

CASE REPORT

A misdiagnosed keratoacanthoma turned out to be a metastatic parotid carcinoma

Erronea diagnosi di keratoacantoma in un caso di metastasi parotidee da carcinoma squamoso

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SUMMARY

Distinguishing keratoacanthoma from well-differentiated squamous-cell carcinoma is often difficult on account of the clinical and histopathological similarities between them. Since the outcome of treatment depends on identifying the correct diagnosis and having the correct treatment on time, it is essential to differentiate keratoacanthoma and squamous-cell carcinoma as soon and accurately as possible. A paradigmatic case is herein reported. An 85 year-old female underwent total parotidectomy and ipsilateral neck dissection due to the squamous-cell carcinoma of the parotid gland. The investigations, in order to determine whether the tumour was a metastatic or a primary one, led to a misdiagnosis. A prior skin lesion, which was excised over her left cheek one year ago in another clinic, was diagnosed as keratoacanthoma. However, the histopathological revision of the specimen revealed that the lesion was in fact a squamous-cell carcinoma. Thus the parotid tumour was accepted as metastatic squamous-cell carcinoma rather than primary squamous-cell carcinoma.

KEY WORDS: Parotid gland • Squamous-cell carcinoma • Keratoacanthoma

RIASSUNTO

La diagnosi differenziale tra cheratoacantoma e carcinoma squamoso ben differenziato è sovente difficoltosa a causa delle similitudini istopatologiche esistenti tra queste due lesioni. Tuttavia considerando che i risultati del trattamento dipendono dalla diagnosi corretta e dalla conseguente corretta impostazione terapeutica, è essenziale la più precoce ed accurata differenziazione tra le due lesioni. In questo lavoro viene riportato il caso paradigmatico di una donna di 85 anni sottoposta a parotidectomia totale e svuotamento laterocervicale omolaterale per il riscontro di un carcinoma squamoso ben differenziato della parotide. Gli esami eseguiti per determinare se si trattasse di una lesione primitiva o di una metastasi avevano portato ad una diagnosi errata. Una precedente lesione della guancia infatti, asportata un anno prima in altra sede era stata diagnosticata come cheratoacantoma. Tuttavia la revisione dell'esame istologico della lesione cutanea ha evidenziato che si trattava di un carcinoma squamoso. Quindi il tumore parotideo considerato inizialmente come un carcinoma primitivo era in realtà una lesione metastatica.

PAROLE CHIAVE: Parotide • Carcinoma squamoso • Cheratoacantoma

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Introduction

Squamous-cell carcinoma (SCC) has been widely accepted as the most uncommon primary malignancy occurring in the parotid gland^{1,2}. More commonly, SCC is metastatic to the parotid gland from a cutaneous malignancy of the face and scalp². Therefore, when SCC is identified in the parotid gland, every effort must be made to rule out a possible metastasis.

Keratoacanthoma (KA) is a benign, self-healing epithelial neoplasm. The clinical and histo-pathological similarity

between KA and well-differentiated SCC often makes the differential diagnosis difficult³⁻⁵.

In this report, a patient with SCC of the parotid gland is presented. Investigations to trace the origin of the tumour (whether it was a primary or a metastatic lesion) revealed a misdiagnosis in her past medical history. A previously excised skin lesion over her left cheek had been erroneously diagnosed as KA. Unfortunately, the correct diagnosis of SCC could not be revealed, until it metastasized to the parotid gland.

Case report

An 85-year-old female patient was referred to our clinic with an uncertain diagnosis of parotid SCC. She had a two-month history of a rapidly enlarging mass on her left angulus of the mandible. In another clinic, an incisional biopsy was performed. She was referred to our clinic for further evaluation and treatment, as the histo-pathologic examination of the biopsy led to the probability of a carcinoma.

The patient had a skin lesion on her left cheek, which had been excised 1 year ago at the same clinic. The histo-pathological diagnosis of the lesion had been made as KA. Her medical history was unremarkable apart from this excision. On admission to our clinic, a 3x4 cm, firm, hard, painless mass was found behind the left angulus of the mandible, anterior to the sternocleidomastoid (SCM) muscle, at the location of lower parotid gland (Fig. 1). A complete physical examination, with endoscopic evaluation, as well as head and neck computed tomography (CT), were performed. The neck CT scan showed a parotid tumour with invasion towards the SCM though the great vessels and deep structures of the lateral neck were intact. Neither the physical and endoscopic examinations, nor the radiological evaluation showed any other lesion beyond the one in the left parotid gland. The routine laboratory investigations (including complete blood count, liver and kidney function tests), chest X-ray, whole body bone scan, and abdominal ultrasonography (US) were also normal.



Fig. 1. Clinical appearance of the tumour.

