

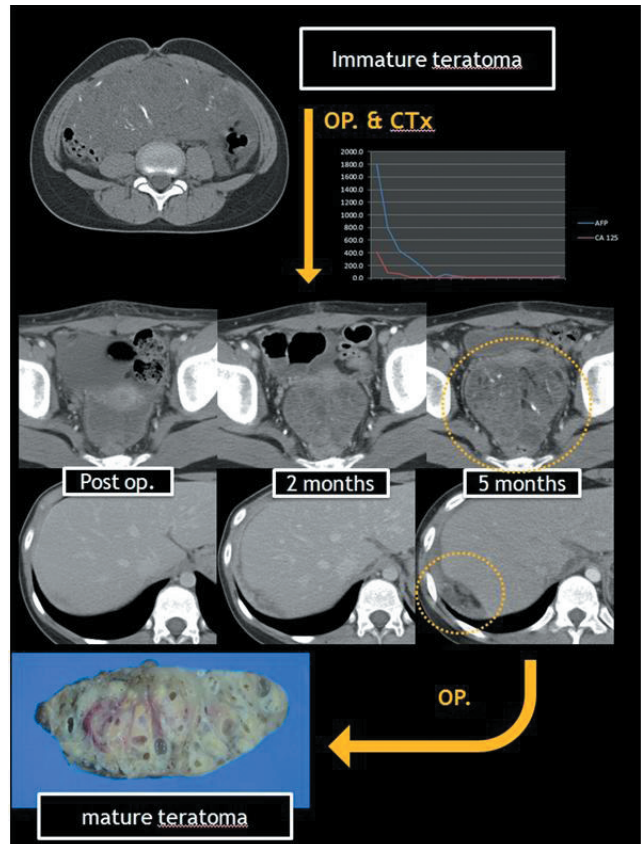
Growing teratoma syndrome: CT findings with pathologic correlation

Nayeon Han¹, Deuk Jae Sung¹, Beom Jin Park¹,
 Min Ju Kim¹, Sung Bum Cho¹, Kyeong Ah Kim²
¹Korea University Anam Hospital, ²Korea University Guro Hospital, Korea.
 urorad@korea.ac.kr

PURPOSE: The purpose of this study is to evaluate the CT findings of growing teratoma syndrome (GTS) which is rare metastatic complication among patients with non-seminomatous germ cell tumors (NSGCT) following appropriate systemic chemotherapy.

MATERIALS AND METHODS: CT images of five female patients (age range, 13–21 years) who meet the criteria for GTS (Clinical or radiological enlargement of tumors during or after chemotherapy administered for NSGCT; normalization of previously elevated tumor marker; and absence of any NSGCT component other than mature teratoma at histological examination of the entirely resected tumor) were retrospectively reviewed by two radiologists in consensus regarding the number, location, CT findings of GTS masses and major increased composition of the mass compared with initial CT.

RESULTS: On pathologic examination of initial NSGCT, three tumors were immature teratomas and two were yolk sac tumors. After chemotherapy, time interval between diagnosis of NSGCT and GTS was 5–83 months (mean 29.4 months). All masses of GTS show mature teratoma on pathologic examination. Location of masses was in the peritoneal cavity in all patients. Number of tumor foci was multiple in two patients (more than five in one patient and four in another patient) and single in three patients. Characteristic components of tumor on CT were calcification and gross fat in 2 patients, only fat in 2 patients and predominant cyst in 2 patients. Major increased composition of the mass compared with initial CT was fat in 3 patients and cyst in 1 patient.



CONCLUSION: CT findings of GTS were well-defined masses with gross fat, calcification or cyst. Radiologists should take GTS into consideration when there is newly developed or enlarged masses with gross fat or cyst in patients with NSGCT on follow up CT scan.