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A Case Report on Malignant Mixed Germ Cell Tumour of Ovary in Post Partum Period

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Abstract: ***Mixed germ cell tumours of ovary are malignant neoplasm of ovary consists of 2 or more types of germ cell components. Incidence of mixed germ cell tumour ranges from 1 to 6% in west and 8 to 19% in Asia. Incidence of these tumours declined by approximately 30% over past few decades. Dysgerminoma is the most common component and typically seen with yolk sac tumour or immature teratoma or both. We report a case of mixed germ cell tumour consisted of malignant components of dysgerminoma and yolk sac tumour. Patient was 23 years old primipara post natal day 8, presented with complain of pain in abdomen, fever , breathlessness on exertion and abdominal mass. Ultrasound and CT scan shows an abdominopelvic mass with neoplastic etiology. Her tumour markers i.e AFP, CA-19-9, CA-125 and LDH were raised. we perform total hysterectomy with bilateral salpingo-opherectomy as extensive spread of tumour. Conclusion: Malignant mixed germ cell tumours are highly aggressive neoplasm. As cytoreductive surgery is generally recommended for malignant ovarian germ cell tumour if extensive disease is encountered at initial surgery.***

Keywords: malignant mixed germ cell tumour, dysgerminoma, yolk sac tumour, post partum

1. Background

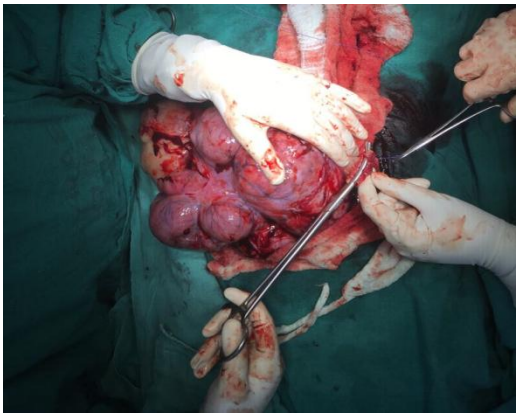
Ovarian germ cell tumour arises from ovarian germinal elements and comprises one third of all ovarian neoplasms. The mature cystic teratoma also called dermoid cyst is by far the most common subtype. This accounts for 95% of all germ cell tumours and is clinically benign. In contrast, malignant germ cell tumour comprises fewer than 5% of malignant ovarian cancer. Incidence ranges from 1-6% in west and 8- 19 % in Asia(1).

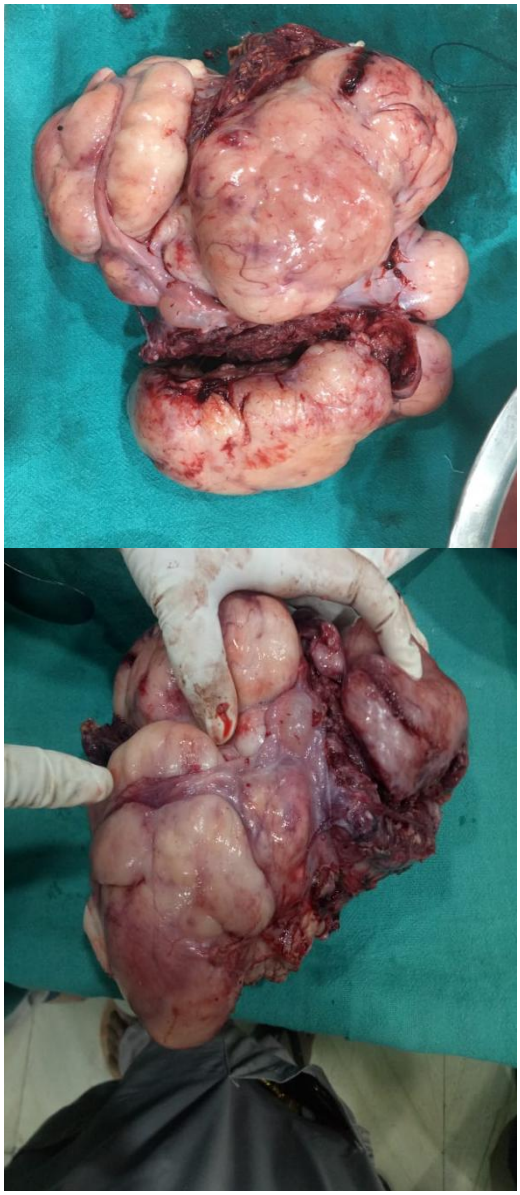
The most common form of malignant germ cell tumours are dysgerminima (80%) endodermal sinus tumour (70%) and immature teratoma 53% in a series.(2) Embryonal carcinoma choriocarcinoma and polyembryoma are very rare type of germ cell tumour(3). Most common combination reported is dysgerminoma and yolk sac tumour/ endodermal sinus tumour. Tumour markers such as alpha feto-protein(AFP), human chorionic gonadotrophin(HCG) and lactate dehydrogenase(LDH) helps in making diagnosis, prognosis and follow up of the disease. We reported a case of mixed germ cell tumour consist of dysgerminoma and yolk sac tumour.

