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Chapter 1

Introduction

Introduction

Thoracic outlet syndrome (TOS), a term coined by Rob and Standover at 1958, refers to compression of the subclavian vessels and/or brachial plexus at the cervico-axillary area. ⁽¹⁾

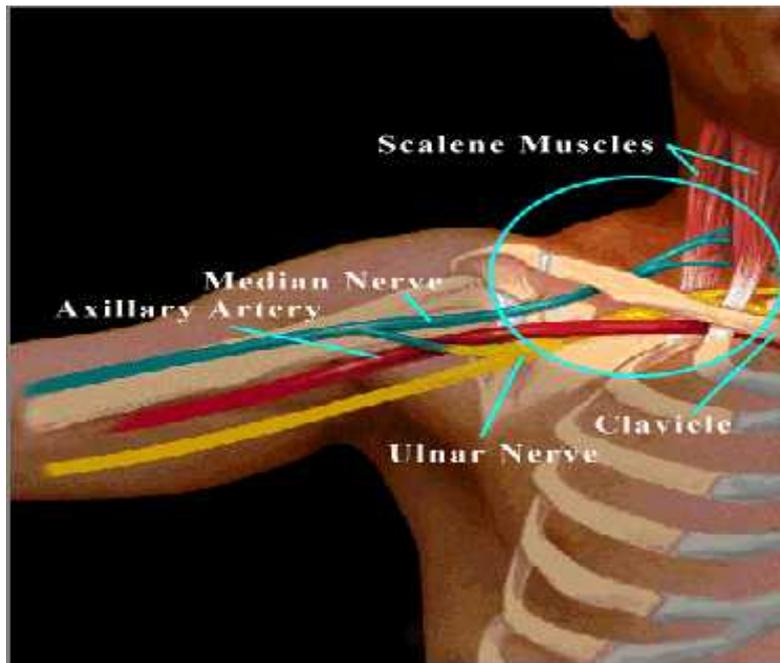


Figure.1 important structures passing through thoracic outlet region. ⁽²⁾

Thoracic outlet syndromes involve compression of one or more of the major anatomic structures passing through the thoracic outlet. These include the upper and lower brachial plexus and peripheral nerves, the sympathetic nervous system with branches along the axillary and subclavian arteries and vein. ⁽³⁾

It was previously designated according to presumed etiologies as scalenus anticus, costoclavicular, hyperabduction, cervical rib, and first thoracic rib syndromes. ⁽¹⁾

Thoracic outlet syndromes (TOS) can be classified as vascular-type TOS (arterial and venous), true neurologic TOS, and the more recently coined disputed neurologic TOS (disputed N-TOS). True neurologic TOS is a rare entity that presents clinically with wasting of the small muscles of the hand, with

established pathoanatomy that responds to surgical treatment aimed at preventing progressive neurologic deterioration. Vascular TOS has specific objective clinical findings consistent with arterial compromise, venous compression, or both. Disputed N-TOS, on the other hand, is a vague, subjective pain syndrome with no specific underlying pathoanatomy, and no objective clinical and electro-physiologic findings.⁽⁴⁾

The sex ratio varies depending on the type of TOS (eg, neurologic, venous, arterial). Overall, the entity is approximately 3 times more common in women than in men.

- Neurologic - Female-to-male ratio approximately 3.5:1
- Venous - More common in males than in females
- Arterial - No sexual predilection⁽⁵⁾

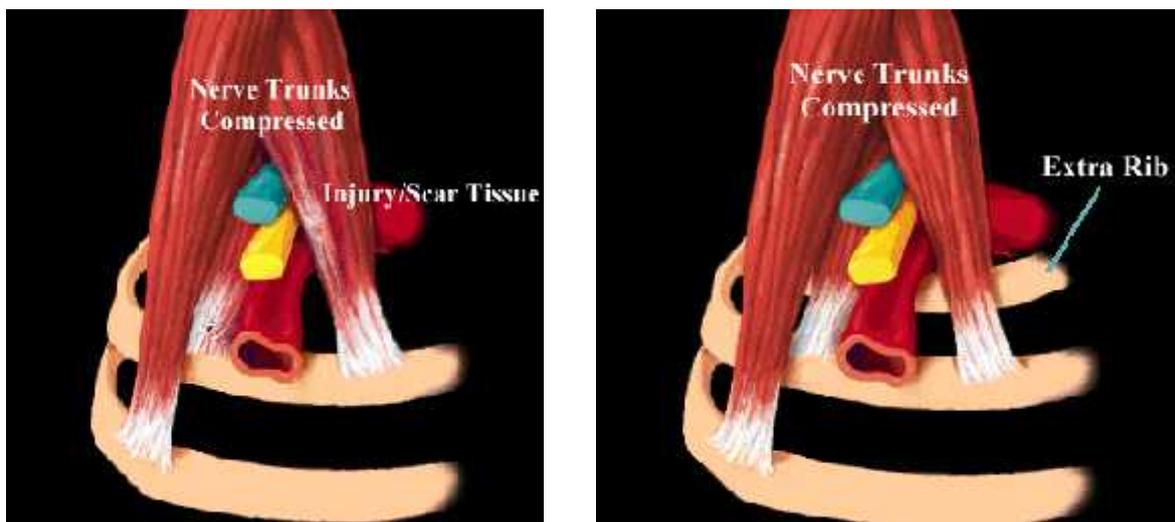


Fig. 2⁽⁶⁾ *The onset of symptoms usually occurs in persons aged 20-50 years.*⁽⁷⁾

Because no objective confirmatory test is available for TOS, there is much disagreement with regards to its true incidence, with reported figures ranging from 3-80 cases per 1000 people.⁽³⁾

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Aim of the work

The aim of this work is to give highlights on recent advances in surgical management of thoracic outlet syndrome.

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