Adenocarcinoma in The Anterior Mediastinum; Is It Thymic Origin? Pulmonary Origin? or Metastasis?

İ. Ebru Çakır¹, Hasan Ersöz², Duygu Ünal¹, Deniz Altındağ¹, Eylül Gün¹, Dilara Özyiğit¹

¹ İzmir Katip Celebi University, Ataturk Education And Research Hospital, Department Of Pathology
² İzmir Katip Celebi University, Ataturk Education And Research Hospital, Department Of Chest Surgery

Introduction: Most adenocarcinomas in the mediastinum are metastases from lungs and gastrointestinal tract. Primary thymic adenocarcinomas are extremely rare, only 58 cases have been reported. Primary mediastinal adenocarcinoma can arise from thymus associated with thymic cysts or thymoma. Papillary and mucinous adenocarcinoma are the most common variants. Staging workup, serum tumor marker profile, the clinical and radiological evolution (disease localized to mediastinum), careful morphologic assessment, and immunohistochemical studies are helpful in supporting a diagnosis of a thymic primary.

Case Report: A 56 year-old male patient presented with chest pain. Computed tomography revealed an irregularly bordered solid mass in the anterior mediastinum adjacent to the right pleura. Surgical resection was performed.

Macroscopic examination revealed a 7cm solid mass with infiltrative borders surrounded partially by fatty tissue and well demarcated from lung parenchyma. Microscopically, the tumor was composed of tubules and tubulopapillary structures lined by columnar cells in a lymphoplasmocyte and neutrophil rich stroma. A fibrotic pleura was separating lung parenchyma from the tumor. There was no infiltration of the lung parenchyma by the tumor cells. Around and inside the tumor, areas of residue thymic tissue and a microscopic thymoma foci drew attention.

On immunohistochemical examination tumor cells were diffuse positive with CK7, CEA(m), focal positive with CDX2 and CD5, negative with TTF1, CK20, napsinA, kalretinin, p63, CD117. Clinical, endoscopic, radiographic and serologic examinations disclosed no evidence of tumor elsewhere and the tumor was reported as an adenocarcinoma with thymic origin.

Conclusion: Primary thymic adenocarcinomas are extremely rare neoplasms. When the main tumor mass is located in the anterior mediastinum and if there is no evidence of a possible primary tumor elsewhere, thymic origin would be considered. Association with thymoma supports thymic origin. Clinical/radiological examinations and immunohistochemical studies should be performed to exclude metastasis from the lungs and peripheral organs.

Anahtar Kelimeler: Thymus, lung, adenocarcinoma, metastasis, primary