



Linear Verrucous Nevus of the External Auditory Canal –Case Report

KEYWORDS

Verrucous/ Epidermal Nevus, External auditory canal

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ABSTRACT *Linear verrucous or epidermal nevi are hamartomatous proliferation of epithelial cells including keratinocytes, sebocytes, pilosebaceous units, eccrine glands or apocrine glands which can occur anywhere in the skin. The occurrence of such a lesion in the external auditory canal is a rare entity. We present a case of a 15 year old boy presenting with a common complaint of aural obstruction and was noted to have a warty lesion involving the external auditory canal. The lesion was then excised and sent for histopathological examination which was reported as Linear verrucous or epidermal nevus.*

INTRODUCTION:

Epidermal Nevi are hamartomatous proliferation of the epithelium which includes keratinocytes, sebocytes, pilosebaceous units, eccrine glands or apocrine glands.[1] They can occur anywhere in the skin, most commonly in the trunk and limbs but the occurrence of such a lesion in the external auditory canal is rare. These lesions are known to occur in 1 in 1000 live births and majority of these lesions occur between birth and adolescence with equal prevalence in males and females.[1]

Linear epidermal nevus or verrucous epidermal nevus is characterised by localised or diffuse, an extra comma, skin coloured, brown, brown-gray verrucous papules, which may coalesce to form well demarcated papillomatous plaques. Most commonly seen on the limbs in a linear pattern in the distribution of Blaschko's lines or in relaxed tension lines. [2,3,4] Extensive distribution of a linear epidermal nevus is known as systemized epidermal nevus. They may be either unilateral (nevus unilateralis) or bilateral (ichthyosis histrix). [3] Epidermal nevi are best classified according to the predominant cell type into keratinocytic (non organoid nevi) and organoid nevi such as sebaceous, follicular and sweat gland nevi. [4] These nevi can be found alone or in association with epidermal nevus syndrome which can display neurologic, ocular, skeletal and cardiovascular abnormalities. [5] These keratinocytic non organoid nevi are known as nevus verrucosus and verrucous epidermal nevus.

We report a case of linear epidermal or verrucous nevus in an unusual location in the external auditory canal in an adolescent boy.

CASE REPORT:

A 15 year old boy presented to the ENT department of a tertiary care hospital with the complaints of right ear block of 5 months duration. There was no associated itching or discharge from the ear. On examination, a hyperpigmented brown-black verrucous lesion measuring approximately 1.5 x 0.5 x 0.5 cm was seen arising from medial aspect of the root of tragus to the anterior canal wall and part of the floor of the cartilaginous part of the external auditory canal. The bony canal and the tympanic membrane beyond the lesion was normal. The patient was then advised excision biopsy under local anaesthesia.

Ear canal was first infiltrated with 1 % xylocaine + 1 in 100,000 adrenaline and the lesion was then excised entirely with adequate margins upto the level of the dermis. The excised area was then allowed to granulate and heal naturally.

Ear canal was packed with antibiotic soaked pack and followed up after a week. After one week the ear canal has healed well with no narrowing of the canal.

The surgical specimen subjected for histopathology measured 1.5 x 0.5 x 0.5 cm and showed epidermal cells with hyperkeratosis, acanthosis, papillomatosis, focal parakeratosis, follicular plugging overlying dermis with adnexal structures. The features were consistent with linear epidermal nevus. The boy was then evaluated for similar lesions elsewhere and other abnormalities associated with an epidermal nevus. No lesions were found elsewhere.

