ATYPICAL NEURILEMMOMAS OF THE TONGUE — REPORT OF TWO CASES

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SYNOPSIS

The aetiology, clinical and histological features of neurilemmomas of the oral and paraoral regions are briefly outlined. Two cases of atypical neurilemmomas of the tongue are described with an intent to document the partial encapsulation and multilobular distribution of the neurogenic tissue noted in these two lesions.

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INTRODUCTION

Tumours of the peripheral nerves are uncommon lesions in the soft tissues of the oral and paraoral region. Without exception, the neurilemmoma (schwannoma) also represents an uncommon entity intraorally. Even more rare are the intraosseous variants. The literature on these soft tissue and central lesions have been reviewed (1,2).

It is generally agreed that the neurilemmoma is a benign tumour derived from Schwann cells. Although the aetiology is unknown, it is thought that the lesion arises by proliferation of Schwann cells at one point inside the perineurium. This then causes a displacement and compression of the surrounding nerve.

Clinically, the neurilemmoma may occur at any age, though most reports suggest that the majority of these lesions arise between the ages of 10 and 40 years (3,4). Studies have variously shown a male or female preponderance (3,4). There are few symptoms associated with these lesions, and they are usually related to the size and location of the tumours. Mucosal lesions commonly present as soft, smooth convex submucosal swellings which may sometimes be tender to palpation (5). According to Hatziotis and Asprides (3) the tongue is the most common site followed by the palate, floor of mouth, buccal mucosa, gingiva, lip and vestibule.

It is generally known that the neurilemmoma commonly presents as a well-circumscribed and well-encapsulated tumour. Microscopically, the tumour shows two distinct cellular patterns designated as Antoni type A and Antoni type B: Antoni type A tissue consists of spindle-shaped cells disposed in a parallel fashion with regimentation of their nuclei, and Antoni B tissue consists of a reticular meshwork of fibrils enclosing microcysts (5).

The primary purpose of this article is to present two large neurilemmomas of the tongue and to report on the partial encapsulation and multilobular distribution of the neurogenic tissue noted in these 2 lesions.

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CASE REPORTS

Case 1

A 17-year-old Chinese girl was seen with a complaint of a large swelling involving the right posterior half of the tongue (Fig. 1). According to the patient, the swelling had been present for the past 3 years, was painless and slowly growing in size. There were no other associated signs and symptoms. Her past medical and dental histories were otherwise noncontributory.

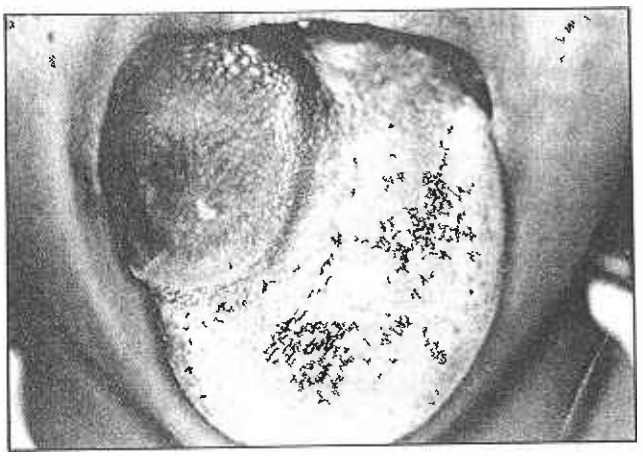

Fig. 1 Case 1 showing neurilemmoma of the tongue.

An incisional biopsy was performed under local anaesthesia and the tissue obtained was submitted for histological examination. Following the report of a neurilemmoma, the entire tumour was excised under general anaesthesia. The surgical specimen was an ovoid soft tissue mass measuring approximately 3.0 × 2.7 × 2.4 cm. (Figs. 2 and 3).

Case 2

A 13-year-old Chinese girl was seen because of a complaint of a growth in the tongue. The lesion had

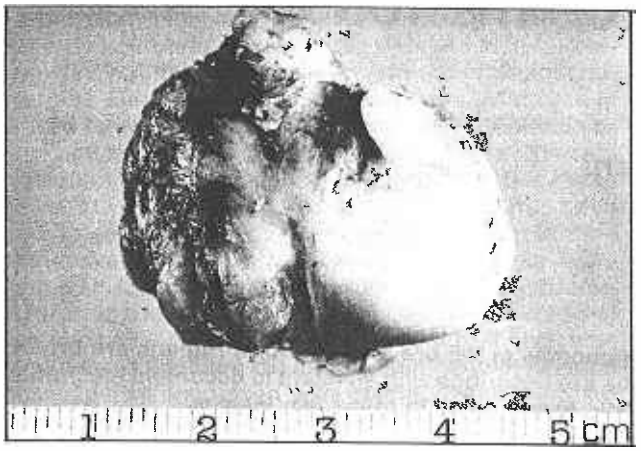

Fig. 2 Gross appearance of the excised surgical specimen in Case 1.