A 23 year old primipara admitted in our hospital on her post natal day 8 with complain of pain in abdomen since 7 days and fever and breathlessness on exertion since last 7 days. Her menstrual history revealed she attained her menarche at age of 13 years and her menstrual cycle were regular. She conceived spontaneously with married life of 1 year. Her antenatal and intrapartum period was uneventful as stated by patient. Patient received 2 unit of blood at some private hospital in lucknow and refered to our hospital. Her physical examination revealed severe pallor. her vitals signs shows temperature 100*F pulse- 120bpm, RR-18/min, BP-110/70 mmHg. No lymphadenopathy.On abdominal examination a huge mass extending upto xiphisternum and lower extent couldn't be palpable seems arising from pelvis with irregular margins and bosselated surface, fixed. There was no guarding and no rebound tenderness felt. On per vaginum examination, same mass felt through all fornices and uterus couldn't be felt separated from mass. Her laboratory investigations were normal except Hb 9 gm %, TLC – 10, 400/MM^3. Her Ultrasound report shows uterus appears normal in size 7.4x5.8x3.2 cm^3. Right adnexa shows large heteroechoic space occupying lesion with few hyperechoic foci and increased internal vascularity noted in abdominopelvic region. However right ovary is not visualized separately.

MRI REPORT shows: abdominopelvic mass abutting uterus with ovaries not seen separately? Ascitis?ovarian neoplasm? Subserosal fibroid. Her tumour markers were CA-125-45.3iu/ml, AFP-16.6ng/ml, LDH-3276IU/ml, B-HCG-43.15IU/ml. after stabilizing the patient was planned for exploratory laparotomy followed by total hysterectomy with bilateral salpingo-opherectomy as there has been high chances of loss to follow up of this patient.

Intraoperatevely : a solid friable lobulated mass of 25x25 cm was seen with capsule ruptured arising from left ovary and left fallopian tube was stretched over mass and right ovary and tube with uterus was grossly seen normal. Figure 1, 2 &3 shows intraoperative picture of ovarian tumour.





Total abdominal hysterectomy with bilateral salpingo-opherectomy was done and patient was discharged in satisfactory condition and planned for chemotherapy but patient is loss to follow up.

Her histopathology report shows ovarian mixed germ cell tumour (embryonal cell carcinoma and dysgerminoma) predominantly embryonal cell carcinoma.

2. Discussion

Most common mixed germ cell tumour consists of combination of dysgerminoma and embryonal cell carcinoma which accounts for 1/3rd of cases. Other combinations includes choriocarcinoma and immature teratoma in decreasing order of frequency. The average age of presentation of germ cell tumour is 13.8 years (4-27years)(2). The frequency of bilateral ovarian involvement depends upon the presence or absence of a dysgerminoma component and increases when it is present(3). The germ cell tumour are the most common ovarian malignancy diagnosed during childhood and adolescents although only 1% of all ovarian cancer develops in this age group. The signs and symptoms associated with these tumours are varied, but in general most arising from tumour growth and hormone they produced.

