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(CASE REPORT)

A verrucous auricular plaque: A diagnostic challenge

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Abstract

Nevus sebaceus of Jadassohn is a congenital hamartoma typically located on the scalp and face. Auricular involvement is uncommon and may lead to diagnostic confusion. We report a 31-year-old woman presenting with a three-year history of a slowly enlarging verrucous pigmented tumor in the retroauricular region. Clinical and dermoscopic findings suggested a complex verrucous lesion. Differential diagnoses included seborrheic keratosis, verruca, and verrucous squamous cell carcinoma. Dermoscopy can assist in distinguishing these lesions from other benign or malignant skin conditions, while histopathology remains crucial for a definitive diagnosis for nevus sebaceus of Jadassohn. This case highlights an unusual auricular presentation of nevus sebaceus, emphasizing the importance of histopathological confirmation in atypical locations.

Keywords: Nevus sebaceous; Auricle; Verrucous plaque; Dermoscopy; Differential diagnosis

1. Introduction

Nevus sebaceus of Jadassohn is a congenital hamartomatous lesion composed of epidermal, sebaceous, follicular, and apocrine components. It classically presents at birth or early childhood and most commonly involves the scalp and face.

Although generally benign, its clinical evolution may change over time, particularly during puberty when verrucous transformation becomes more evident. Rare anatomical locations, such as the auricular region, are poorly documented in the literature and may mimic other benign or malignant cutaneous tumors, leading to diagnostic uncertainty.

2. Case presentation

A 31-year-old female with no relevant medical history presented with a slowly progressive verrucous tumor located in the retroauricular region, evolving over three years.

Clinical examination revealed a 3 cm pigmented, verrucous, sessile plaque with an infiltrated base, partially covered by hemorrhagic and honey-colored crusts (Figure 1). No cervical or retroauricular lymphadenopathy was detected.

Dermoscopy showed comedo-like openings, structureless whitish areas, hemorrhagic crusts and glomerular vessels suggestive of a complex epithelial lesion (Figure 2).

The main differential diagnoses included: inflamed seborrheic keratosis, verruca vulgaris, verrucous squamous cell carcinoma and pigmented nevus sebaceus of Jadassohn with possible degeneration.

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An excisional biopsy was performed. The histological study of the auricular lesion showed epidermal hyperplasia with acanthosis and papillomatosis. The dermis contained an increased number of mature sebaceous glands, often abnormally distributed within the superficial dermis of the auricular skin, associated with poorly developed or reduced hair follicles. The adnexal structures appeared disorganized, with occasional prominence of apocrine elements. The underlying stroma was fibrous, without cytological atypia or malignant features.

Figure 1 A pigmented, verrucous, sessile plaque with an infiltrated base, partially covered by hemorrhagic and honey-colored crusts

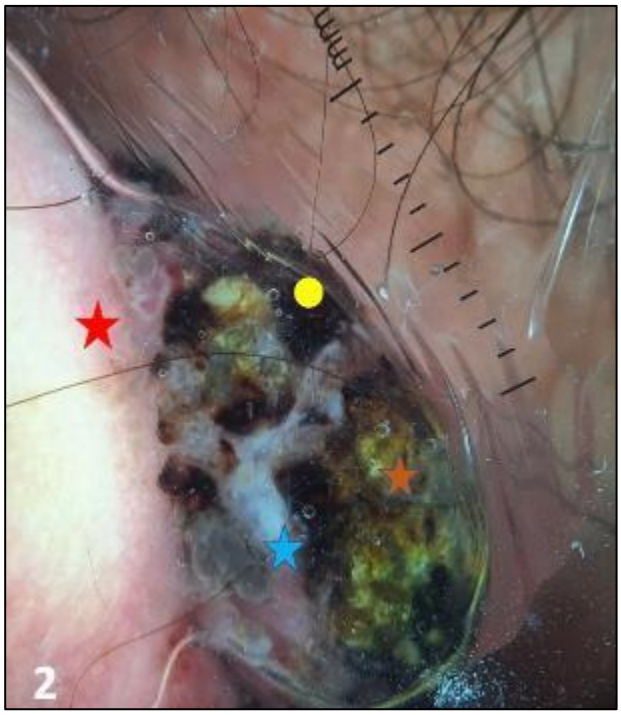

Figure 2 Whitish areas (blue star), glomerular vessels (red star), comedones (yellow circle), honey-colored crusts (orange star)

3. Discussion

Nevus sebaceus is a congenital hamartoma composed of epidermal, sebaceous, follicular, and apocrine structures, usually appearing at birth or in early childhood, with an estimated prevalence of around 0.3% in newborns [1]. Clinically, it classically presents as a well-circumscribed yellowish plaque, often alopecic when located on the scalp, with a smooth or verrucous surface, most commonly affecting the scalp and face, while atypical sites such as the neck, preauricular region, and auricle are rarely reported [2-3].In our case, the retroauricular location represents an uncommon presentation that may lead to diagnostic uncertainty and broaden the differential diagnosis, particularly in adult patients where it can mimic a variety of verrucous or pigmented lesions. Dermoscopy is increasingly recognized as a useful non-invasive tool, typically showing yellowish-brown globular structures, comedo-like openings, and a papillomatous or structureless background; however, as illustrated in our case, these findings are not entirely specific and may overlap with other epithelial tumors, reinforcing its role as a complementary rather than definitive diagnostic tool. The main differential diagnoses include seborrheic keratosis, verruca vulgaris, and verrucous squamous cell carcinoma, making histopathological confirmation essential; indeed, histology typically reveals epidermal hyperplasia, papillomatosis, hyperkeratosis, and an increased number of mature sebaceous glands associated with rudimentary follicles and ectopic apocrine glands [4]. Beyond diagnostic challenges, nevus sebaceous is of particular clinical importance due to its potential for secondary neoplastic transformation, most commonly benign tumors such as trichoblastoma or syringocystadenoma papilliferum, and less frequently malignant tumors such as basal cell carcinoma, reported in up to 10–20% of cases in some series [5-6]. For this reason, complete surgical excision is generally recommended, ideally before puberty, to prevent both malignant transformation and aesthetic complications [1-7]. From a broader perspective, this case highlights that nevus sebaceous should not be considered a static lesion but rather a dynamic entity with variable clinical expression depending on age, location, and biological evolution, and that atypical auricular presentations represent a true diagnostic challenge requiring a multidisciplinary approach combining clinical examination, dermoscopy, and histopathology to ensure accurate diagnosis and appropriate management.

4. Conclusion

Auricular location of nevus sebaceous is rare and may clinically mimic a wide range of verrucous or pigmented lesions. This case underscores the importance of considering nevus sebaceus of Jadassohn in the differential diagnosis of auricular tumors. Histopathological examination remains essential for definitive diagnosis, and early recognition is crucial to guide appropriate management and prevent unnecessary interventions.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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