immunocompetent man presented with cough, fever, and a right hilar mass. Mediastinal biopsies revealed *Aspergillus flavus*. The patient was treated with amphotericin B and 5-fluorocytosine, but expired after esophageal and superior vena caval compression [3]. Another case published in 1984 described chest wall invasion by *Aspergillus flavus* in a 24-year-old healthy, immunocompetent man. After *Aspergillus flavus* was confirmed on biopsy, amphotericin B therapy resulted in complete resolution of the infection [6]. It is interesting to note that our patient had an atypical course of chronic mediastinal aspergillosis as evidenced by chest roentgenograms and CT scans obtained within 5 years. Although the infection progressed during the 5 years, the patient remained essentially asymptomatic during that time. It is plausible that *Aspergillus* was the cause of her initial right lower lobe pneumonia, because the infiltrate evolved into a right lower lobe nodule and then subsequently progressed to a right hilar mass with ipsilateral adenopathy. Because our patient is presumed to be immunocompetent, it is possible that her immune system was able to partially control the infection during this period of time. This is distinctly different from the typical pattern of *Aspergillus* infections in immunocompromised patients, which is usually rapidly progressive [2]. Despite our patient’s lack of symptoms, the growth of the mediastinal mass was troublesome and a definitive tissue diagnosis was needed. Using the video-assisted thoracoscopic surgical approach, adequate tissue specimens were obtained directly from the mass to reveal fungal hyphae and *Aspergillus flavus* in the tissue culture.

Optimal treatment of *Aspergillus* mediastinitis is unclear because of the infrequent number of reported cases. The few published reports have shown the benefit of combined surgical and medical therapy [7]. Our patient did not receive surgical debridement owing to the extensive involvement of mediastinal structures. She was started on oral voriconazole, 200 mg twice daily, with monitoring of serum concentrations. Voriconazole, an extended spectrum triazole antifungal, is recommended as a first-line therapy for infections caused by *Aspergillus* [4]. The patient continues to do well clinically and radiographically, with no evidence of disease progression after 6 months of treatment with voriconazole. The exact duration of antifungal treatment is unknown, but is likely to be necessary indefinitely.

### References


### Thoracic Outlet Syndrome in a Patient With Poland Syndrome

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We report a 20-year-old man with Poland syndrome who suffered from weakness, pain, numbness, and discoloration in the left upper extremity. He was eventually diagnosed as also having thoracic outlet syndrome. The concomitance of these two disorders is discussed with a special emphasis on the underlying mechanisms.

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Poland syndrome is a rare congenital disorder that refers to the absence of pectoralis major and minor muscles, ipsilateral breast hypoplasia, and the absence of

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two to four rib segments [1]. Herein, we report a patient with Poland syndrome who was eventually diagnosed as also having thoracic outlet syndrome (TOS). We believe that our case is the second report exemplifying such an interesting coincidence [2]. The underlying mechanisms and the clinical findings are discussed in the light of the relevant literature.

A 20-year-old man was seen for pain in the left upper limb and in the upper back region on the left side. He also declared that weakness, numbness, and paleness of the left upper extremity accompanied the pain. He narrated an episode of strenuous exercises of the upper limbs (6 months prior) after which his complaints had started. He claimed that his pain got worse when he used his left arm, particularly when overhead. The medical history was otherwise unremarkable but he was diagnosed with Poland syndrome.

In the physical examination, he had an appearance of asymmetric chest and upper extremities. Pectoralis muscles were absent on the left side, and the left upper limb was also found to be mildly underdeveloped. His neurologic examination was normal, except for hypesthesia in C8–T1 dermatomes on the left side. Hyperabduction and Roos tests revealed significant pain and tingling sensations on the left side. During the Roos test, a band-like lesion that was considered to be a remnant of pectoralis muscles was also detected in the axillary region (Fig 1). The laboratory tests, cervical roentgenograms, and electromyography were all normal. Sonography clearly demonstrated the absence of pectoralis muscles (Fig 2) and the presence of a band-like lesion (Fig 3). At first glance, it was suspected that the axillary band would be causing the clinical findings of TOS. Dynamic imaging with Doppler ultrasound was normal in the neutral position or during Adson, hyperabduction, costoclavicular, and Roos maneuvers. Multi-slice computed tomographic angiography during neutral and hyperabduction positions were done to visualize a possible compression in the thoracic inlet, which was also noncontributory. With the aforementioned clinical findings, the patient was diagnosed with Poland syndrome and TOS due to cervicoaxillary strain. A home-based exercise regimen that comprised mainly of strengthening the shoulder elevator muscles was prescribed. On the control visit 3 months later, he was found not to have improved significantly. On the other hand, as he benefitted from stellate ganglion blockage with a local anesthetic, a surgical approach was suggested to him.