Subacute abdominal pain is presenting symptoms in 85% of cases, others are abdominal mass, pain and fever sometimes. Embryonal carcinoma may secret estrogen and can presents with precocious puberty or menstrual irregularities(5). Patients with suspected malignant germ cell tumour should have test for tumour markers that helps in making diagnosis pre-operatively. For yolk sac tumour AFP usually raise, in embryonal carcinoma both AFP and Bhcg levels raised but in our case despite of predominant component of embryonal carcinoma both levels are not so markedly raised only the serum LDH levels are markedly raised which is mostly raised in dysgerminoma. Mixed germ cell tumour (embryonal carcinoma and choriocarcinoma) is a very rare tumour. Orientals may have a higher proportion of non-dysgerminomatous malignant ovarian germ cell tumours when compared to reports in the Western literature (6).

The treatment and the prognosis of germ cell tumour are determined by the non-dysgerminomatous component(3). Survival in embryonal carcinoma the first reported series of 15 patients was 39% with 50% of stage I Patients being disease free at 3.75 to 15 years post surgery and chemotherapy.(7)

Most of the recent articles shows there is improved survival rate with conservative surgery and combined chemotherapy as GCTS are highly sensitive to chemotherapy, with survival figures of 98% and 94% for early and advanced stage tumours(8).
Fertility sparing unilateral salpingo-opherectomy should be performed in all reproductive age group women diagnosed with malignant ovarian germ cell tumours, as this conservative approach in general does not adversely affect survival.

Stage IA dysgerminoma and stage IA grade 1 immature teratoma do not require additional chemotherapy. The standard regimen is a 5 day course of bleomycin, etoposide and cisplatin given every 3 weekly(3). The serum markers, may become negative during chemotherapy, but this may reflect regression of only a particular component of the mixed lesion. Therefore, in these patients a second look laparotomy may be indicated if there is residual disease following chemotherapy.

3. Conclusion

Malignant mixed germ cell tumours are highly aggressive tumour. Fertility sparing surgery is required in young girl. Patient with malignant germ cell tumours should be followed by careful clinical, radiological and serologic survillence every 3 months for the first 2 years after therapy completion. 90% of recurrence develops within this time frame.

Consent

Written informed consent was obtained from the patient for the publication of the case report and images.

References

[1] Lim FK, Chanrachaul B, Chong SM, Ratnam SS : Malignant ovarian germ cell tumours:experience in the National university Hospital of Singapore.Ann Acad Med Singapore 1998, 27(5):657-661.
[2] Gershenson DM, Del Junco G, Copeland LJ, Ruthledge FN: Mixed germ cell tumors of the ovary. Obstet Gynecol 1984, 64(2):200–206.
[3] Williams gynaecology 2nd edition page 879-886.
[4] Goyal LD, Kaur S, Kawatra K: Malignant germ cell tumours of ovary-an unusual combination and review of literature. Journal of ovarian research 2014 7.91.
[5] Berek JS, Hacker N, Berek JS, Hacker NF: Practical Gynecologic Oncology. Fifthth edition. Philadelphia: Williams and Wilkins; 2007.
[6] M Koshy, AVijayananthan, V Vadiveloo: Malignant ovarian mixed germ cell tumour: a rare combination; Biomed Imaging Interv J 2005;1(2):e10.
[7] Kurman RJ, Norris HJ: Embryonal carcinoma of the ovary. A clinicopathological entity distinct from endodermal sinus tumour resembling embryonal carcinoma of the adult testis. Cancer 1976, 38:2420–2433.
[8] Low JH, Perrin LC, Crandon AJ, Hacker NF: Conservative surgery to preserve ovarian function in patients with malignant ovarian germ cell tumours. A review of 74 cases. Cancer 2000, 89:391–398.