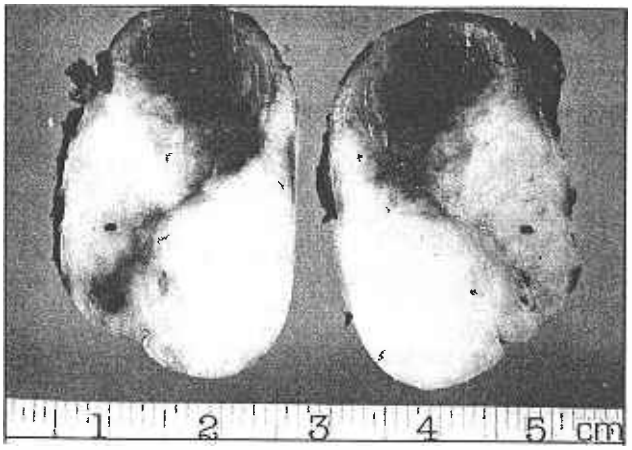

Fig. 3 The cut surface of the specimen in Case 1 is firm and whitish except for the haemorrhagic area in the superior pole.

been present for the past 2 months and was slowly-increasing in size. The clinical impression was papilloma. Under general anaesthesia the entire lesion was excised and submitted for histological examination. The surgical specimen consisted of an ovoid lobulated mass of soft tissue measuring approximately 4.4 × 2.9 × 2.6 cm. (Figs. 4 and 5).

Microscopic Findings

For both cases, routine sections were prepared from the excised surgical specimens and stained with haematoxylin and eosin, Masson trichrome and Van Gieson connective tissue stain.

Both lesions presented with a similar microscopic picture, consisting of Antoni type A and Antoni type B tissues in varying proportions (Figs. 6–9).

One striking feature observed in both of these lesions was the tendency of the Antoni type A tissue to be regularly disposed as tumorous lobules separated by a variable amount of intervening fibrous connective tissue (Figs. 6 and 7). Each lobule may exhibit several rows of closely packed elongated cells with nuclear regimentation and alternation with hyaline acellular, eosinophilic material (Fig. 8).

The Antoni type B tissue was, on the other hand, identified as those areas where the elongated cells were disposed in a reticular meshwork with microcyst formation (Fig. 9).

In both cases, the tumour mass showed partial encapculation.

On the basis of the above findings the two tumours were diagnosed as neurilemmomas with atypical features (2,7).

Follow-up

Follow-up for 1 year and 8 months postoperatively in Cases 1 and 2 respectively, did not show any evidence of recurrence.

DISCUSSION

As far as it is known the largest neurilemmoma to occur in the tongue was reported by Mazarella in 1956 (6). The lesion which measured approximately 8 × 4 × 3 cm, was located at the base of the tongue and had been present for the past 1½ years. In most other documented cases of neurilemmomas of the tongue, the reported size may range from that of a grain of rice to that of a hazelnut (3). The large size and prolonged duration observed in some of these lesions may be attributed to the delayed symptomatology associated with these tumours. The two cases reported here also represented the larger variant of this entity.

According to Barbosa and Hansen (7) the disposition of the tumour component in a multilobular configuration represents an unusual histological pattern in a neurilemmoma. Murphy and Guinta on the other hand reported a case of an atypical central neurilemmoma exhibiting a total lack of encapsulation (2). Both studies

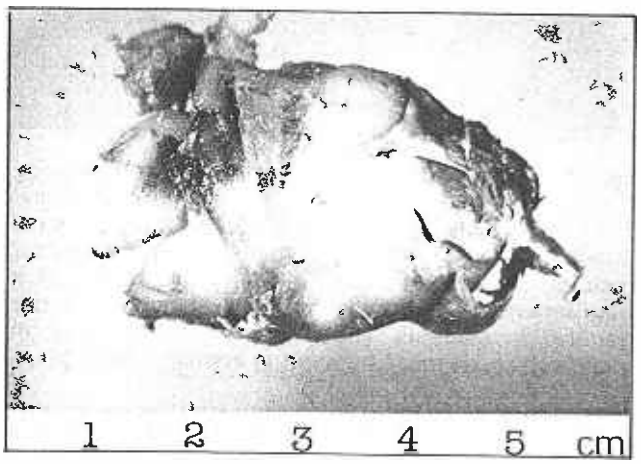

Fig. 4 Dorsal view of excised surgical specimen in Case 2 showing the bilobed configuration at one end.

