Images in Clinical Oncology

GROWING TERATOMA SYNDROME (GTS)

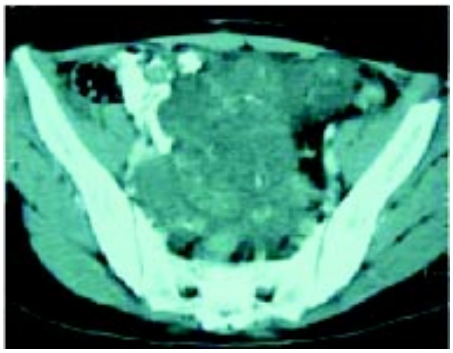

Fig 1A: Pre chemotherapy CAT scan showing the pelvic mass

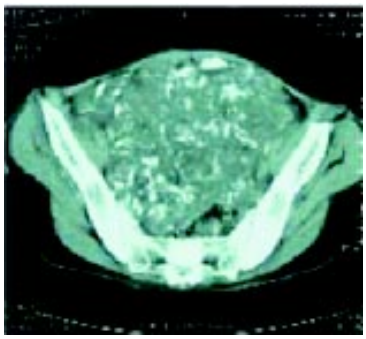

Fig IB: Post chemotherapy CAT scan showing increase in the size of the mass with calcification

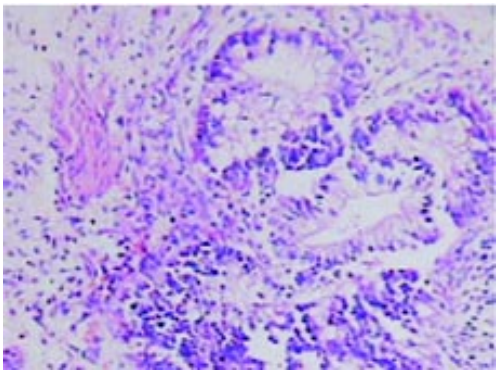

Fig 2A: Pre chemotherapy Photomicrograph showing Immature Teratoma (H&E 200x).

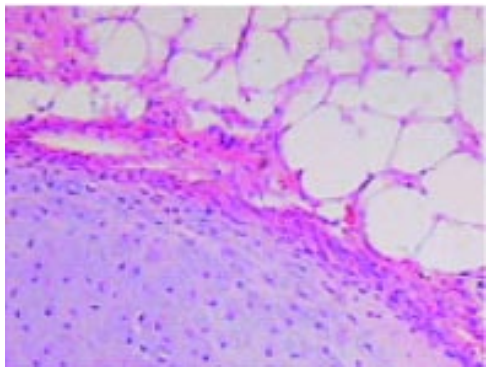

Fig 2B: Post chemotherapy Photomicrograph showing mature cartilage and adipose tissue (H&E 200x).

An 18-year-old unmarried girl was diagnosed to have right ovarian cyst in May, 2002. She underwent right salpingo-oophorectomy in another hospital. Histology was reported as immature teratoma. She did not receive any postoperative treatment. She presented to AIIMS in January 2003 with dull aching pain in lower abdomen. Examination revealed a firm mass in the pelvis extending upto the umbilicus. CAT scan of abdomen & pelvis revealed a large heterogenous abdomino- pelvic mass infiltrating into uterus, rectum & sigmoid colon with multiple foci of calcification within (fig 1A). Serum AFP-560 ng /ml & ß HCG - 48 mIU/ml. Histology: immature teratoma, Grade 3 (fig 2A). She received four cycles of BEP chemotherapy at three weekly intervals. Post chemotherapy her serum markers (AFP and B-HCG) were negative. The mass was still palpable on examination and CAT scan revealed significant increase in the size of the pelvic mass (fig IB). She underwent surgery and complete debulking of tumour with omentectomy was performed. Histology revealed mature teratoma, confirming the diagnosis of GTS (fig 2B). She resumed regular menstruation 5 months after her treatment and continues to be disease-free 4 years from her last surgery.

Growing Teratoma Syndrome (GTS) is defined as increase in tumour size in a patient with germ cell tumour (GCT) during or after chemotherapy while the tumour markers are normal and the histology showing only mature teratoma. Logothetis et al first used this terminology in 1982. This syndrome is relatively common in testicular GCT, the incidence varying from 1.9-7.6%. GTS is a rare in females. Recognition of this syndrome is essential as it prevents the use of ineffective chemotherapy for the persistent mass. Complete surgical resection is advised. Regular follow up with tumour markers and CAT scan is important in these patients. Prognosis is good.

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