Thoracic outlet syndrome due to abnormal first rib-A case report

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Introduction

All the conditions of interest to poorly physician, none has been SO understood or diagnosed as thoracic syndrome. Thoracic outlet syndrome refer to compression of the subclavian vessels and nerves of the brachial plexus in ion of the thoracic inlet. It was described b Cooper in 1821 and since the various ritten o articles has be

mmonly develop Symtoms secon ary to neural co-, however, romis vascula scula symptoms are 's population most reported. The patien commonly by thoracic outlet syndrome is middle aged women. Cervical ribs are the most common cause of thoracic outlet syndrome. Congenital abnormal first and second ribs have been reported to cause syndrome, thoracic outlet with

d'sprope percentage th vascular symptoms [1]. We manifesting of abnormal first rib report a rare d producing neurological symptoms.

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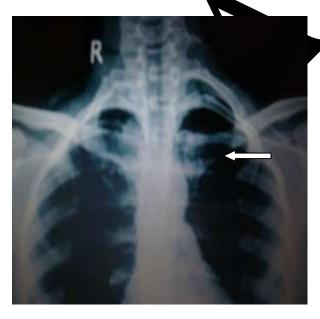
A 31 year old female presented with istory of pain in both upper limb since 3 years, with pain being more in the left upper limb compared to right side. Pain was increasing in severity since last 4 months. She also gave history of swelling in the lower part of the neck on the left side.

She did not have any other symptoms and her past history was non contributory.

Examination revealed tenderness of the base of the neck on the left side along with diffuse swelling. All the pulses of upper limb were palpable clinically. Adsons as well as Roos test were negative. Chest x-ray film [Figure 1] revealed an abnormal first rib. Doppler seen of left upper limb revealed a triphasic flow pattern in subclavian, axillary, brachial and ulnar artery with a monophasic flow in radial artery. A CT angiogram was done which showed fusion of left first rib with lateral aspect of second rib causing indentation on left subclavian artery .The artery shows post indentation dilatation by the downsloping first rib.

Patient underwent excision of the first rib along with scalenotomy through supraclavicular approach. Her symptoms improved within 48hours, after which he was discharged.

Figure 1: Chest x-ray showing abnormal first rib [Arrow]



Discussion

Thoracic outlet syndrome refers to abnormal compression of nerve, arterial and less frequently, venous structures at the base of the neck or thoracic outlet. The incidence of Thoracic out a sy ome has been reported to be a roxim tely 0.3-2% of general population [2].

otentia causes of thoracic outlet cervical $\mathbf{z}_{10}^{[2]}$, abnormal syndron ligamentous ssue and nypertrophy of the scalenus anterio. Scle, as well as postural effects that interfere with the normal ationship between the first rib and those structures overlying it.

Pain is the most common symptom of thoracic outlet syndrome. Neurologic rather than vascular symptoms predominate in 95% of thoracic outlet syndrome patients [3]. Paresthesia and muscle weakness may also occur.

The most common cause of thoracic outlet syndrome is the cervical rib which is present in 1% of the population but produces symptoms only in 5-10% of the patients. Congenital first rib abnormalities are rare causes of thoracic syndrome.

Patients with thoracic outlet syndrome from abnormal first rib have been described previously [4]. 11 of these patients have been vascular symptoms and 5 had neurological symptoms [3]. Most cases of thoracic outlet syndrome resulting from first rib aberration involve hypoplasia of the first rib with fusion at anterior margin of the second rib [1].

Conclusion:-Thoracic outlet syndrome due to abnormal first rib is a rare entity. Most of present with neurological the cases symptoms. Resection of the first rib is the treatment of choice for symptomatic first rib abnormalities.

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