Recurent benign schwannoma of the scalp: Case report

Maurice E. Asuquo a,∗, Victor I.C. Nwagbara a, Samuel O. Akpan a, Fidelis O. Otobo a, Judith Umeh a, Godwin Ebughe b, Cornelius C. Chukwuegbu b, Theophilus I.E. Ugbe b

a Department of Surgery, University of Calabar Teaching Hospital, Calabar, Nigeria
b Department of Pathology, University of Calabar Teaching Hospital, Calabar, Nigeria

1. Introduction

Schwannomas are benign neoplasms originating in Schwann cells.1,2 They are rare, usually solitary with clearly delimited capsues and present as fusiform swellings related to nerves.1,3 The most common site is the acoustic nerve. They also arise from peripheral nerves. Sensory branches are affected more frequently and the vagus nerve is the most common peripheral site.2 According to their cellularity, they can be subdivided into Antoni A or Antoni B types and the histology is a mixture of the 2 growth patterns.4,5 Malignant change is extremely rare.4,5 The recommended surgical treatment is tumor enucleation.1 We report a case of recurent unilocular multiple schwannoma of the right side of the scalp on the temporal region in 42 year old man.

2. Presentation of case report

A 42-year-old male trader presented with a 6-year history of a recurrent right sided scalp swelling. The swelling was first noticed eight years earlier was excised in a peripheral hospital for which no histology was sought. It recurred 3 months after excision and progressively increased in size. There was no history of hearing loss, tinnitus, dizziness, loss of balance, headaches, convulsion, facial numbness or weight loss. There was no history of pain, trauma or history of other swellings in any other part of the body. Examination revealed a hockey stick shaped scar over a multilobulated, irregular, non-tender mass that measured 20 cm × 9 cm located on the right side of the temporal region (Fig. 1). There was no cervical lymphadenopathy. Haemogram, urinalysis, and skull X-ray were unremarkable. Fine needle aspiration cytology showed paucicellular smear with micro biopsies of fibrocollagenous tissue without atypia. A pre-operative diagnosis of a recurrent right sided scalp fibroma was made. Intra-operative findings were multiple oval fibromatous scalp swellings. Some of the lesions were attached to the undersurface of the scalp along the previous scar. The largest measured 4 cm × 2 cm and the smallest approximately 1 cm × 0.5 cm (Fig. 2). The previous scar tissue was excised along with the attached masses while the other lesions were enucleated with primary closure of the scalp. Histology revealed alternating hypo and hyper cellular areas of myxoid stroma, a predominance of hyper cellular areas (Antoni A) with monomorphic Schwann cells, poorly defined eosinophilic cytoplasm and pointed basophilic nuclei and hypo cellular areas (Antoni B) composed of Schwann cells with nuclei suspended in myxoid, micro cystic matrix. There was no cellular atypia and the appearances were consistent with benign schwannomas.

3. Discussion

Benign tumors of the peripheral nerves have been well documented and one specific group originates from Schwann cells. It is currently divided into two subtypes: neurofibromas and Schwannomas.1 Schwannomas occur in the head and neck region in approximately 25% of the cases and are sometimes associated with Von Recklinghausen’s disease in 8–18%.1 Clinical evaluation of our patient did not indicate association with Von Recklinghausen’s disease. Schwannomas are equally distributed between genders, and
the greatest age incidence reported was between the 3rd and 5th decades in keeping with the age of our patient.6,7

In cases not associated with neurofibromatosis as depicted in our report, Schwannomas are seen clinically as solitary slow-developing lesions that show symptoms only when large areas have been affected. Presentation then may be pain along the distribution of the nerve, hyperesthesia and tenderness. Extradural schwannomas are most commonly found in association with large nerve trunks, where motor and sensory modalities are intermixed.4 The cranial pairs most affected by schwannomas are the ninth, seventh, eleventh, fifth and fourth in order of frequency8 (Langner et al.1). Our patient’s lesion may have arisen from the temporal branches of the auriculotemporal nerve a branch of the mandibular branch of the trigeminal nerve.

Diagnosis was histological. The typical gross appearance of a schwannoma is as shown in Fig. 2 (arrow A), and cut section (Fig. 2, arrow B). There were 26 oval to ovoid encapsulated, light yellow, smooth surface with some adherent to the scar tissue of the previous surgery. Microscopy was characterized by specific hypercellular areas known as Anthony A areas with nuclear palisading arrangements (Verocay bodies), and by less dense cellular areas called Antoni B (Fig. 3a), with a loose meshwork of cells with myxoid changes (Fig. 3b). Other reports attest to these diagnostic features.1,4,7

Local recurrence can follow incomplete resection as was indicated in our patient during the previous surgery.4 The classical surgical treatment is enucleation of the tumor with care always taken to preserve the function of the affected nerves.1 This is possible as the tumor is well encapsulated and displaces the nerve. Our patient had a combination of excision and enucleation in view of the adhesions occasioned by the previous surgery. recall the attachment of some Schwannomas to the previous scar. There was no nervous deficit in the pre and postoperative periods.

Conflict of interest statement

None.

Funding

None.
Ethical approval

Written consent obtained from patient.

Author contributions

Maurice E Asuquo, Consultant Surgeon, contributed to the study design and writing of manuscript; Victor Nwagbara, Consultant Surgeon, writing of manuscript; Samuel O. Akpan, Surgeon, writing of manuscript; Fidelis O. Otobo, Assistant surgeon, writing of manuscript; Judith Umeh, case report, writing of manuscript; Godwin Ebughe, Consultant Pathologist, Histopathogy, writing of manuscript; Coenelius C. Chukwuegbọ, histopathology, writing of manuscript; Theophilus I.E. Ugbem, histopathology, writing of manuscript.

References

1. Langer E, Del Negro A, Akashi HK, Araujo PP, Tincani AJ, Martins AS. Schwannomas in the head and neck: retrospective analysis of 21 patients and review of literature. Sao Paulo Medical Journal 2007;125(4):220–2.
2. Sriram Bhat M. Swellings. In: SRB’s manual of surgery. 3rd ed. New Delhi, India: Jaypee; 2009. p. 78–9.
3. Rangopal Shenoy K, Nileshwar A. Tumours, cysts, and neck swellings. In: Manipal manual of surgery. 3rd ed. New Delhi, India: CBS Publishers; 2010. p. 182–3.
4. Cotran K. Collins central nervous system. In: Robins pathologic basis of disease. 6th ed. Philadelphia: Saunders; 1999. p. 1352–3.
5. Kantas A, Mucke T, Houghton D, Michell DA. Schwannomas of the head and neck. Oncology Reviews 2009;3(2):107–11.
6. Feany MB, Anthony DC, Fletcher CD. Nerve sheath tumours with hybrid features of neurofibroma and schwannoma: a conceptual challenge. Histopathology 1998;32(5):405–10.
7. Zbaren P, Becker M. Schwannoma of the branchial plexus. Annals of Otology, Rhi- nology and Laryngology 1996;105(9):748–50.
8. MacCollin M, Woodfin W, Kronn D, Short MP, Schwannomatosis: a clinical and pathological study. Neurology 1996;46(4):1072–9.