

CASE REPORT

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A pigmented lesion of the auricle and its significance: a case report

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Abstract

Background A pigmented lesion that progressively increases in size anywhere in the body is a matter of concern, and when it presents in the ear, it has various differential diagnosis, one among them being a benign nevus. In this case report, we present a rare and interesting case of a pigmented lesion in the aural concha and review the literature of the same.

Case presentation A 40-year-old male presented with pigmented right aural conchal growth with easy bruising of 1-year duration. Initial evaluation reported as a possible hemangioma, and excision biopsy revealed a compound nevus.

Conclusion Despite its rarity, we should consider compound nevus as a differential diagnosis of pigmented external ear lesions. Histopathological examination is considered confirmatory; hence, excision biopsy is the treatment of choice.

Keywords Compound nevus, External auditory canal, Concha, Melanocytic nevi

Background

A pigmented lesion in the external ear is a matter of concern and has various differential diagnosis ranging from benign to malignant like foreign body granuloma, viral wart, seborrheic keratosis, senile keratosis, pigmented actinic keratosis, benign pigmented keratosis, common warts, pigmented fibrous histiocytoma, actinic lentigo, squamous papilloma, melanocytic nevus, pigmented basal cell carcinoma, and malignant melanoma [1]. Among these lesions, melanocytic nevi are considered very common benign skin lesions that can occur anywhere on the skin, and their presence is not considered a defect or an abnormality as this congenital melanocytic

nevus or moles can occur in about 1% of newborns at birth, and on average, adults exhibit approximately 10 to 40 cutaneous melanocytic nevi, with most lesions distributed above the waist [2, 3]. However, melanocytic nevi presenting as an aural conchal growth is very rare, and there is a paucity of such cases reported worldwide until date. There are five clinical types of melanocytic nevi, namely flat, slightly elevated lesions, halo, verrucous, and dome-like lesions, and three histological variants of melanocytic nevi which are known to occur, namely intradermal, junctional, and compound nevi, and among them, the intradermal variant occurring in the external ear is more commonly reported in the literature compared to the compound variant [4]. Because the nevus cells progress from the epidermis into the dermis, the intradermal variety is more common among adults, and the junctional variety is more common among children, and the majority of papillomatous and dome-shaped nevi are intradermal nevi [5]. Although melanocytic nevi are benign lesion and their presence may not be considered abnormal, it is considered significant because their

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occurrence in the external ear is considered very rare, and the chances of these lesions turning into a more aggressive malignant melanoma can be seen in about 2.6 to 4.9% [6]. Therefore, we emphasize that whenever a pigmented aural conchal lesion is encountered, an early excision biopsy is advised for the same. We present a case of compound nevus presenting as an aural conchal growth, and we discuss the histopathology and management of the same.

Case presentation

A 40-year-old male presented to the ENT outpatient department with a 1-year history of right aural conchal growth that was brown-black in color with easy bruising and not associated with complaints of ear pain, ear discharge, and hearing impairment. There was no history of similar lesions in other parts of the body and no history of trauma to the ear, and the patient had no history of chronic illness, drug intake, or addictions. He was concerned more about the bleeding and cosmesis, and our concern was to rule out malignancy. On examination, there was a well-demarcated 1 × 1 cm globular, non-tender skin-covered brown-black lesion with a tuft of hair was present in the right cavum concha (Fig. 1), and his right external auditory canal and right tympanic membrane were normal. There were no similar lesions found in other parts of the body.

Fine needle aspiration cytology (FNAC) of the lesion was reported as a possible hemangioma as the smears showed only blood and blood components. The patient underwent an excision biopsy of the right aural conchal lesion under local anesthesia. Intraoperatively, the lesion described above measured approximately 1 × 1 cm and was not attached to the cartilaginous part of the pinna. An elliptical incision was made around the lesion, and complete excision was done with cauterization of the base; the incision was closed with 3–0 Ethilon using simple interrupted sutures, and the excised tissue was sent for histopathological examination (HPE).

The histopathological examination revealed the aural conchal lesion to be benign nevus cells arranged in nests with few nests extending to the epidermis and predominantly located in the intradermal area. Nevus cells located in the papillary dermis showed pigmented epithelioid cells with well-defined cell boundaries and abundant amphophilic cytoplasm containing coarse melanin granules (type A cells) (Fig. 2A). Nuclei are uniform round to oval with finely dispersed chromatin, small distinct eosinophilic nucleoli. The nevus cells in the intradermal area revealed an epithelioid to lymphoid appearance with scant cytoplasm without any melanin pigmentation



Fig. 1 A well-demarcated lesion of 1 × 1 cm in the right cavum concha

(type B cells). The deep dermis revealed spindle-shaped nevus cells with oval nuclei surrounded by collagen (type C cells). Hence, the diagnosis of compound nevus was offered. Interestingly, the lesion also showed multiple enlarged and dilated follicular structures with infundibular-type keratinization, suggesting a dilated pore of Winer surrounded by the nevus cells (Fig. 2B).

On follow-up after 8 months, the right aural conchal wound healed well with no evidence of residual or recurrence (Fig. 3).

