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CASE REPORT

Intradermal nevus of the external auditory canal: a case report

Dış kulak yolunun intradermal nevusu: Olgu sunumu

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The external auditory canal is an uncommon location for the nevi that are common benign tumors of the skin. A papillomatous lesion was detected on the external auditory canal of the patient who was on following-up for acute otitis externa. The lesion which resembles the nevus was excised and was diagnosed as an intradermal nevus in the pathological examination. The clinical and pathological picture of the intradermal nevus of the external auditory canal was discussed.

Key Words: Ear canal/pathology; ear neoplasms/pathology; nevus, pigmented/pathology.

Cildin sık karşılaşılan iyi huylu tümörlerinden olan nevuslar dış kulak yolunda nadiren görülürler. Akut eksternal otit nedeni ile takip edilen bir hastanın dış kulak yolunda papillamatöz lezyon saptandı. Cerrahi olarak çıkarılan lezyonun patolojik incelemesi sonucunda intradermel nevus olduğu görüldü. Dış kulak yolu intradermel nevusunun klinik ve patolojisi tartışıldı.

Anahtar Sözcükler: Dış kulak yolu/patoloji; kulak neoplazileri/patoloji; nevus, pigmente/patoloji.

Melanocytic nevi are benign neoplastic proliferations of nevus cells, and are classified as congenital and acquired.[1] Congenital nevi are less frequent than the acquired type. Acquired nevi appear in childhood, adolescence, or early adulthood, and follow a specific life cycle.[2] Very few of these lesions develop in late adulthood. Melanocytic nevi are categorized in three subgroups according to histological location, namely, junctional, compound, and intradermal.[2] These categories are also used to stage lesions, as nevi pass through successive junctional, compound, and intradermal phases.[1-3] Junctional nevus cells are situated at the epidermo-dermal junction and extend into the dermis, but they always remain in contact with the epidermis.[2] Characteristically, intradermal nevus cells are restricted to within the dermis and do not contact the epidermis at all.[2] The compound nevus represents the transitional stage between the junctional and intradermal nevus, and exhibits features of both these forms.[2] In accord with this life cycle, most nevi in children are junctional, and those in older adults are intradermal.

Melanocytic nevi are composed of nevus cells. Originally, these cells are melanocytes arranged in nests or clusters.[1] However, nevus cells differ from ordinary melanocytes in pigmentation and in cell

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shape.[1] They are rounded and do not show the typical dendritic processes exhibited by melanocytes. In addition, nevus cells retain the pigment in their cytoplasm instead of transporting it to neighboring keratinocytes, as ordinary melanocytes do.

There are five distinct clinical types of nevi, as follows: flat lesions, slightly elevated lesions, papillomatous lesions, dome-shaped lesions, and pedunculated lesions.[1] In most cases, the histology of the nevus can be predicted on the basis of clinical appearance.[1,2] Clinically, junctional nevi appear as small, flat, pigmented macules. Compound nevi are pigmented or non-pigmented macular, papular, or papillomatous lesions. The majority of papillomatous lesions, and nearly all dome-shaped and pedunculated lesions with or without pigmentation, are intradermal nevi.

Malignant melanoma is closely associated with the nevus.[4] Congenital nevi are more likely to undergo malignant transformation than acquired-type nevi.[2] However, the process by which the benign nevus transforms to malignancy is not yet clear. It is possible that the pre-existing clinically diagnosed "nevus" in these cases is actually the earliest manifestation of malignant melanoma. Size, shape, and color changes in a pre-existing nevus, as well as development of spontaneous hemorrhage, ulceration, and border irregularity are all possible signs of malignant melanoma.[2]

CASE REPORT

A 56-year-old woman presented with the complaint of earache of 2 days' duration and long-standing pruritus in the right ear. Examination revealed a swollen and tender right external auditory canal containing epithelial debris. The rest of the complete ENT examination showed nothing abnormal. The patient was diagnosed with acute otitis externa. The debris was aspirated, and cotton gauze was introduced into the canal. A systemic antibiotic (ciprofloxacin 750 mg per os), topical antibiotic (gentamycin sulphate 0.3%), and steroid eardrops (dexamethasone 5 mg) were prescribed.

