkable. From all the histopathological findings final diagnosis was given as synchronous cervical adenocarcinoma and right ovarian serous cystadenocarcinoma.

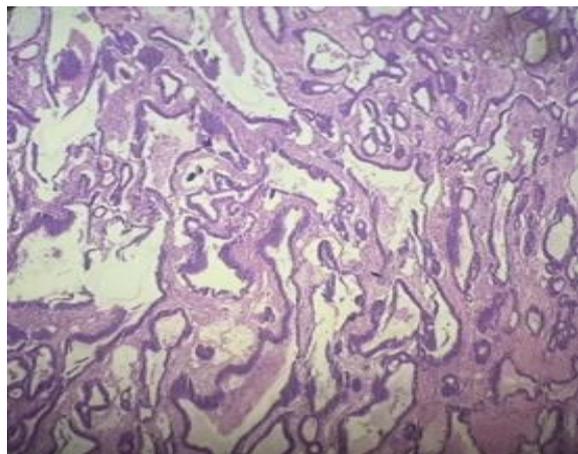
Photograph – 2: Specimen of right ovarian mass with presence of multiple cyst.



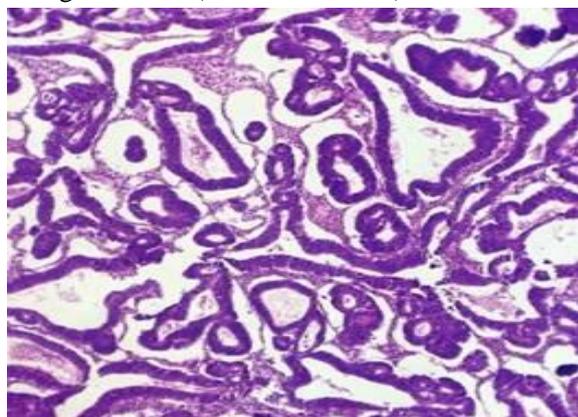
Photograph – 3: Cervical adenocarcinoma (H&E stain, 40X).



Photograph – 4: The branching papillae of right ovarian mass (H&E stain, 4X).



Photograph – 5: The branching papillae lined by malignant cells (H&E stain, 20X).



Discussion

Synchronous primary neoplasms are defined when two or more neoplasms take place simultaneously in the same patient. These neoplasms should be histologically distinct and separated from each other by means of healthy tissues, such as basal lamina or stroma [8]. Double gynecological neoplasms are occasionally observed, and the most commonly reported combination is endometrial-ovarian neoplasms [1, 2]. In our case patient had synchronous cervical adenocarcinoma and right ovarian serous cystadenocarcinoma which is very rare, so that we have presented this case.

The etiology of synchronous primary neoplasms of the female genital system remains unknown. It has been supposed that in genetically predisposed individuals, the Mullerian tissues

with similar embryological origin may respond as a single structural entity when concurrently exposed to carcinogenic, hormonal, therapeutic, or other triggering factors [1]. Other hypothesis proposed that tissues with common embryological origin may develop synchronous malignancies. This concept was successfully implemented in gynecologic oncology under the generic name of “secondary mullerian system concept”, in order to explain the apparition of synchronous primaries [9].

Several clinicopathological criteria have been suggested to assist clinicians and pathologists in distinguishing synchronous primary gynecological neoplasms from related metastatic foci. These criteria include either one major criterion or all the four minor criteria. The one major criterion is the existence of distinct histological types of the neoplasms. The four minor criteria include (a) neoplasms which are limited to primary locations, (b) absence of direct extension between neoplasms, (c) absence of lymphovascular neoplastic invasion, and (d) absence of distant metastasis [10, 11]. In our case, all the above-mentioned major and minor criteria were met, hence confirming the diagnosis of double synchronous primary neoplasms of the female genital system.

The histopathological examination is very much important to rule out metastatic lesions which are necessary for correct staging and treatment. Histopathological parameters like evaluation of direct extension, size, grade, lymphovascular invasion, presence or absence of coexistent lesions are important in distinction [12, 13]. Regarding prognosis, synchronous primary gynecological neoplasms are associated with better survival rates than metastatic or advanced primary ones [1, 2, 5]. Due to the rarity of this situation, a standard therapeutic protocol is not established. However an aggressive surgical approach consisting of complete tumor resection seems to be the only potential curative solution.

Conclusion

The presence of synchronous cervical and ovarian malignancies is an extremely rare situation in which both the tumor stage and the histopathological subtype will influence the prognosis. Careful evaluation of patients with cancer suspicion is very important especially keeping in mind the synchronized tumor possibility of female genital system.

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