

A CASE OF PRIMARY MEDIASTINAL SEMINOMA

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SUMMARY: Extragenadal germ cell tumors are rarely seen. Although they can be found in the pineal, paraaortic and sacrococcygeal regions, they occur most often in the superior mediastinum. Seminoma is the most common pure cell type of germ cell tumor reported to be in the superior mediastinum. A case of Primary mediastinal seminoma is presented and the literature is reviewed.

INTRODUCTION

Seminomatous germ cell tumors can arise as primary malignancies in the mediastinum without involving the testis (1). Some cases of primary mediastinal seminomas have also been reported in females (2,3). The common location of the tumor is the superior mediastinum and histologically it is identical to testicular seminoma.

Mediastinal seminoma usually affects young men aged between 20 and 35 years. Most patients have symptoms due to the mass in the mediastinum, but some can present without any symptoms and are diagnosed from a routine chest x-ray. Seminoma should be considered in the differential diagnosis of a young male presenting with a mass in the superior mediastinum.

Primary mediastinal seminoma responds well to radiotherapy and has a good prognosis.

CASE REPORT

A 20-year-old man was admitted with dyspnea. Chest X-ray showed a mass in the superior mediastinum (Fig 1) which in the CT scan pushed the trachea to left and vena cava superior, right pulmonary artery and also right main bronchus to the posterior. Tumor markers, alpha-fetoprotein was normal but β -HCG was slightly elevated (35 IU/ml). Testicular clinical and ultrasonic examinations were negative. Other clinical and radiologic examinations including IVU and lymphangiography showed no evidence of disease elsewhere. At thoractomy a thinly encapsulated and

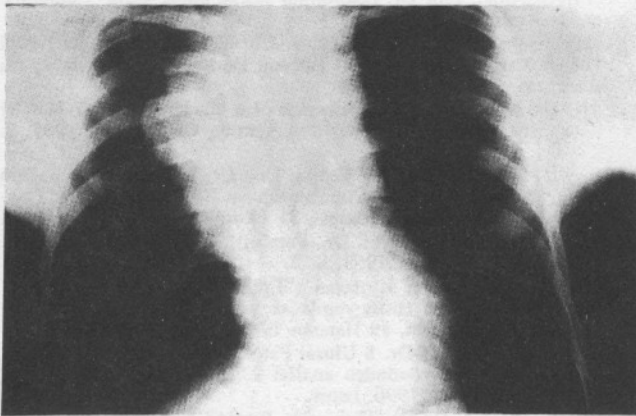


Figure 1- X-ray of the chest taken preoperatively showing a large lobulated mass in superior mediastinum.

lobulated mediastinal mass measuring 10x11x8 cm was completely removed and this histologically proved to be seminoma (Fig 2). Random testicular biopsies were performed and none of these specimens revealed a testicular malignancy but in the seminiferous tubuli only Sertoli cells and very few germ cells in between were observed (Fig 3). The mediastinum and both supraclavicular regions were irradiated to a total of 4000 rad in four weeks postoperatively. The patient remains disease-free 7 months after the treatment.

DISCUSSION

Friedman proposed that all germ cell tumors originate from extragenadal, potentially biphasic germ cells left wit-

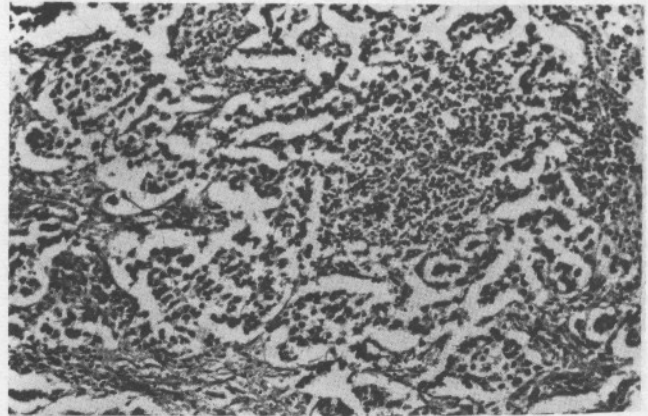


Figure 2- Polygonal, uniform seminoma cells and lymphocytic infiltration of the stroma with a lymphoid follicle (H and E x 125).



Figure 3- Testicular biopsy. (H and E x 125).

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hin the embryonic thymus (4). Under oncogenic stimulus, these germ cells may develop into one of the classic histologic types of testicular tumor, either a pure or a mixed form. Also Lattes (5), and Schlumberger (6) suggested that germinal tumors can arise from a maldevelopment of the thymic gland during embryogenesis.

Primary mediastinal seminoma is a rare but well defined disease which commonly affects young men and has a good prognosis (7). The diagnosis should be established after exclusion of a primary testicular tumor. The average survival time is longer in cases with surgery followed by radiotherapy (8). Mediastinal irradiation to a total of 3000-5000 rad in 3 to 6 weeks following surgery is considered to be the best method of treatment. Chemotherapy with vinblastin, bleomycin an cisplatinum is also suggested by some authors in order to decrease distant metastatic spread and when there is only a partial response to other treatment.

KAYNAKLAR

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