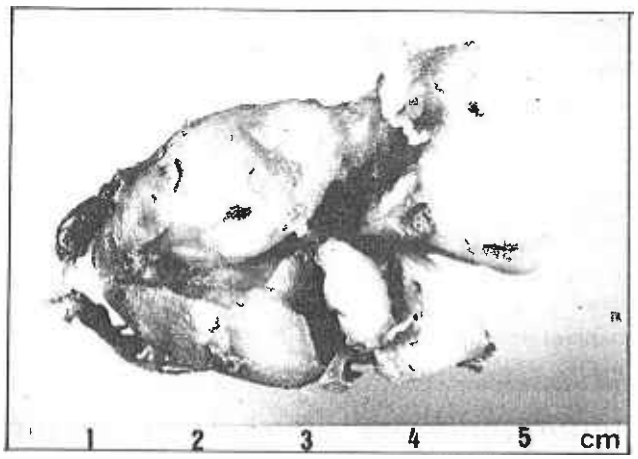

Fig. 5 Ventral view of excised surgical specimen in Case 2 showing the lobulated surface.

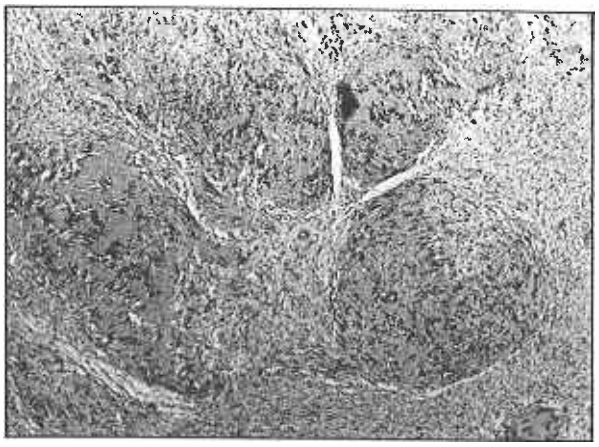

Fig. 6 Case 1 showing four converging lobules containing Antoni type A tissue and Verocay bodies. (Haematoxylin and eosin stain. Original magnification × 41).

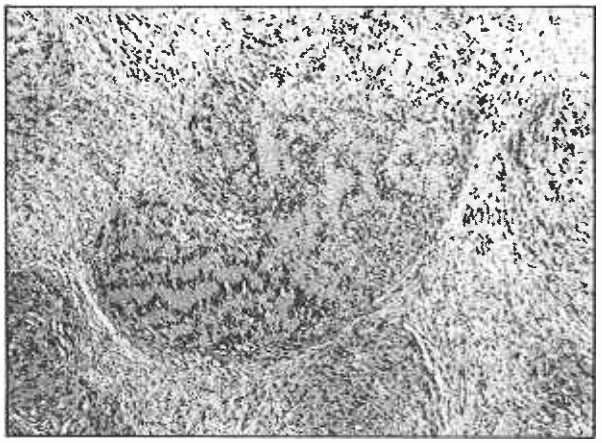

Fig. 7 Case 2 showing similar lobulated configuration of predominantly Antoni type A tissue. (Haematoxylin and eosin stain. Original magnification × 41)

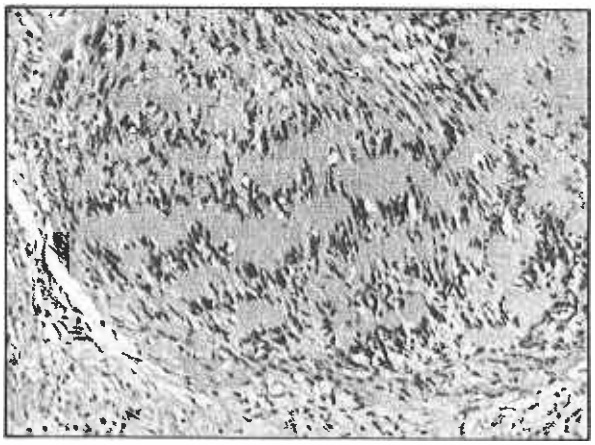

Fig. 8 High power view showing Antoni type A tissue and Verocay bodies (Haematoxylin and eosin stain. Original magnification × 83).

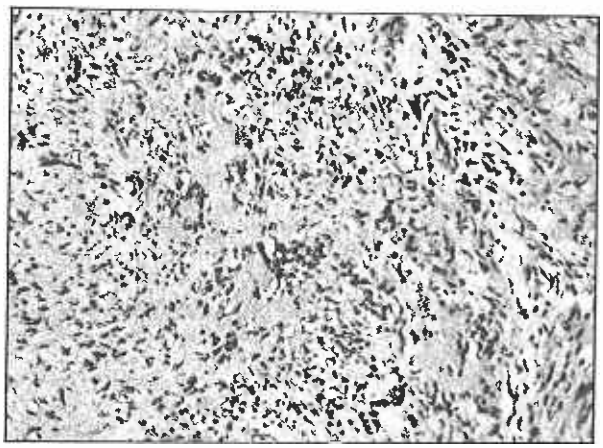

Fig. 9 High power view of Antoni type B tissue (Haematoxylin and eosin stain. Original magnification × 83).

however consistently found that these changes did not result in any variation in the clinical behaviour from that of a typical neurilemmoma (2,7). Likewise in the present report, despite the partial encapsulation and multifocal distribution of the tumour tissue in the two cases, it is expected that healing would continue to be uneventful.

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