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Case Report

A Case of Chronic Suppurative Otitis Media Associated with Keratoacanthoma - A Rare Presentation

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Abstract

Keratoacanthoma is usually a rapidly growing benign tumor of the hair follicles, that is, they originate from pilo-sebaceous glands. Its usual presentation is a firm, cone shaped nodule with a central crator and usually affects the middle aged population and the elederly. It may be best viewed as an aborted malignancy that only rarely progresses into invasive SCC. The risk for SCC development is attributes to genotypic, phenotypic, as well as environmental factors. UV Rays is classified by the IARC (International Agency for Research on Cancer) as a class I carcinogen, sufficient for initiation, promotion, and progression AK into squamous carcinogenesis of the skin,14 and is generally the most important environmental risk factor for SCC. Management includes Surgical excision, preferably microscopically controlled surgery (Mohs surgery).Topical therapeutic treatments such as topical imiquimod, topical or intra-lesional 5-fluoruracil, Cryotherapy, and photodynamic therapy for SCC have been reported.

Keywords: Keratoacanthoma; Mohs Surgery; Basal Keratinocytes; SCC. Ss

Introduction

Keratoacanthoma (KA) is a common benign cutaneous tumor that often occurs on sun exposed sites in light-skinned, predominantly middle-aged or older per sons [1]. Al most all Keratoacanthoma arise from hair follicle [2]. Occasionally, it is seen on hair less areas such as a nail bed or oral cavity [3,4]. It is characterized by rapid growth with a histological pattern of ten suggestive of squamous cell carcinoma (SCC) [5]. It may be best viewed as an aborted malignancy that only rarely progresses into invasive SCC. SCC is a relatively common skin tumor which, if untreated, generally has a progressive clinical course with development of metastatic disease and often lethal outcome [6]. However, KA usually undergoes spontaneous regression as part of its natural history. Clinically, rapid tumor growth may suggest a de novo cutaneous SCC, a relatively rare, aggressive tumor that produces regional or distant metastases in about 8% of patients [7].

Sometimes a well differentiated SCC can be difficult to distinguish from a KA without clinical history [8]. Here we came across a rare case of infrauricular swelling associated with same sided chronic suppurative otitis media.

Case Report

A 59 year old male came to ENT OPD with chief complaints of left ear discharge on off since 10 years. He also complained of similar discharge coming out from an infra auricular growth on the same side on off since 10 years. There was no history of tinnitus or vertigo, upper respiratory tract infection or trauma. The discharge from ear was mucopurulent. The discharge from the growth was also mucopurulent, with no offensive smell. The growth was mobile, 1x1 cms in size, non tender, does not bleed on touch, mobile an was not adherent to underlying structures. Rest of the ENT examinations were normal. His blood investigations like cbc, lft, kft, viral markers and coagulation profile was normal. On getting a pure tone audiometry done, his loss in left ear was 35 dB conductive hearing loss with normal Tympanometry findings. His CT scan of temporal bone revealed no such abnormality. No sinus tract was visualised between the infrauaricular cyst and external auditory canal. Neither any connections were seen to any other structure. It remained as a soft tissue swelling in CT scan. A tympanoplasty was performed on the left side of the patient. In the same sitting, excision of the soft tissue swelling was done and sent for histopathology in December 2021. The excised area was sutured with 3-0 ethylene. Histopathology revealed lymphocytes along with granulation tissue.

The patient came to ENT OPD again in May 2022,where he complained of left infra auricular swelling discharge which he developed again over past 6 months after surgery. The left ear was checked and neotympanum look healthy. No opening in external auditory canal seen. Rest of ENT examinations were normal. The swelling was 1x1 cms in size, mobile, with mucopurulent discharge oozing out of it, non tender, does not bleed on touch, not adherent to underlying structures.

Then it was decided to get a revision excisional biopsy done. The growth was excised from its base and sutured with3-0 ethylene and sent for histopathology examinations again.

Figure 1: Shows the presentation of growth left side infra auricular in OPD after 6 months of its surgery.

Figure 2: Shows the growth left infra auricular region pre op.

