

Squamous cell carcinoma of the scalp initially diagnosed as keratoacanthoma

Carcinoma espinocelular em couro cabeludo inicialmente diagnosticado como queratoacantoma

ABSTRACT

Keratoacanthoma may be easily mistaken with squamous cell carcinoma, both clinically as well as histopathologically. However, only keratoacanthoma can regress spontaneously. We report a case of a patient with a exophytic, ulcerated, infiltrated lesion in their scalp that was initially diagnosed as a keratoacanthoma. The histopathologic examination confirmed the presence of squamous cell carcinoma, and the tomography of the skull showed that the cancer had spread within the cranium. A surgical excision with wide margins and rotation flap was conducted, followed by adjuvant chemotherapy and radiotherapy treatments. There are a great number of accounts of squamous cell carcinoma erroneously diagnosed as keratoacanthomas in the specialist literature, illustrating the difficulty in differentiating between them. While there is no established effective method to distinguish between the two conditions, surgical excision should be the treatment of choice.

Keywords: carcinoma; squamous cell; keratoacanthoma; surgery.

RESUMO

O queratoacantoma pode com muita facilidade ser confundido com carcinoma espinocelular, tanto clínica quanto histopatologicamente. Só o queratoacantoma, entretanto, pode regredir de maneira espontânea. Relata-se caso de paciente com lesão exofítica, ulcerada e infiltrada em couro cabeludo previamente diagnosticada como queratoacantoma. O exame histopatológico confirmou carcinoma espinocelular, e a tomografia de crânio evidenciou invasão da calota craniana. Procedeu-se à excisão cirúrgica com margens amplas e confecção de retalho de rotação, seguida de tratamento adjuvante com quimioterapia e radioterapia. Há muitos relatos na literatura de carcinomas espinocelulares erroneamente diagnosticados como queratoacantomas demonstrando a dificuldade nessa diferenciação. Enquanto não se estabelecem métodos eficazes para distinguir as duas entidades, o tratamento de escolha deve ser a excisão cirúrgica.

Palavras-chave: carcinoma de células escamosas; ceratoacantoma; cirurgia.

INTRODUCTION

Keratoacanthomas can be easily mistaken with squamous cell carcinomas – also named spinocellular carcinomas – both clinically and histopathologically. Only keratoacanthomas, however, can regress spontaneously¹. This paper reports a case of a scalp lesion previously diagnosed as keratoacanthoma and later confirmed as squamous cell carcinoma and discusses the difficult diagnostic differentiation between the two conditions.

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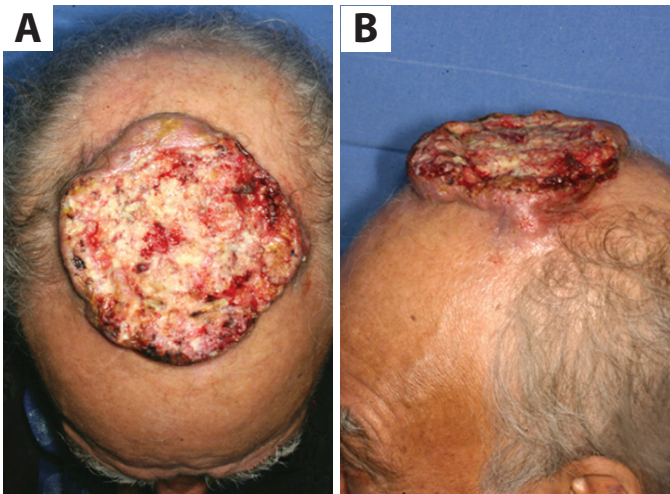
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CLINICAL CASE

A white male patient, aged 69, reported a painful vegetational lesion of progressive growth on the scalp that had been developing for two years. The patient brought with him the results of a recent biopsy analysis compatible with keratoacanthoma (KA), performed by a different healthcare service institution. The patient reported a similar lesion in his scalp three years earlier that was diagnosed as KA and surgically removed. The patient also reported to be diabetic (with the use of oral hypoglycemic agents), as well as a smoker and an alcoholic. The dermatologic examination described an ulcerated, exophytic, infiltrated lesion with elevated edges of approximately 15cm in diameter in the frontoparietal region (Figures 1 and 2). No lymphadenomegaly was observed in the physical

examination. The tomography of the skull showed that the cancer had spread within the cranium. The histopathologic examination carried out by the healthcare public service where

the authors work confirmed the squamous cell carcinoma (SCC) hypothesis (figure 3). An excision with wide margins, including a resection of the external table of the skull, was executed. A wide rotation flap originating from the left temporal region of the scalp was accomplished, aimed at covering the excised area of the skull and partially closing the primary lesion. The areas not covered by the flap were left to heal by second intention, using activated carbon as an adjuvant in the process (figures 4 -7). Subsequently, the patient received chemotherapy (three cycles of 5-fluoracil and cisplatin) and 30 sessions of radiation treatment (cobalt 200cGy per day). Nevertheless, seven months after surgical treatment the patient died after the tumor recurred at the same location and the cancer spread to the central nervous system and the meninges.