After the otitis externa resolved, re-examination of the ear revealed a pedunculated, papillomatous hair-bearing lesion in the postero-superior cartilaginous portion of the external auditory canal (Fig. 1). The lesion appeared to be a nevus. There was no palpable adenopathy and/or mass in the neck region. Excision was planned in order to pathologically confirm this diagnosis. Local anesthesia and vasoconstriction were achieved with lidocaine HCl 20 mg/ml and epinephrine 0.125 mg/ml, respectively. A circumferential incision was made around the lesion, and excision was performed to the level of the underlying perichondrium. The wound was left to heal spontaneously. The wound site healed well and there was no stenosis of the ear canal.

Examination of the surgical specimen showed hyperkeratosis and papillomatosis in the epidermis, and nests of nevoid cells in the upper dermis (Fig. 2 and 3). The nevus cells contained a moderate amount of melanin pigment in the cytoplasm. The entire margin of the specimen appeared to be tumor-free. The histopathological diagnosis was intradermal nevus.

DISCUSSION

Although nevi are commonly found in other parts of the body, the external auditory canal is the uncommon location for such lesions.[5-8] Most nevi at all locations are usually asymptomatic and require no treatment; however, these lesions may be excised for cosmetic reasons or if melanoma is suspected.[2] Nevi in the external auditory canal may be asymtomatic or can present with aural obstruction, sound conduction-type hearing loss, or as our case that causing recurrence of acute otitis externa and pruritus.[8] The excisional biopsy should be made for the symptomatic nevus or suspicious of melanoma.

Fig. 1 - *The endoscopic view of a papillomatous hair-bearing lesion was seen on the postero-superior wall of the right external auditoy canal.*

Intradermal nevi are usually papillamatous or pedunculated dome shaped and pink colored lesions.[1,7] Clinically, nevi of external auditory canal should be differentiated from squamous papillomas, inflammatory polyps, foreign body granulomas, solitary neurofibromas, seborrheic keratoses, osteoma, malignant melanoma, adenoid cystic carcinoma of the ceruminous glands or squamous carcinoma.[1,6,7] Osteoma and exostosis of external auditory canal occur on the bony portion of external auditory canal. The thin and pale skin covers both of them. Although osteoma appears pedunculated, exostosis usually has broad base. The inflammatory polyp, foreign body granulomas, adenoid cystic carcinoma of the ceruminous glands and squamous carcinoma are painful lesions. The inflammatory polyps are commonly associated chronic otorrhea and hearing loss. The carcinomas of external auditory canal are usually ulcerated with surrounding induration or granulation tissue and can be associated with chronic otitis media or external otitis media. If the pain persists after medical treatment of otitis media, malignancy must be suspected. Malignant melanoma should be suspected in cases of dark colored, ulcerated and irregular bordered nevus.[2] Ultimately the definitive diagnosis should be made microscopically. Histologically, cells of the non-tumorigenic malignant melanomas are located in

