


Rare Case Presentation of Synchronous Endometrioid Adenocarcinoma of Ovary and Papillary Thyroid Cancer


Bansal Anshul^{1#}, Dave Pariseema S², Patel Bijal M³, Kar Bijoy⁴, Waghralkar Nidhi¹, Vali Faraz¹
Fellow¹, Professor and Head of Unit², Professor³, Assistant Professor⁴

Department of Gynaecological Oncology

The Gujarat Cancer & Research Institute, Asarwa, Ahmedabad Gujarat

Corresponding Author: pariseema.dave@gcriindia.org

 ^{1#}<https://orcid.org/0000-0002-8581-5596>

 ²<https://orcid.org/0000-0003-3300-4414>

Summary

Most of the cases of primary ovarian carcinoma present in advanced stage with distant metastasis, but it is very rare wherein early stage endometrioid adenocarcinoma of ovary presents with synchronous papillary thyroid cancer. A 30-year-old female was referred with history of Laparotomy and right ovarian cystectomy. On clinical examination, swelling in thyroid gland was noted for which Fine Needle Aspiration Cytology was done and was reported as papillary thyroid cancer. Slide and block review of the right adnexal mass with Immunohistochemistry was reported as endometrioid adenocarcinoma of ovary. Patient received 3 cycles of chemotherapy with paclitaxel and carboplatin. Then patient underwent Completion surgery for ovarian cancer and complete thyroidectomy with selective neck node dissection in the same sitting. Then patient received three more cycles of adjuvant chemotherapy. Later radioactive iodine ablation of thyroid gland by I-131 was done. The patient is on levothyroxine and calcium supplementation. The patient is currently disease free for 2 years and is on regular follow-up.

Keywords: ovarian cancer, adenocarcinoma, synchronous malignancy

Introduction

Epithelial ovarian tumours accounts to 90-95% of all ovarian carcinomas. Endometrioid OC contribute for around 10% of all OC, with the most of cases diagnosed as early stage, low grade disease with good clinical outcome.^{1,2} Synchronous malignancy is used in oncology to refer to two (or more) independent primary malignancies, when the second (or third, etc.) malignancy comes within six months of the diagnosis of the first malignancy.^{3,4} In our case, early stage endometrioid adenocarcinoma of ovary presented with synchronous different primary thyroid cancer. To the best of our knowledge this is one of the rare case going to be reported. We have selected this patient as a case presentation to have insight on clinical vignette and to help in the management of such unique case in future.

Case Report

A 30-year woman with North Indian origin was referred to our cancer institute with history of laparotomy for large ovarian tumour. Patient had undergone left ovarian mass removal with left

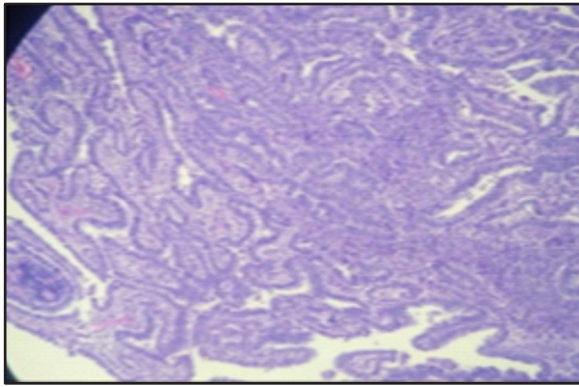
Tubectomy one month back and HPE report revealed serous cystadenocarcinoma. Laparotomy findings were large solid cystic ovarian mass on left side with uterus and opposite adnexa appearing normal, staging was not done. Patient had 1 full term normal delivery 4 years back. Outside pre laparotomy CT scan report showed large solid cystic lesion 11×10 cm in left pelvic region with soft tissue component of 6×4 cm with CA-125 value of 211U/ml. She had complaint of mild abdominal pain and pain in throat. Her menstrual cycles were regular.

On abdominal examination, small healthy transverse scar present. On clinical examination no abnormal findings present. All investigation with tumour markers and review of slide were done. Repeat CA-125 was 127 U/ml.

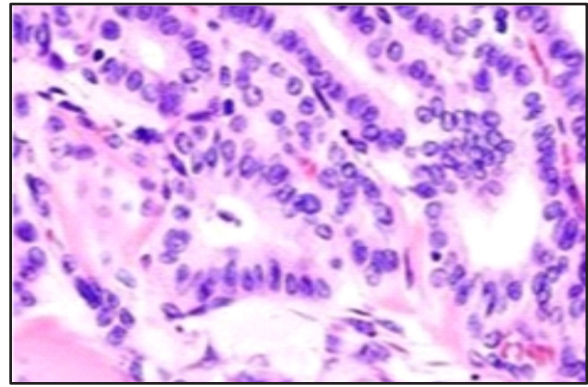
Slide and block review of the cystectomy with IHC was reported as endometrioid adenocarcinoma of ovary. (Figure 1a) On immunohistochemistry CK7, vimentin, beta catenin - positive WT1, CDX2, CK20 – negative, PAX8 - weakly positive.

