

# NERVE SHEATH GANGLION OF THE SUPERFICIAL RADIAL NERVE

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**Nerve sheath ganglia are infrequent and most commonly involve the peroneal nerve. We describe the previously unreported involvement of the superficial branch of the radial nerve.**  
*Journal of Hand Surgery (British Volume, 1991) 16B: 94-95*

## Case report

A 28-year-old right-handed man presented with a six-week history of a painful swelling in the right anatomical snuff-box, with numbness in the distribution of the superficial radial nerve. There was no history of injury and radiographs of the wrist and hand were normal.

A diagnosis of radial nerve neuroma was made. A course of ultrasound therapy did not relieve his symptoms, so the superficial radial nerve was explored. An intra-neural cyst containing mucinous material was found and excised, preserving nerve fibres where possible.

The specimen consisted of two strands of white tissues measuring  $1.4 \times 0.2 \times 0.1$  cms. and  $1.3 \times 0.2 \times 0.1$  cms. The tissue was fixed in formalin and embedded in paraffin wax and sections were prepared and stained with haematoxylin and eosin. Examination of these sections revealed a cyst with a thin wall composed of fibrous tissue, without distinctive epithelial or synovial lining and closely related to nerve bundles within the nerve (Fig. 1).

The appearances were consistent with those of a nerve sheath ganglion, such as has been described in the peroneal nerve by Barrett and Cramer (1983).

## Discussion

This case illustrates an uncommon presentation of a

ganglion: pressure on an adjacent nerve producing neurological symptoms. Brooks (1952) reported 13 such cases. Four were ganglia at the wrist. Neurological symptoms involving the ulnar and median nerves resolved within 18 months of excision. The deep branch of the ulnar nerve is particularly liable to compression by a ganglion on at the wrist as it passes under a ligamentous band connecting the pisiform bone to the hamate superficial to the deep branch of the ulnar nerve (Hayes et al., 1969).

Stack et al. (1965) reported nine cases of compression of the common peroneal nerve by ganglia. None of their cases recurred even after incomplete excision, so sacrifice of nerve fibres to obtain complete excision is not necessary.

The superficial branch of the radial nerve is a purely cutaneous nerve supplying a variable amount of the radial half of the back of the hand. It becomes subcutaneous as it emerges from the posterior border of brachioradialis and splits into its terminal branches. In this patient, there was a painful swelling. Normally the nerve can be flicked against the radius on palpation without causing pain.

Our review of the literature failed to yield a previous account of a nerve sheath ganglion arising in the radial nerve.

In cases with neurological symptoms, prompt surgical

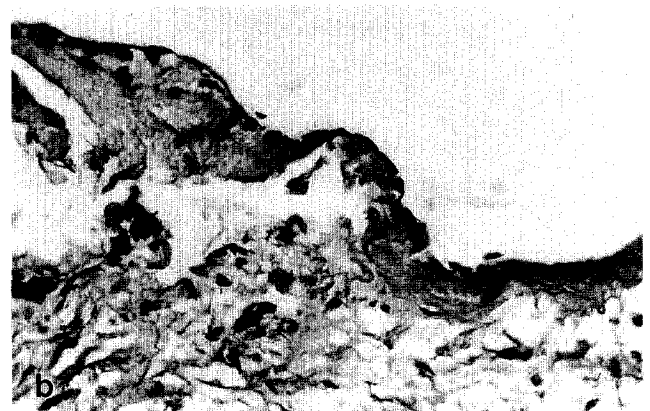
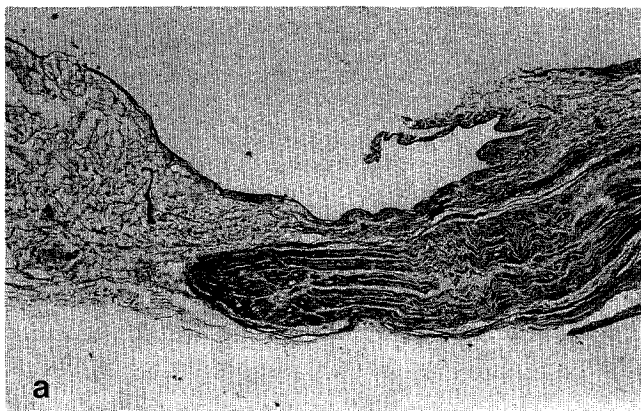


Fig. 1 (a) Nerve with adjacent ruptured ganglion cyst, situated above the nerve. (Haematoxylin and eosin). (b) High power view of the cyst wall, which consists of collagenous fibrous tissue without any epithelial or endothelial lining. (Haematoxylin and eosin).

exploration is indicated to prevent further nerve damage and to restore nerve function. Complete excision is desirable but not at the expense of sacrificing nervous tissue.

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Accepted: 13 February 1990

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