



## 2 Cases of Arteriogenic Thoracic Outlet Syndrome Presenting as Cervical Radiculopathy

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### Introduction

Thoracic outlet syndrome (TOS) is an infrequent entity encountered by medical practitioners attributed to compression of the neurovascular structures passing through the thoracic outlet. It may often masquerade as other processes. Patients with misdiagnosed TOS are at risk of undergoing unnecessary cervical spinal procedures in an attempt to relieve their symptoms. TOS disorders are subdivided into (1) neurogenic TOS, due to compression of the brachial plexus, (2) vascular TOS, due to compression of the subclavian vessels, and (3) non-specific type TOS. Here we report the presentation of two young adults who were referred for workup of cervical radiculopathy, whom had planned to undergo cervical operations, and whom both a dynamic angiogram was later performed and confirmed the diagnosis of arteriogenic TOS.

### Methods

Both patients underwent diagnostic arterial phase angiography. Contrast was injected with both shoulder adduction and abduction. Changes in upper extremity blood flow could then be evaluated and interpreted in real-time.

### Results

Both patients displayed normal subclavian blood flow patterns during the arterial phase with shoulder adduction, but had obvious filling defects with 90 degree abduction.

### Conclusions

In both cases the patients were previously diagnosed with cervical radiculopathy and scheduled to undergo cervical decompression and fusion. After referral for a second opinion they were diagnosed with arteriogenic TOS. Both patients have since been referred for definitive treatment of their TOS and are doing well. It is important to keep TOS in the differential when evaluating arm pain to avoid unnecessary surgery. These cases are also helpful in illustrating how TOS can be easily and safely diagnosed with diagnostic angiography.

### Learning Objectives

Become more aware of arteriogenic thoracic outlet syndrome. Learn how to diagnose arteriogenic thoracic outlet syndrome with a diagnostic angiography.

### References