On general examination swelling in thyroid gland was noted. Patient was referred to head and neck oncology department for neck swelling where patient was advised USG neck and FNAC of thyroid gland. USG Neck and CT scan (Figure 2) confirmed lesion in right lobe of thyroid with few enlarged lymph nodes. Other reports were normal. Fine needle aspiration cytology of the thyroid gland came as papillary cancer. (Figure 1b)

Patient was given the options of fertility preservation surgery with complete staging or completion surgery as patient already had 1 child at that time. Despite multiple counselling, the patient was not willing for any surgery at that time. So after tumour board discussion, patient received 3 cycles of chemotherapy - paclitaxel and carboplatin and after 3 chemotherapy, recounselling of patient and relatives was done. After recounselling patient agreed for completion surgery. So patient underwent total

**Figure 1:** HPE

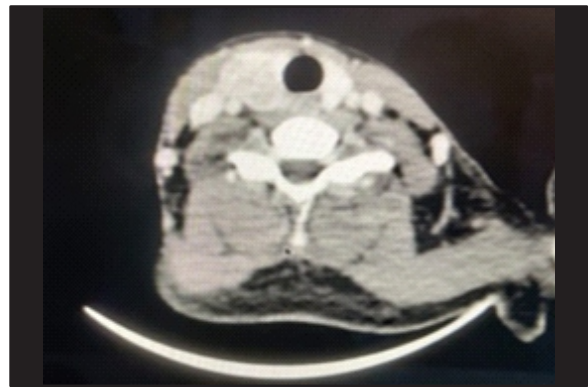
a) Endometrioid adenocarcinoma of ovary



b) Showing papillary carcinoma of thyroid

**Figure 2:** CT scan

a) Coronal section showing enlarged right thyroid gland



b) Axial section showing enlarged thyroid gland

abdominal hysterectomy with right salpingo-oophorectomy with left infundibulopelvic ligament removal with pelvic lymph node dissection with infracolic-omentectomy and total thyroidectomy with selective lymph node dissection in the same sitting. Histopathology showed no tumour in left ovary, uterus or cervix. Final stage was carcinoma ovary IA grade 2 with T3N1bM0 stage of thyroid cancer. Repeat CA-125 was 43U/ml. Post surgery her whole body iodine scan was done for any residual lesion in thyroid. The patient received three more cycles of chemotherapy. Repeat CA-125 was 12U/ml. Later radioactive iodine ablation by 30 mCi I^{131} was done. The patient was given levothyroxine 75 microgram and calcium supplementation. The patient is currently disease free for 2 years and on regular follow up for clinical examination with normal repeat CA125 and imaging and thyroid function tests.

Discussion

The main aetiology of multiple primary cancers is unknown, although family history, immunological and genetic factors and, and exposure to some carcinogens have been indicated. The incidence of primary cancers varies by the site of involvement of organ systems and varies between 1.7 and 5.17% for the female genital tract.⁵ Concurrence

of endometrial cancers and ovarian cancers is already known. However, extra-genital tumours accompanying ovarian cancer are extremely uncommon. Synchronous malignancies present with a lot of difficulties, diagnostically for the pathologist as well as for the clinician in terms of management. As we all know papillary thyroid cancer is the most common thyroid cancer and is associated with a very good 20-year survival rate of more than 90%.⁶ Thyroidectomy is the main stay of treatment and usually leads to good cure rates with excellent prognosis and for ovarian tumours the primary stay of treatment remains primary staging laparotomy followed by chemotherapy or neoadjuvant chemotherapy followed by Interval debulking surgery followed by adjuvant chemotherapy. As per our knowledge, this case is one of the rarest report of an endometrioid adenocarcinoma of ovary and a thyroid cancer occurring concurrently. Managing two primary malignancies at a time proves a challenge for the attending clinician. So, this case could be a torch bearer for such unusual presentation and as a clinician we should think one patient may have multiple synchronous primary cancer requiring very thorough clinical examination and multidisciplinary approach.

References:

1. Vaughan S, Coward JJ, Bast RC Jr et al: Rethinking ovarian cancer: recommendations for improving outcomes. *Nat Rev Cancer*. 2011; 11:719–725
2. Hollis R L, Gourley C: Genetic and molecular changes in ovarian cancer. *Cancer Biol Med* 2016; 13:236-247
3. William Alexander Newman Dorland. *Dorland's Illustrated Medical Dictionary*. 2018
4. De Luca A, Fresno F, Verging M et al: Breast cancer and multiple primary malignant tumors: case Report and review of the literature in vivo (Athens, Greece). 2019; 33: 1313-1324
5. Ayhan A, Yalçın OT, Tuncer ZS et al: Synchronous primary malignancies of the female genital tract. *Eur J Obstet Gynecol Reprod Biol* 1992; 45:63-67
6. Abdullah MI, Junit SM, Ng KL et al: Genetic alterations and molecular biomarker investigations. *Int J Med Sci* 2019; 16:450-60