Figure 3: Shows the excised growth left infrauricular cyst to be sent for histopathology examination.

The patient followed up in ENT OPD for stitch removal and with biopsy report which revealed that the tissue sent was lined by stratified squamous epithelium showing irregular acanthosis with elongation of rete ridges. There is focal presence of intraepidermal microabscess. There is invagination of epidermis into underlying dermis with crator formation. Stroma markedly infiltrated with lymphocytes and plasma cells. The findings were suggestive of keratoacanthoma. The patient was advised 5% 5-flourouracil cream local application 3 times a day along with chemotherapy for the same.

Discussion

SCCs are thought to typically arise from basal keratinocytes in the interfollicular epidermis. SCC development in the skin is usually considered a multistep process, and most of the invasive SCCs develop from preinvasive lesions or maybe in situ tumors, such as actinic keratosis (AK) or Bowen disease [9]. Although the cumulative risk is dependent on the number of lesions as well as length of time they persist, estimation of the annual rate of AK to progress into invasive disease range from 0.025% to 20% [10,11]. The estimated cumulative lifetime risk of patients with multiple AK is approximately 6% to 10% [12]. Other noninvasive, precancerous conditions that has the capacity to evolve into SCC includes bowenoid papulosis and erythroplasia of Queyrat. KA is a squamous neoplasm characterized by an intial rapid growth phase and followed by subsequent slow spontaneous regression and generally controversially discussed in the popular classical sequence of skin carcinogenesis [13].

The risk for SCC development is attributes to genotypic, phenotypic, as well as environmental factors. UVRays is classified by the IARC (International Agency for Research on Cancer) as a class I carcinogen, sufficient for initiation, promotion, and progression AK into squamous carcinogenesis of the skin [14], and is generally the most important environmental risk factor for SCC. Other major risk factors responsible for SCC include exposure to physical and chemical carcinogens, genetic predisposition with immunosupressioin.

KA commonly is usually regarded as a subtype of highly differentiated SCC with few typical clinical and histopathological features. KA generally erupts rapidly within a few weeks and has the ability of spontaneous regression. KA clinically presents usually as a sharply circumscribed firm nodule containing a central horn-filled crater that typically arise on the head and sun-exposed areas of the extremities like leg, arms, neck and back of the hands. There are usually several different clinical variants, including grouped KA, subungual KA, intraoral KA, giant KA, KA centrifugum marginatum, multiple KA of the Ferguson-Smith type, eruptive KA of Grzybowski, and KA associated with Muir-Torre syndrome.

Figure 4: Shows clinical presentation of keratoacanthoma with horn filled crater in the middle.

Management includes Surgical excision, preferably microscopically controlled surgery (Mohs surgery), is regarded usually the primary mode of therapy for localized SCC and has a cure rate of 95% [16-18]. Full histopathological characterization of this tumor and its margins allowed for the adequate management of the patient [15,17] and is particularly important for avoiding recurrence and deeply infiltrating tumors, which are, tumors with a histologic risk factors such as perineural invasion, tumors present in immunosupressed patients, and over sites where tissue preservation is essential (eyelid, nasal tip, ear). Conventional standard excision with 4- to 6-mm margins are usually acceptable as primary treatment of these local, low-risk SCCs [16].

Topical therapeutic treatments such as topical imiquimod, topical or intralesional 5-fluoruracil, cryotherapy, and photodynamic therapy for SCC have been reported and tried [18-20]. Patients treated with Mohs surgery (microscopically controlled surgery) should be sent for postoperative adjuvant radiation if clear margins cannot be achieved as in case of the above mentioned case we had [15,16].

Conclusion

Here we saw an interesting case of keratoacanthoma over the infra auricular region on the left side which is usually an uncommon site of this condition. Keratoacanthoma is usually considered as a low grade variant of squamous cell carcinoma. Due to its rapid growth and histological appearance, it is usually surgically excised as it is difficult to differentiate. The recorded risk in this case might have been sun exposure or repeated trauma, though no such history was given by the patient. Keratoacanthoma as such in Otorhinolaryngology is rare, so this case was worth mentioning.

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