

CASE REPORT

Nongestational Choriocarcinoma Managed by Neoadjuvant Chemotherapy and Interval Surgery: A Case Report

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ABSTRACT

Ovarian cancer is the third commonest gynecological malignancy worldwide. Among ovarian cancer, epithelial carcinoma is the commonest followed by germ cell tumor. Choriocarcinoma of the ovary can be gestational or nongestational. Pure nongestational choriocarcinoma (NGCO) of the ovary is extremely rare. Histologically, it has the same appearance metastatic gestational choriocarcinoma to the ovaries. Here is a case of 15-year-old premenarchal girl referred with abdominal distension with ascites. Among her markers, beta-hCG was 860 IU/L and imaging showed a large mass with central necrosis. USG showed an ovarian mass with empty uterus. Due to her poor ECOG status, she was given etoposide + cisplatin for four cycles post-FNAC diagnosis of choriocarcinoma diagnosis. Post-neoadjuvant chemotherapy (NACT) her beta-hCG came down to be 2.16 IU/L. She subsequently underwent right salpingo-oophorectomy with surgical staging. Postoperative period was uneventful and further two cycles of etoposide + cisplatin were planned to be given. There is only a case series of 21 cases in India where NACT was given in advanced germ cell tumor followed by fertility-sparing surgery.

Keywords: Fertility-sparing surgery, Malignant germ cell tumor, Neoadjuvant chemotherapy in germ cell tumor, Nongestational choriocarcinoma. *Journal of South Asian Federation of Obstetrics and Gynaecology* (2022); 10.5005/jp-journals-10006-2002

INTRODUCTION

Ovarian cancer is the third commonest gynecological malignancy worldwide. Among ovarian cancer, epithelial carcinoma is the commonest followed by germ cell tumor.¹ Germ cell tumor of the ovary itself is rare gynecologic malignancy. Choriocarcinoma is a very highly malignant tumor with trophoblastic differentiation.²

Choriocarcinoma of the ovary can be gestational or nongestational. Pure nongestational choriocarcinoma (NGCO) of the ovary is extremely rare. Histologically, it has the same appearance metastatic gestational choriocarcinoma to the ovaries. Majority of these patients are younger than 20 years of age and beta-hCG is the tumor marker to be elevated in it. NGCO is rare and has poor prognosis hence early detection is required and a very good amount of diagnostic suspicion is a paramount to diagnose this condition.

CASE DESCRIPTION

This case, a 15-year-old girl, was referred to our institute from a private hospital. She was having pain and abdominal distension for the last 15 days. The distension was rapid in progression. She still did not attain her menarche. On abdominal examination, there was a 15 × 15 cm solid cystic mass palpable with tenderness. There were also moderate ascites and pleural effusion. She had bilateral ICD given for pleural effusion and her overall ECOG status was 2.

She was subsequently admitted and worked up. Her tumor marker showed raised beta-hCG—860 IU/L. Among other tumor markers, CA 125 was mildly raised—95 IU/L and AFP and LDH were normal. USG abdomen and pelvis showed a large abdominopelvic mass with raised internal vascularity and ascites with empty uterus. CECT was done and showed a large abdominopelvic mass with central necrosis and moderate ascites (Fig. 1). The patient was planned to be treated conservatively with neoadjuvant chemotherapy (NACT). Her ICD was subsequently removed and chest physiotherapy was initiated. FNAC from the abdominal

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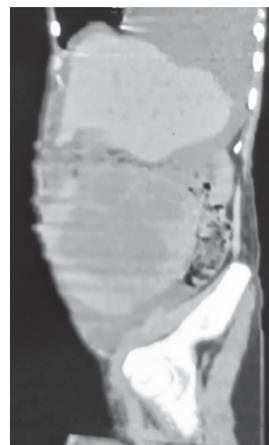
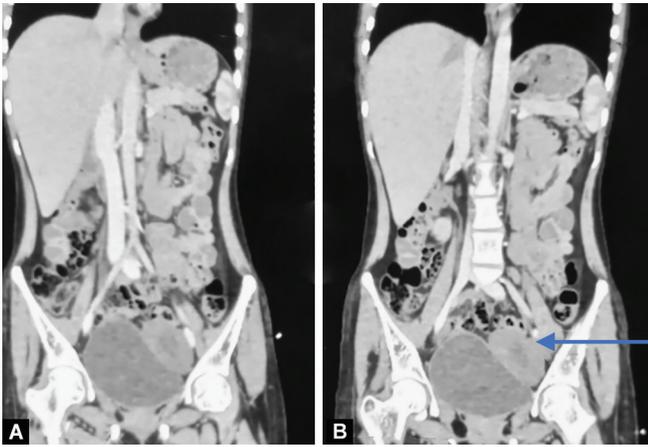