Discussion

Friedmann et al. first reported the occurrence of melanocytic nevi in the external auditory canal in the year 1976 [7]. Kim et al. in 2013 first reported the occurrence of compound nevus in the ear with no complaints except for the pigmented lesion which they removed by CO₂ laser abrasion [8]. Mounika Reddy et al. in 2021

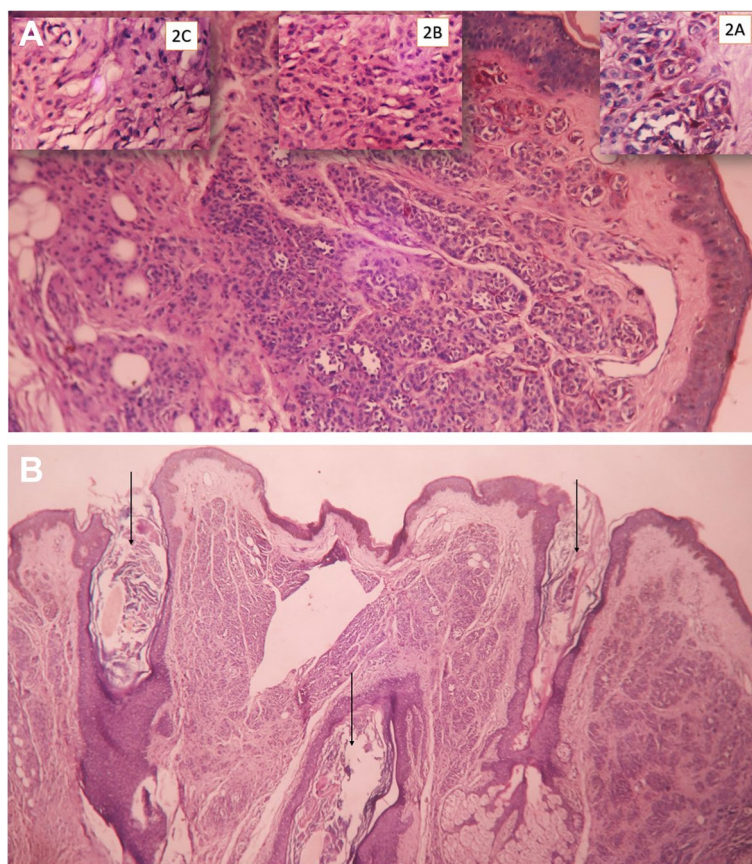


Fig. 2 A Compound nevus with type A, type B, and type C nevus cells. B Multiple dilated pores of Winer surrounded by nevus cells

encountered a similar pigmented papillomatous lesion in the anterosuperior part of EAC where the patient presented with ear pain, itching, and ear discharge for 2 months, and a pyogenic granuloma was suspected, but excision biopsy of the lesion revealed a compound nevus [8]. Min Kwan Baek et al. in the year 2017 had a patient who presented with unilateral hearing loss, and examination revealed a skin-colored papillomatous lesion occluding the external auditory canal for which an excision biopsy was done which was reported as compound nevus [9]. The above authors followed up with their patients for 1 to 6 months, and there was no recurrence. Our patient presented with a pigmented lesion with intermittent oozing in the right concha, and the excision biopsy revealed a variant of compound melanocytic nevi.

Melanocytic nevi are a benign pigmented proliferation of melanocytes from the dermo-epidermal junction that can occur in the skin of other parts of the body but is very rare in the skin of the external ear. Histologically, melanocytic nevi are classified into 3 subtypes as follows:

1. Intradermal nevi (nevus cells are restricted to the dermis and are separated from the basal layer).
2. Junctional nevi (nevus cells are located in the dermo-epidermal junction and extend into the dermis).
3. Compound nevi (shows both junctional and intradermal features) [10]

FNAC has a very limited role in the diagnosis of superficially located melanocytic lesions, and biopsy is confirmatory for diagnosing melanocytic lesions [11]. In our case, FNAC done preoperatively was reported as hemangioma. Melanocytic nevi can become malignant in 2.6 to 4.9% (small and medium nevi) and 6 to 20% (giant nevi), thus warranting a follow-up [5]. We followed up with our patient for 8 months, and there was no recurrence.

Conclusion

A pigmented skin lesion of the concha with easy bruisability is worrisome to both the patient and the treating physician because 2.6 to 4.9% of cases can become malignant. Hence, we recommend that the possibility of



Fig. 3 Excised site post 2 months

compound nevus, as a differential diagnosis, should be considered whenever a pigmented lesion in the external ear is encountered. We also emphasize that the confirmatory diagnosis can be made only after histopathological examination; the definitive treatment is excision biopsy and to have a regular follow-up.

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Authors' contributions

AR — concepts, design, definitions, literature search, manuscript preparation, editing, review, and guarantor. SA — concepts, design, definitions, manuscript preparation, editing, and review. PK — concepts, design, definitions, literature search, and manuscript preparation. SPS — concepts, design, definitions, manuscript preparation, editing, and review. SK — concepts, design, definitions, manuscript preparation, editing, and review. KR — concepts, design, definitions, manuscript preparation, editing, and review. The authors read and approved the final manuscript.

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Consent for publication

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Competing interests

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