Coexistence of Schwannoma and Hodgkin's Lymphoma

Schwannoma ve Hodgkin Lenfoma Birlikteliği

Nadir Rastlanan Olgu Sunumu / A Rare Case Report

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Özet

Yirmidört yaşında bayan olgu göğüs duvarında ele gelen kitle nedeniyle kliniğimize sevkedildi. Arka-ön akciğer radyografisinde dokuzuncu interkostal aralıkta düzgün sınırlı opasite ve mediastinal genişleme izlendi. Toraks bilgisayarlı tomografisinde dokuzuncu interkostal sinirle ilişkili tümör ve mediastinal lenfodenopati izlendi. Göğüs duvarındaki kitle eksize edildi. Aynı seans, ve aynı insizyondan torakoskopik olarak mediastinal lenf nodlarından örnekleme yapıldı. Göğüs duvarındaki kitlenin ve lenf nodlarından alınan örneklerin frozen patoloji sonucu sırasıyla; schwannoma ve hodgkin lenfoma olarak değerlendirildi. Bu olgu, literatür araştırmasında hodgkin lenfomanın ve interkostal sinir kaynaklı intratorasik schwannomanın birlikte eşlik ettiği başka bir olguya rastlanmadığı için, literatür incelemesi ile birlikte sunuldu.

Anahtar Kelimeler

Hodgkin Lenfoma; Schwannoma; Torakoskopik

Abstract

A 24-years-old woman was referred with the complaints of palpabl mass in the chest wall. Postero-anterior lung radiography showed well-demarcated opacity along with the ninth intercostal space and mediastinal enlargement. A chest computed tomographic scan showed tumor along with the ninth intercostal nevre and mediastinal lymphadenopathy. Excision of the chest wall tumor was performed. We performed sampling of the mediastinal lymph nodes thoracoscopically in the same session from the same incision. The tumor was diagnosed as a schwannoma and these lymph nodes were diagnosed as a hodgkin's lymphoma with frozen section examination. We present this case with a literature review, as we did not find any other case of intrathoracic schwannoma arising from intercostal nerve diagnosed simultaneously with hodgkin's lymphoma in the literature search.

Keywords

Hodgkin's Lymphoma; Schwannoma; Thoracoscopic

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Introduction

Schwannoma is a benign neurogenic tumor that arises from schwann cells. Most thoracic neurogenic tumors arise in the mediastinum; fewer than 10% of these tumors originate peripherally from the intercostal nerves[1].Hodgkins disease is a disease that originates from the lymphoid tissue and is characterized by Reed-Sternberg cells in pathologic specimens. The cause to date is unknown but may be culmination to diverse pathologic processes, such as viral infections, enviromental exposures and a genetically determined host response[2]. Eventhrough schwannoma and hodgkins disease don't have common etiological factor they can be seen together in the same patients.Most patients with hodgkin disease or thoracic schwannoma are asymptomatic and these diseases are often discovered incidentally.However, to our knowledge, a rare case of schwannoma arising from a ninth intercostal nerve diagnosed simultaneously withhodgkin's lymphoma that we diagnosed in our patient has not been previously reported in the literature. Hence, due to the clinical significance of this case, we present the data related to this rare combination of anomalies.

Case Report

A 24-years-old woman who presented to the medical center with palpabl mass in the chest wall.There was nothing remarkable in either the patient's medical history or that of her family. Hematology, biochemistry and blood gas analysis were normal. The respiratory function tests were within normal ranges.

She had a chest radiograph that demonstrated opacity in right lateral of the ninth rib and mediastinal enlargement that was confirmed with chest computed tomography (CT) to be a 27-28 mm well-circumscribed, mass of the right chest wall and mediastinal lymphadenopathy (Figure 1-3).During staging investigation, integrated positron emission tomography using [18F] fluoro-2-deoxy-D-glucose (FDG-PET)/CT showed enhanced FDG uptake in the mediastinal lymphadenopathy (maximum standardised uptake value (SUVmax) 11.26 and in the right chest wall mass (SUVmax) 2.43(Figure 4).