With these results and clinical findings, we decided to perform parotidectomy with simultaneous frozen section, in order to make an accurate diagnosis and

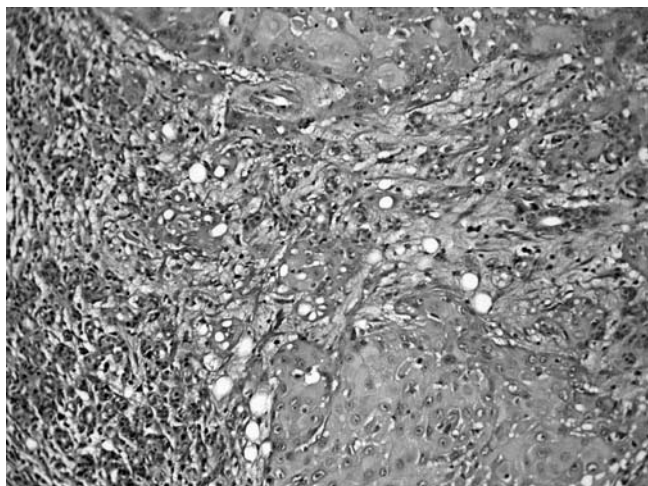


Fig. 2. SCC of the parotid gland.

establish correct treatment. After revealing the diagnosis of SCC via the frozen section biopsy, an ipsilateral radical neck dissection was also performed together with total parotidectomy. The patient also received post-operative radiation therapy.

The final report confirmed the diagnosis of SCC (Fig. 2). The histopathological slides of the earlier lesion over the cheek were requested for review in order to exclude a possible relationship with the recent parotid tumour. In this way, it has been found that KA was a diagnostic mistake and, in fact, the lesion was a SCC (Fig. 3).



Fig. 3. Misinterpreted keratoacanthoma.

In conclusion, the recent parotid tumour was thought to be metastatic SCC, which had developed secondary to the lesion over the cheek.

Discussion

Various investigators have stated that SCC of the parotid gland is usually metastatic rather than primary^{1,2,6,7}. For the correct diagnosis of primary parotid SCC, excluding other primary parotid malignancies (high grade mucoepidermoid carcinoma, adenocarcinoma) and possible metastases is crucial^{1,2,6,7}. The most common origin of a metastatic parotid tumour is cutaneous SCC of the head and neck region, particularly the face, scalp, and upper aero-digestive tract². In our case, we could not find any other lesion, apart from that in the parotid gland, at physical examination. However, the histo-pathological revision of the previously excised lesion over the cheek was, in fact, found to be SCC. So, the parotid tumour was accepted as a metastatic growth secondary to this lesion. KA is a benign, rapidly growing, squamous epithelial neoplasm. Sometimes the differential diagnosis between KA and SCC can be difficult on account of their clinical and histopathological similarities³⁻⁵. However, it is of vital importance to differentiate KA from SCC as there are significant implications for therapeutic management.

KA is a benign lesion that is likely to regress spontaneously or can be treated by total excision, whereas SCC is a malignant tumour which has the potential to metastasize, thus requiring radical surgery as treatment³. Errors in the histological diagnosis to differentiate these two neoplasms lead to a delay in appropriate management and may cause recurrences. As in the present case, the inappropriate therapy of the first lesion, due to the erroneous diagnosis, caused a recurrence with metastasis to the parotid gland.

At present, the quandaries regarding the nature and the biological behaviour of KA still continue⁸⁻¹⁰. Some Authors regard KA as a subgroup of SCC⁸, whereas others consider KA as a self-healing proliferation with a potential of malignant transformation⁹ but a third group denies both theories and advocates that KA is a benign neoplasm, and that a lesion diagnosed as SCC after recurrence, should be regarded as if it was SCC from the onset and the initial diagnosis of KA was a diagnostic mistake¹⁰. In the literature, many Authors consider the third explanation as the most likely, so we do. It would be wise to remember this fact and question the initial diagnosis - whether it was a SCC on the inception. In our case, we confirmed the di-

agnostic mistake following revision of the histopathologic slides referring to the first lesion.

Although KAs are frequent lesions in the head and neck area (almost 75% of them involve the face; particularly the cheeks, nose, eyelids, ears, and lips, in order of decreasing frequency)⁴, they are rarely seen by otolaryngologists⁵. As a result, otolaryngologists remain unfamiliar with the clinical features of KA. This may also cause a delay in the diagnostic process and therapeutic management.

Conclusions

1. Otolaryngologists should become more familiar with the clinical features of KA.
2. Both the clinical and histopathological similarities between KA and SCC must be borne in mind when considering suspicious cases.
3. Histo-pathological revision of relevant pathologic materials should be performed in suspicious cases.

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