Diagnosis Of A Case Of Testicular Embryonal Carcinoma By Bronchial Biopsy

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Abstract

Embryonal carcinoma of the left testis in a 25-year old man who had left testicular mass, cough, hemoptysis, left chest pain, swelling and hoarseness is reported. The diagnosis was established by bronchial biopsy of an exophytic endobronchial lesion.

CASE REPORT

A 25-year old man was admitted to our emergency department with the complaints of coughing, bloody sputum, pain on the left side of chest, headache, night sweating , hoarseness and weight lost.He had a 15-pack year history of cigarette smoking.

Detecting a hilar mass on his chest radiogram he was taken to the bronchopnomology department. The patient underwent bronchoscopy emergently, and an exophytic lesion was noted in the left upper lobe orifice. The left vocal cord was paralytic. The biopsy taken from the lung was a poorly diffentiated neoplasm suggestive of an embryconal cell carcinoma.

With these biopsy findings, the patient is evaluated in details and his left testis was found to be swollen in his physical examination. The laboratory tests revealed normal red blood cell and platelet count, and urine analysis. White blood cell count was 13300/mm with a differential count of neutrophils 75%, lymphocytes 20%, monocytes 4% and eosinophils 1%.

Sedimentation rate was 97mm/h. Blood urea nitrojen, serum electrolytes, alkaline phosphatase, bilirubin, glucose, ALT, AST and protein electrophoresis were normal. HCG, LDH and alphafetoprotein levels were 5000 (0-5mUI/ml), 1914 (240-480U/L), and 1490 (0-2UI/ml), respectively. Sputum specimens were negative for malignant cells.

Thorax CT showed a solid round lesion (2.5cm) on the anterior part of left paratracheal area in the upper mediastinum. There were also round noduler images (1-1.5cm) located subpleurally in both lungs. In abdominopelvic CT there were lymph nodes in mesenteric and retroperitoneal areas. Testis USG revealed a left testicular mass. The patient underwent bronchoscopy and an exophytic lesion was noted in the left main stem bronchus at the level of left upper lobe orifice. The biopsy taken from the lung was a poorly differentiated neoplasm suggestive of an embryonal cell carcinoma. The biopsy of the testicular mass revealed embryonal testis carcinoma and the patient was directed to oncology deparment after orchiectomy.

DISCUSSION

Testicular tumors constitute only a small percantage(0.52 to 2 percent) of all malignant tumors in men ([1]). However, in men between the ages of 29 to 35, they are the most commonly occuring neoplasms, ([2]) and account for 11.4 percent of the cancer deaths in the age group 25 to 34 ([3]). More than 90 percent of all testicular tumors are malignant and in most, the presenting symptom is a mass or swelling in the testis. ([4,5])

Testicular germ cell neoplasms affect young men in the prime of life. Although the overwhelming majority are malignant, they are curable. In addition to the stage of the disease and the presence of serum markers, there are important pathological changes that have clinical significance. These include the cell type, the amount of the component, and the presence or absence of vascular invasion of the tumor ([6,7,8]). Vascular/lymphatic invasion are high-risk factors as they are predictors of relapse. These factors should be recognized by the pathologist and should be taken into account by the oncologist when selecting the management of a patient with a germ cell tumor of the testis.

Vugrin et al., in their review of testicular embryonal tumors,

found that.long-term survival rates were correlated with selected clinical features in 479 patients with embryonal carcinoma of the testis and 33 patients with endodermal sinus tumor (infantile embryonal carcinoma yolk sac tumor) (11).

Among patients with embryonal carcinoma, over 80% were diagnosed in the 15 to 34 year age group. Seventy-four percent of the patients had metastatic disease at the time of diagnosis, and 50% of these had distant metastases, attesting to the aggressiveness of embryonal carcinoma and its tendency to early hematogenous spread. Despite the highly malignant nature of the tumor, the overall 5-year survival rate with treatments used was excellent (88 %). Survival was correlated with the extent of disease at the time of diagnosis; the 5-year actuarial survival rates for patients with localized, regional, and distant disease were 98%, 96%, and 74%, respectively. Endodermal sinus tumor was uncommon (1.8 of all testicular germ cell tumors), occurred predominantly in the younger age group (0-24 years), and in 50% of the cases was localized to the testis. The survival rate for the 33 patients with this form of tumor was slightly worse than for the “adult form” of embryonal carcinoma. The authors concluded that survival of patients with embryonal carcinoma has greatly improved over the last decade as a result of improved methods for early detection of metastatic deposits and the effectiveness of newer chemotherapies in the treatment of disseminated disease.($_{9}$)

The role of surgery in patients with pulmonary metastatic germ cell tumors has been exolving since 1970s. Germ cell tumors are highly curable when treated appropriately ($_{10}$). The majority of germ cell tumors arise in the testis, with a proportion having pulmonary parenchymal or mediastinal metastases. With current chemotherapy regimens, almost 85% of the patients with testicular germ cell tumors undergoing complete resection of their pulmonary metastases can be expected to achieve long-term survival ($_{11}$).

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