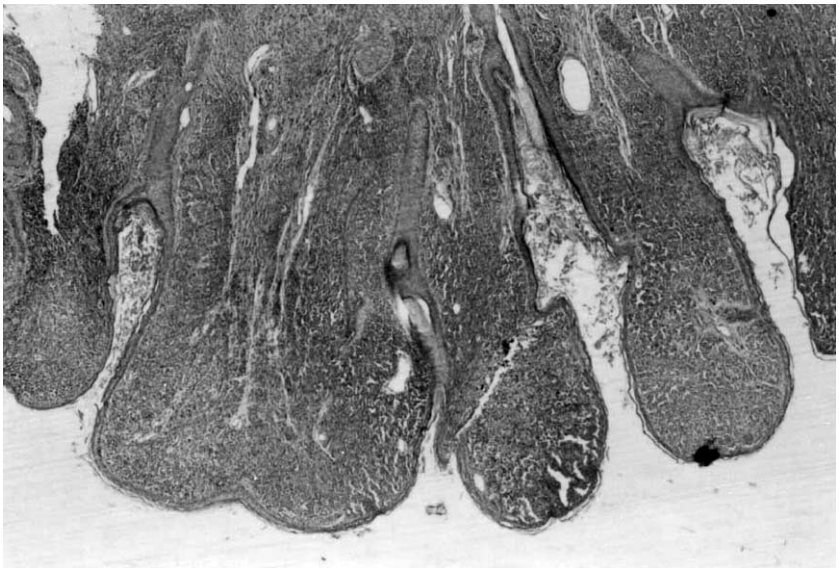

Fig. 2 - *Nevoid cells in the dermis (original magnification x 40).*

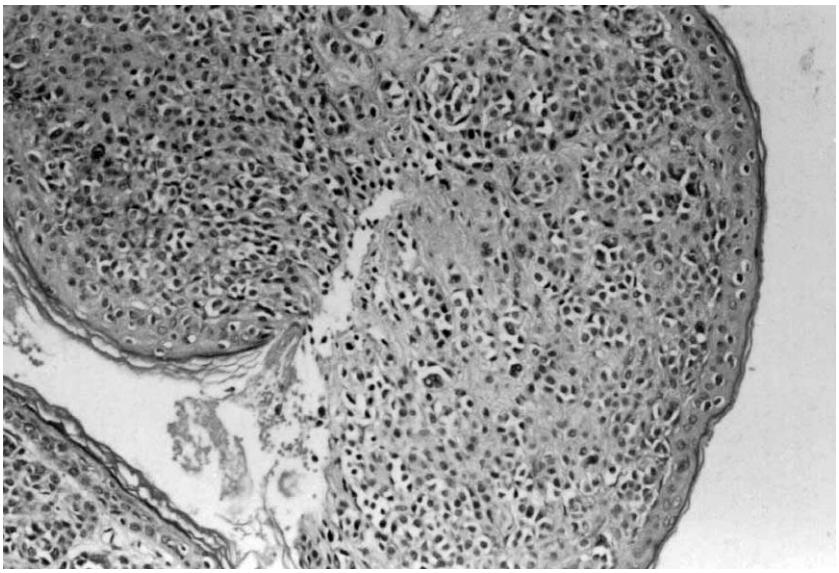

Fig. 3 - *The papillomatous lesion contained nest and cords of nevoid cells (original magnification x 200).*

the epidermis, however, the cells of malignant melanomas are uniformly atypical. Tumorigenic malignant melanomas are composed of uniformly atypical mitotically active malignant melanocytes. Intradermal nevus cells are restricted to within the dermis and do not contact the epidermis.[2] Hyperkeratosis and papillomatosis in the epidermis, and nests of nevoid cells in the upper dermis are detected in pathological examination. No cytological atypia was observed in cells of intradermal nevus.

The methods for surgical removal of intradermal nevi are well known.[9] Hairless intradermal nevi may be removed using the shaving technique. This method is usually satisfactory, though there is a small risk of recurrence from residual nevus cells located at the periphery of the lesion or along the outer root sheath of the hair follicles. The cosmetic result is generally satisfactory, but a small hypopigmented area may remain at the excision site. The second method for removing these lesions is complete excision. This technique yields a better cosmetic result, and is an option for all cases; however, it is mandatory for removal of hair-containing intradermal nevi. Complete excision also offers the advantage of providing a complete specimen for histological examination, and there is much lower probability that the lesion will recur. We did not used shaving technique and used complete excision because of the lesion was hair-containing nevus. When surgically excising a nevus from the external ear canal, great care must be taken to avoid traumatizing the remaining skin and cartilage. Traumatizing the cartilage and postoperative infections may cause the healing problems. Both the excision procedure and postoperative care are important for preventing canal stenosis. Our patient's excision site healed well, and there was no stenosis.

This report of melanocytic nevus of the external auditory canal is of particular interest because the patient presented with long-standing pruritus that had led to otitis externa. Such nevi must be removed to relieve acute otitis externa, treat sound conduction-type hearing loss and/or pruritus, and eliminate the possibility of melanoma.

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