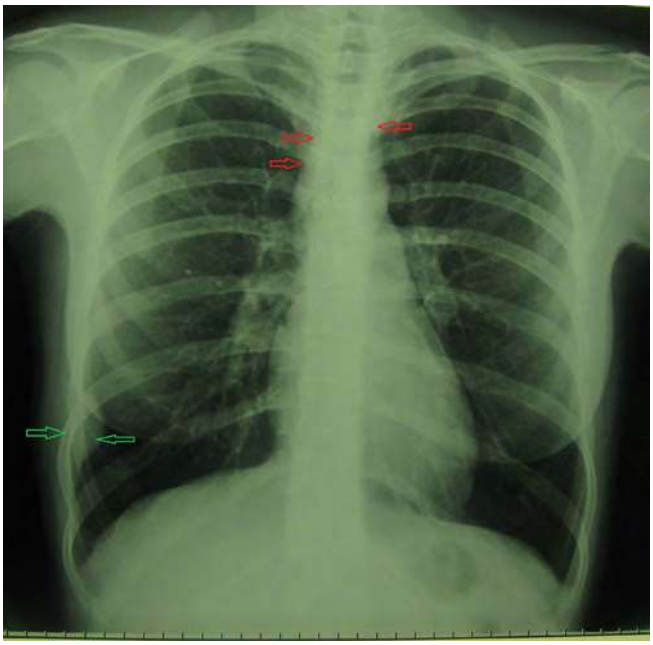


Figure 1. Chest radiograph scan a mass lateral of the ninth rib (green arrows) and mediastinal enlargement (red arrows).



Figure 2. Computed tomographic scan revealing a mass lateral of the ninth rib(green arrows).

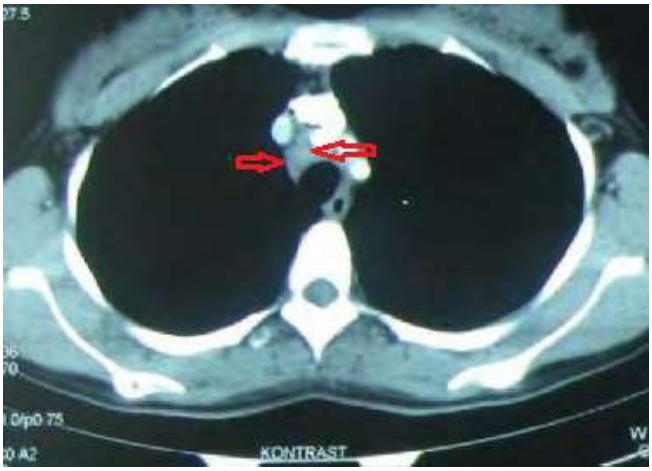


Figure 3. Computed tomographic scan revealing mediastinal lymphadenopathy (red arrows)

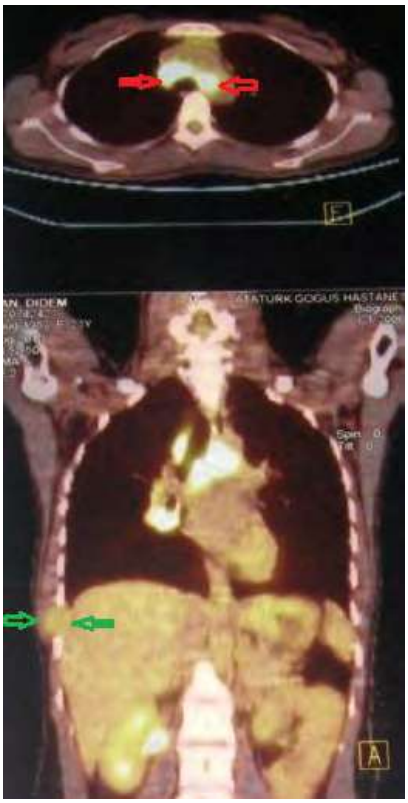


Figure 4. Positron emission tomographic scan of the patient. (A) mediastinal lymphadenopathy (red arrows), (B) the mass lateral of the ninth rib (green arrows), mediastinal lymphadenopathy (red arrows)

Skin incision was performed above the tumor and dissected from the intercostal muscle, ribs and parietal pleura then completely resected. We performed sampling of the mediastinal lymph nodes thoracoscopically from the same incision using the affected intercostal distance in the same session because of the FDG involvement.The tumor was diagnosed as a schwannoma of the ninth intercostal nerve and all these lymph nodes were diagnosed as a hodgkin's lymphoma with frozen section examination. Surgical excision was performed for a definitive diagnosis and treatment for schwannoma and she underwent adjuvant chemotherapy for hodgkin's lymphoma. The patient was discharged from the hospital in stable condition and is currently undergoing long-term treatment with chemotherapy.

