

Title: Challenge of diagnosing and treating a mediastinal mass in a young patient.

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Background: Germ cell tumors (GCT) are neoplasms arising in the testicles (1). Rarely these tumors can grow outside of the reproductive organs without involving them, acquiring the name of extragonadal GCT (2). Mediastinal extragonadal GCT are further divided into seminomatous, nonseminomatous (yolk sac tumor, choriocarcinoma and/or embryonal cell tumor), mature teratoma and immature teratoma according to the histological pattern (2).

Case Presentation: 24-year-old-male patient presented to the ER with complaints of a persistent cough of one month duration accompanied by orthopnea, pleuritic chest pain, and worsening shortness of breath. Patient denied weight loss, testicular pain, night sweats, fever, or hemoptysis. Vital signs on admission were stable. CXR showed a large mass-like density overlying the right hilum. CT chest with contrast showed a 13 cm anterior mediastinal mass with a right loculated pleural effusion. Biopsy was performed with immunohistology compatible with non seminatomous germ cell tumor. Serological tumor markers including Alpha fetoprotein, LDH and Beta HCG were significantly elevated. AFP 1,680.4, LDH 399, Beta HCG 113 and CEA 1.3 supported this diagnosis.

Conclusion: Nonseminomatous extragonadal GCT are rare but aggressive neoplasm that arise in the anterior mediastinum. Statistically they occur more often in men than in women, commonly between the ages of 20 and 40 years old. Treatment with chemotherapy followed by surgical resection of the mass is recommended and should be initiated as soon as the diagnosis is made. Our patient opted to be transferred to MD Anderson Cancer Center for higher level of care.

1. Shafae MN, Tannir NM, Pagliaro LC. Testicular Cancer. In: Kantarjian HM, Wolff RA. eds. The MD Anderson Manual of Medical Oncology, 3e New York, NY: McGraw-Hill; . <http://accessmedicine.mhmedical.com.ezhost.utrgv.edu:2048/content.aspx?bookid=1772&sectionid=121901468>. Accessed February 23, 2020.

2. Wick MR, Perlman EJ, Orazi A, Muller-Hermelink HK. Germ cell tumours of the mediastinum. In: Tumours of the Lung, Pleura, Thymus and Heart, Travis WD, Brambilla E, Muller-Hermelink HK, Harris CC (Eds). 3. National Cancer Institute: <https://www.cancer.gov/types/extragenadal-germ-cell/hp/extragenadal-treatment-pdq>