DISCUSSION:

Nevi are benign pigmented tumours resulting from proliferation of melanocytes from dermoepidermal junction. Linear epidermal nevus usually appears between birth and adolescence. Often, stabilizing in size at or around puberty. Although the exact mechanism underlying the development of nevus is unknown, there are theories of somatic mutations attributing to its origin. [1,3] Appearance of nevi in the external auditory canal is very rare. Only few cases have been reported in literature with most of them being intradermal nevi. In childhood 90% of the nevi are junctional and Friedmann, first reported the occurrence of nevi in the external auditory canal. [6]

Epidermal nevi may appear in conjunction with other epidermal lesions such as café au lait macules, congenital hypopigmented macules, congenital nevocellular nevi and may be associated with abnormalities. [1] So patients presenting with epidermal nevi must be evaluated for any coexistent abnormalities in the other systems. There are 10 histological variants of epidermal nevi and most of them show features of moderate hyperkeratosis, acanthosis, papillomatosis, in psoriasiform pattern, and dermal infiltration or even Munro's micro-abscesses. The rete ridges are elongated, and in certain cases focal thickening of the granular layer and columns of parakeratosis are seen. [1,3] All these features will create an appearance of a raised, verrucous lesion. Sometimes an increase in melanin in the basal layer may give the appearance of tan or brown colored lesion. [3].

Basal cell carcinoma, keratoacanthoma and squamous cell carcinoma have been reported to occur in linear epidermal nevus, more commonly seen in elderly people. Malignancy should be suspected if there is sudden increase in size, shape of lesion or ulceration of the lesion. [3]

Extensive distribution of linear epidermal nevus is known

as systemized epidermal nevus where in it may be associated with abnormalities in other systems such as skeletal,ocular,neurological defects.[5,7]Epidermal nevi have been known to be difficult to treat due its large size and conspicuous location.[5]Various treatment modalities have been explained in literature from topical steroids to intralesionalsteroids,topical and systemic retionoids, 5 flou-rouracil and podophyllin.Surgical interventions like dermaab rations,cryotherapy,electrofulguration,laser ,excision biopsy are suitable for smaller lesions[2,3,5,7].However these treatments have failed to achieve complete clearance or resulted in unacceptable scarring in extensive nevi.[2,3]

In our case as the lesion was well localised to the external auditory canal and since the patient was symptomatic with the complaint of aural obstruction , an excisional biopsy was done and wound left to heal by secondary intention with a pack left in situ in the canal to prevent stenosis.In extensive lesions as it normally presents, excision may not be the appropriate treatment option .Variable results have been mentioned in the past with laser. Of late due to the cosmetic aspect involved in such cutaneous lesions and developments in CO2 laser, have made modern pulsed and scanned laser an effective tool for such lesions with minimal scarring [5].In order to prevent recurrence of the lesion ,complete excision upto the level of dermis is required.[2,8]If malignant transformation is confirmed on histology, the lesion must then be completely excised.[3]

CONCLUSION

Linear Epidermal nevus,despite its rarity should be considered as one of the differential diagnosis of masses in the external auditory canal presenting with a common symptom of aural obstruction .These lesions must then be excised completely and subjected to histopathological examination for a proper diagnosis as well as to prevent recurrence or malignant transformation.Once verrucous epidermal nevus is identified,the patient must be thoroughly examined to rule out any associated systemic abnormality.



Figure 1: Brown-black warty lesion involving the floor and

anterior wall of external auditory canal



Figure 2: Tympanic membrane beyond the lesion being normal

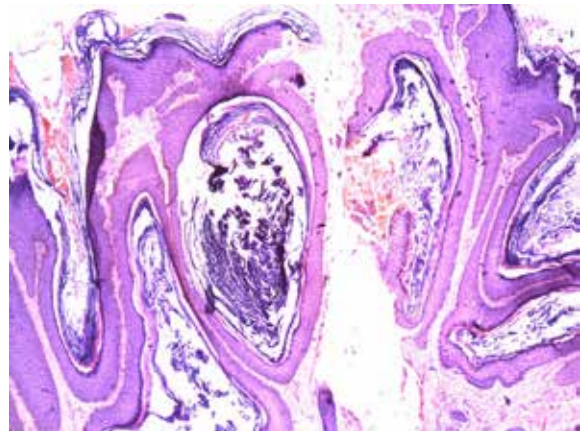


Figure 3:Histopathology showing proliferation of epithelial cells

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