Comment
Thoracic outlet syndrome is the constellation of findings that ensue due to compression of the neurovascular structures in the cervicoaxillary region. This scenario typically occurs as the patients use their arms overhead or when they carry heavy objects [3]. Patients generally describe pain, paresthesia, weakness, swelling, and color changes in the upper limbs. Although the compromised structures are generally mentioned to be the subclavian...
vessels and the brachial plexus, compression of the vertebral artery or the cervical sympathetic broadens the symptomatology and makes the syndrome more challenging. In the case of vertebrabasillary system involvement, dizziness, tinnitus, vertigo, and syncope are involved, and in the case of involvement of the cervical sympathetics, tachycardia, Raynaud phenomenon, and complex regional pain syndrome may be encountered [4, 5]. In our patient, the provocative maneuvers yielded paresthesia and paleness in the left upper limb and pain in the upper back. Because the Doppler imaging did not show any arterial compromise, we considered the pain and paresthesia to be due to intermittent compression of the brachial plexus and the paleness to stem from compression of the left upper limb sympathetics.

Regarding the underlying predisposing and causative factors, a cervical rib or long transverse process of C7, congenital bands, and anomalous muscles, or any musculoskeletal trauma to the cervicoaxillary region may play a role in TOS. Likewise, a traffic accident was reported to cause the relevant findings in the single report of Poland syndrome and TOS coexistence [2]. In our case, we have initially considered the fibrous band extending from the chest through the axilla to the biceps muscle belly to be the likely predisposing factor for TOS. Yet, a similar condition is known to cause TOS due to compression by an aberrant muscle called Langen’s muscle [6]. However, during the evaluation of reformatted three-dimensional computed tomographic images in hyperabduction, the band was followed to be quite superficial, which is unlikely to compress any of the previously noted structures. Moreover, a bony, soft-tissue structure narrowing the thoracic inlet was also ruled out by the same imaging method. Eventually we considered the episode of strenuous exercises to have caused the onset of TOS. However, a predisposing factor (eg, a cervical rib as described elsewhere) [7], could not be uncovered.

Overall, we imply that clinicians should be vigilant against the diagnosis of TOS in patients with congenital abnormalities of the cervicoaxillary region. On the other hand, despite every effort, sometimes it may be impossible to demonstrate an underlying predisposing factor in which history might unmask only a probable causative factor.

References

Primary Pulmonary Rhabdomyosarcoma in an Adult With Neurofibromatosis-I
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Rhabdomyosarcomas arising in various tissues associated with neurofibromatosis type 1 have been sporadically described in children and young adults. We report a unique case of primary pulmonary rhabdomyosarcoma in an adult with neurofibromatosis type 1. A right lower lobectomy was performed. The Intergroup Rhabdomyosarcoma Study IV postsurgical grouping classification was IA. The patient is scheduled for chemotherapy without adjuvant radiation therapy as per standard pediatric protocol.


Primary pulmonary rhabdomyosarcoma (RMS) has been sporadically reported in spite of the fact that the lung is devoid of striated muscle. The occurrence of RMS is believed to be associated with neurofibromatosis type 1 (NF1) [1, 2]; however, the diagnosis of pleomorphic RMS in adult NF1 patients is exceedingly rare [3]. The reported locations where juvenile and pleomorphic RMS arises in NF1 patients are the extremities, urinary bladder, orbital space, and other soft tissues. We suggest that the lung parenchyma should be added to the anatomic locations for RMS in NF1 patients based on the case described herein.

A 44-year-old man with known NF1 was referred to the thoracic surgery department with a lung mass, approximately 49 × 47 mm in size in the right lower lobe. Two months earlier in the orthopedic surgery department, he had undergone complete resection of a left periscapular mass that had been rapidly growing and causing back pain. The mass was shown to be a malignant peripheral nerve sheath tumor.

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