Discussion

There have been few reports of late secondary malignancies following of Hodgkin's lymphoma (HL) treatment. Synchronous schwannoma and HLwhere it is seen widespread between the ages of 15-35 is rare[3].

HL, formerly known as Hodgkins disease, is a type of lymphoma first described by Thomas Hodgkin in 1832 [4]. The majority of patients with HL present with nontender adenopathy, usually in the neck or supraclavicular area. Mediastinal involvement is commonly present and may become very large. It is sometimes the only site of disease. Based on differences in the cellular composition and the histology, HL is nowadays distinguished into four subsets of classical HL (nodular sclerosis, mixed cellularity, lymphocyte depletion, lymphocyte rich and lymphocyte predominant HL [2]. Our case had only mediastinal involvement and distinguished into mixed cellularity of classical HL.

Ancient schwannomas are encapsulated tumors with long duration and a benign nature. These tumors tend to develop slowly and seem to be symptomless until they reach a sufficient size to compress adjacent structures. They may be detected incidentally on routine roentgenograms [4]. Our patient was asymptomatic until mass began to grow, and a chest wall of mass was detected by roentgenogram and CT.

The radiological features of ancient schwannomas have not been well described due to their rarity. Long-term progression of the tumor leads to degenerative changes such as cystic formation, calcification, hemorrhage, and hyalinization. Ancient schwannomas have a characteristic appearance on CT and magnetic resonance imaging, consisting of encapsulated solid components with cystic areas or appearing as cystic masses with marginal crescent-shaped or nodular solid components often containing calcifications[4]. In our case, CT revealed cystic masses and a low-density area on the inferior margin probably due to hemorrhage as a degenerative change.

FDG uptake by schwannomas is variable, with a range of SUVmax of 1.9-1,2[5,6]. Therefore, PET scan seems to have a limitation in distinguishing schwannomas from other malignant peripheral nerve sheath tumors.

During staging investigation, integrated (FDG-PET)/CT showed enhanced FDG uptake in the mediastinal lymphadenopathy of the hodgkin's lymphoma(SUVmax) 10.04[2]. Our case positron emission tomography using (FDG-PET)/CT showed enhanced FDG uptake in the mediastinal lymphadenopathy (SUVmax) 11.26 and in the right chest wall mass (SUVmax) 2.43.

Total resection is mandatory for treatment of the schwannoma because malignant transformation has been reported . After complete resection recurrence is rare, and the prognosis is usually good [7]. In our case, tumor resection was pathologically complete and epithelioid cells were not found.

The diagnostic workup of HL includes obtaining an adequate tissue sample and a staging evaluation. In HL in particular, the malignant cell of origin, the Reed-Sternberg cell, is relatively rare in comparison to the intense background lymphoid reaction. Its recognition is essential for diagnosis, and such cells may not be present if the biopsy is small. Samples obtained by mediastinoscopy, an excellent technique for staging carcinomas, are not always adequate for diagnosis of mediastinal lymphomas. If no easily accessible peripheral lymph node is present, thoracoscopy, anterior mediastinotomy, or a limited thoracotomy may be required for establishing the diagnosis [2]. We performed sampling of the mediastinal lymph nodes thoracoscopically from the same incision because of using the affected intercostal distance in the same session

Our present case is the benign intercostal schwannoma diagnosed simultaneously with hodgkin's lymphoma. In this case, because the chest wall schwannoma with mediastinal lymphadenopathy, a biopsy of the lymph node was an important aspect of the decision regarding the treatment modality of the hodgkin's lymphoma.

Competing interests

The authors declare that they have no competing interests.

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