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Brachial plexus block and cervical rib

To the Editor:

Cervical rib has an incidence of 1:250.¹ The neurovascular anatomy may be grossly distorted, causing pain and weakness. Thrombosis of the subclavian artery leading to embolism and ischaemia is a rare complication.² Many cervical ribs do not cause symptoms; the diagnosis being made from chest radiography.

A 50-yr-old asthmatic woman presented with a three-year history of right-sided neck pain with inconsistent radiation to her arm. Before its onset she had been asymptomatic. On examination there was no right-sided wasting of muscle or neurological deficit. The radial pulse was normal. However, the patient was unable to hold her arms above her shoulder or use her hands, for more than 60 sec continuously. The rest of the history and examination were unremarkable. Chest x-ray revealed a right-sided cervical rib and she was admitted for resection under general anaesthesia.

The surgical field was revealed with a transverse supraclavicular incision followed by reflection of the omohyoid muscle (Figure). The anterior division of the upper trunk of the brachial plexus was thrust anteriorly by the cervical rib articulating with the first rib, lateral to scalene tubercle. The posterior division of the upper trunk, and the middle and lower trunks were displaced laterally. The subclavian artery was displaced anteriorly and stenosed as it passed between the cervical rib and scalenus anterior, with post-stenotic dilatation. The cervical rib was surgically removed allowing the plexus to lie in its correct anatomical position.

Brachial plexus injury has been described following shoulder manipulation for frozen shoulder in patients with undiagnosed cervical ribs.³ Until three years ago this patient was asymptomatic with no indication of abnormal anatomy. An attempted supraclavicular block would have been unlikely to succeed and puncture of the abnormal subclavian artery might have led to a vascular accident as a result of an embolus secondary to thrombus formation in the stenotic artery.

FIGURE Cervical rib (A) exposed showing displaced anterior division of upper trunk of brachial plexus (B), remainder of plexus (C) and stenosed subclavian artery (D).

This patient reminds us of the possibility of cervical rib when considering a brachial plexus block above the first rib. Clinical features of cervical rib may be a contra-indication to this block.

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Succinylcholine and children (1)

To the Editor:

We were considerably troubled to receive the communication to physicians from Burroughs Wellcome Inc. dated October 29th 1993, concerning the use of Anectine® (succinylcholine). There are undoubtedly some reasonable recommendations in this letter, and most an-