Fig. 1: Pre-NACT CECT picture of ovarian mass



Figs 2A and B: Post-NACT CECT picture of the same ovarian mass

mass showed choriocarcinomatous tissue. She was subsequently planned for bleomycin, etoposide, and cisplatin (BEP) regimen for four cycles. However, because of her collapsed lung, bleomycin was omitted and only etoposide and cisplatin of four cycles were given.

After her four cycles of chemotherapy, her tumor markers were repeated and beta-hCG came to 2.16 IU/L. CA 125 was 25 IU/L. Rest of all the markers were normal. Her ECOG status improved. Repeat CECT abdomen and pelvis (Fig. 2) showed a right adnexal 5 × 5 cm mass with central necrosis without any ascites. She was planned for interval surgery and right salpingo-oophorectomy with total omentectomy and peritoneal biopsy was done. Postoperatively she recovered well and was discharged on day 7. She is now being planned to give two more cycles of etoposide and cisplatin. Her initial biopsy report did not show any choriocarcinomatous component. However, on regressing, the area of choriocarcinoma was found (Fig. 3).

DISCUSSION

Nongestational choriocarcinoma is an extremely rare malignant germ cell tumor with an incidence of less than 1%. The clinical symptoms are predominantly pain and rapid abdominal distension with vaginal bleeding.² Beta-hCG is the marker that is elevated. Usually upfront staging surgery and unilateral salpingo-oophorectomy are the treatment of choice; however, NACT followed by fertility-sparing surgery may also be a reasonable option in advanced germ cell tumor patients who are not fit for surgery. There is one recent study published by Talukdar et al. in 2014 which described 21 cases of malignant germ cell tumor who underwent NACT followed by fertility-sparing surgery.³ Chemotherapy of choice is BEP regimen

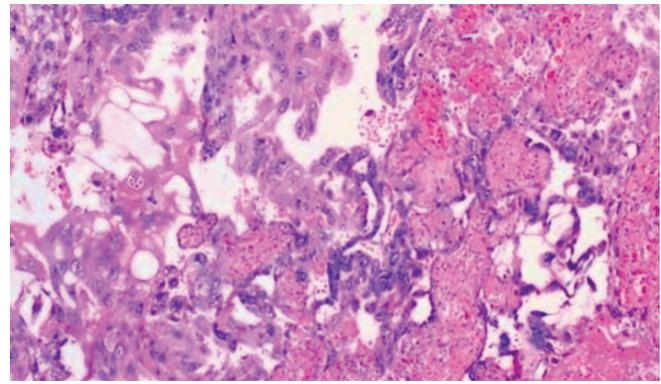


Fig. 3: HPE picture of choriocarcinoma

consisting of bleomycin, etoposide, and cisplatin. However, in our case, because of the collapsed lung, bleomycin was avoided. Also three cycles of BEP are appropriate for low-risk tumor whereas four cycles for intermediate-to-high risk tumor. Here the ECOG status and size of the mass were intermediate risk factors.⁴ An alternative chemotherapeutic approach would have been VIP regimen (vinblastine, ifosfamide, and cisplatin).

CONCLUSION

Pure NGCO is a rare malignant germ cell tumor with the average age of presentation below 20 years. Beta-hCG is the marker that is raised in it and used for the diagnosis and prognosis. Although upfront fertility-sparing surgery is the choice of treatment, NACT followed by fertility-sparing surgery can also be an option in advanced-stage disease with poor ECOG status.

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