A repeat USG at 16 weeks showed an increase in the size of the cyst to 94 × 104 mm. Hence on 20/09/2010, a laparotomy with right ovariectomy was done. Left ovary normal.

- **Histopathology report**: Macroscopy–Brownish nodular mass measuring 12 × 13 × 6 cm capsule appears ruptured, cut section shows solid and cystic spaces, solid areas whitish glistening and cystic spaces filled with mucinous material, cartilage, hair, and fat.
  - Microscopy shows ovarian cyst lined by squamous epithelium. The section from solid areas shows glial tissue, choroid plexus, lobules of fat, cartilage, bony tissue, and skin appendages.

**Diagnosis: Mature Teratoma (Benign)**

She had normal term delivery one week before the expected date of confinement/3 kg male baby in February 2011. No other antepartum/intrapartum or postpartum complications.

Two months later, she had complaints of mass in the abdomen for which she consulted a doctor, and ultrasonogram was done which showed a multicystic heteroechoic mass measuring 18 × 10.4 cm seen in the pelvis extending to the right side of the abdomen. Another mass of size 18.1 × 8.4 cm seen in the supraumbilical region.

**Contrast-enhanced Computed Tomography**

Well defined heterogenous solid and cystic mass measuring 16 × 13 cm showing scattered areas of fat, calcification, and soft tissue component is seen in the pelvis (midline and the right side). Lesion shows minimal post contrast enhancement suggestive of immature teratoma. The lesion is seen to displace the bowel loop to the left side. Superiorly it is reaching the level of the umbilicus. Stranding of fat seen adjacent to the lesion infiltration? Another lesion measuring 16 × 10 cm with similar appearance seen in the right suprarenal region. The lesion is seen abutting the posterior surface of the right lobe of the liver. The fat plane between the lesion and liver is not clearly defined. Heterogeneous attenuation lesion is also seen in the right perihepatic region and subdiaphragmatic location suggestive of immature teratoma with the capsular breach and peritoneal extension. Ascites are seen. Right adrenal not visualized separately. Both ovaries not well visualized. The remote possibility of a capsular breach and granulomatous peritonitis also need to be considered.
Growing Teratoma Syndrome

Growing Teratoma Syndrome (GTS), is defined as an enlarging mature teratoma that arises during or following chemotherapy for a malignant germ cell tumor.\(^1\) Two possible explanations for the occurrence include selective elimination of the malignant cells by chemotherapeutic agents or differentiation of malignant cells into mature teratoma components following exposure to chemotherapeutic agents. Other explanation for the appearance of GTS may be as a result of micrometastases of the remaining immature teratoma cells within the peritoneal cavity. This may be as a result of intra-abdominal dissemination despite intact capsule which may occur spontaneously preoperatively.

The presenting symptoms may be abdominal distension or abdominal discomfort as in our case, and the initial histopathology may be an immature teratoma. As the patients are young, they may undergo unilateral salpingo-ovariotomy due to fertility concerns. The development of GTS had been reported as early as 3 months and in some cases, delayed until 8 years. Our patient developed GTS after 7 months. Monitoring of response to chemotherapy is by serum tumor markers till low or normal levels.\(^2-11\) However, despite normalization of serum tumor markers during chemotherapy, the metastatic tumor grows and is usually identified on radiological imaging or ultrasonography, and complete surgical excision is the treatment of choice with retroperitoneal para-aortic and pelvic lymph node dissection. Malignant transformation has been reported in 3% of the cases.

The overall prognosis for GTS is good with few reported deaths. The 5-year survival rate is 89% for patients who have undergone surgery following GTS. However, close follow-up is essential as GTS has developed 10 years later on follow-up.

CONCLUSION

Our patient had two successful pregnancy outcome following GTS and is on follow-up.

REFERENCES