Figures 1 A and B: Infiltrated, vegetational, and ulcerated lesion in the frontoparietal area of the scalp



Figures 3: Radial and vertical tumorous invasion that caused the erosion of the calvaria in all its thickness, touching the dura mater

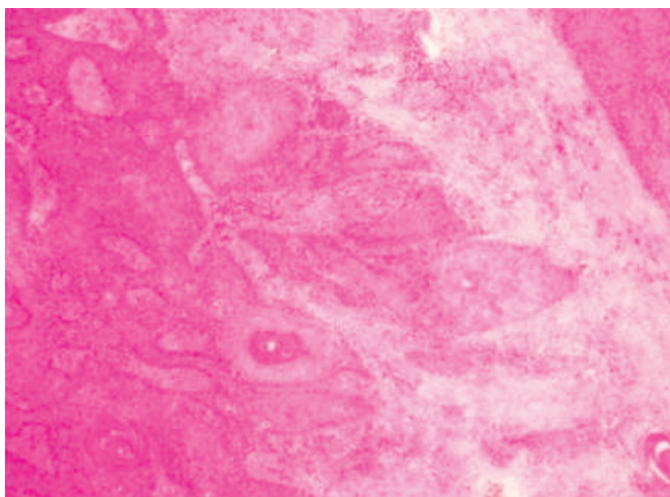


Figure 2: Blocks of epithelial cells infiltrating the stroma with the presence of corneal pearls/hematoxylin-eosin 40x



Figures 4: Rotation flap originally derived from the left temporal area of the scalp, aimed at covering the area with the absence of periosteum



Figures 5: Results one week after surgery



Figures 6: Results four months after surgery

DISCUSSION

Squamous cell carcinoma (SCC) is the second most common type of skin cancer. The tumor initially presents as a papule or nodule, with varied degrees of hyperkeratosis and ulceration, in senior patients' photoexposed areas. The illness has been associated with immunosuppression, exposure to arsenical agents, radiation, chronic ulceration and to the human papillomavirus. Although it is easily treatable, it has the potential to reappear in the site and cause metastases, leading to significant morbidity and mortality rates ².

On the other hand, KA is classically classified as a benign neoplasia of the skin. Emerging as an isolated lesion in photoexposed areas of senior patients, it evolves within a few weeks into a nodule with high edges and a center filled with keratin ³, resembling a volcano ². In contrast to SCC, its spontaneous resolution may take place in six months ². Connors and Ackerman refer to KA as a pseudomalignant neoplasia ³.

Some authors consider KA to be a well-differentiated variation of SCC, given the significant difficulty in their histopathologic differentiation. Moreover, there are several reports of KAs that presented aggressive development, with local recurrence and even metastases ². Forslund believes that KA presents a proliferative phase, and that the proliferation by itself can be considered a carcinogenic event, which would explain the development of some of those tumors into SCC ⁴.

To understand why cases – such as the one described in this paper – are first diagnosed as KAs and later proven to be SCCs, three hypotheses have been proposed by Goldenhersh and Olsen: 1)

mistaken initial diagnosis, 2) combined lesion (SCC containing KA), and 3) transformation of KA into SCC ³. An alter-

native explanation would be that KA and SCC are, in fact, the same condition ^{2,3}.

In the literature, there are many reports of cutaneous tumors diagnosed clinically and histopathologically as KAs that are afterwards proven to be SCCs, demonstrating the difficulty in differentiating between these conditions ³.

The reconstruction of extensive lesions in the scalp, above all when there is invasion into the periosteum and bone table, requires covering the area with flaps. The remaining parts of the lesion (where the periosteum is intact) can be covered by flaps, grafts or await cicatrization by second intention ⁵.

Regarding activated carbon, its adjuvant actions – reducing the healing time of chronic wounds and decreasing the risk of local infection – are well described in the literature ⁶. It is administered in the form of sterile bandages composed of a fabric of activated carbon impregnated with silver, wrapped in a porous case made of nylon fibers and sealed all along its extension. The fabric's system of pores retains bacteria, which are then deactivated by the silver. Because it is a primary covering, it requires a gauze layer, which should be replaced once or more a day; the carbon, in turn, must be replaced as soon as it becomes saturated ⁷. Activated carbon bandages are effective when used on large dimension surgical wounds; they accelerate the healing process and reduce the unevenness of the wounds. Replacement should be carried out on a weekly basis.

CONCLUSION

Before adequately effective methods of distinguishing KAs from SCCs are established, the surgical removal of doubtful lesions is recommended, due to the risk of aggressive development of some types of SCCs. ●

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