

Autograft reconstruction of nasal dorsum in cutaneous neoplasia treatment

Reconstrução com autoenxerto de dorso nasal no tratamento de neoplasias cutâneas

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ABSTRACT

Basal cell carcinoma is the most common type among skin cancers. It occurs in basal cells and is primarily caused by sun exposure. It mainly affects elderly people, mainly man, in exposed areas of the body and is diagnosed through biopsy. The choice of treatment depends on the type, size, location and depth of penetration, the patient's age, health conditions and potential aesthetic outcome. The present study aims to evidence, through a case report, the aesthetic and functional importance of the cutaneous transplant technique in cases of tissue loss in the face region by Basal cell carcinoma. A 56-year-old female patient, leukoderma, attended the Maxillofacial Surgery and Traumatology service of the Federal University of Pernambuco, complaining of asymmetry in the nasal dorsum region, with differentiated staining and raised edges. In anamnesis time she reported having suffered sun exposure for long periods. The patient underwent an incisional biopsy and subsequently, with a diagnosis of basal cell carcinoma, a resection of the lesion followed by skin autografting. Good acceptances of the skin flap as well as excellent aesthetic result were attained. The autogenous grafts use has shown satisfactory aesthetic results for remaining coverage after the lesion excision.

Indexing terms: Autologous transplantation. Basal cell carcinoma. Nose neoplasms.

RESUMO

O carcinoma basocelular é o tipo mais comum entre os cânceres de pele. Ela ocorre nas células basais e é ocasionado principalmente pela exposição solar. Acomete principalmente idosos, principalmente homens, em áreas expostas do corpo e é diagnosticado por

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biópsia. A escolha do tratamento depende do tipo, tamanho, localização e profundidade de penetração, idade do paciente, condições de saúde e do potencial resultado estético. O presente estudo visa evidenciar, por meio de um relato de caso, a importância estética e funcional da técnica de transplante cutâneo em casos de perda de tecido da região facial por carcinoma basocelular. Paciente do sexo feminino, 56 anos, leucoderma, compareceu ao Serviço de Cirurgia e Traumatologia Buco Maxilo Facial da Universidade Federal de Pernambuco, com queixa de assimetria na região do dorso nasal, com coloração diferenciada e bordas elevadas. Na anamnese relatou ter sofrido exposição solar por longos períodos. A paciente foi submetida à biópsia incisional e posteriormente, com diagnóstico de carcinoma basocelular, ressecção da lesão seguida de autoenxertia de pele. Foram obtidas boas aceitações do retalho cutâneo e excelente resultado estético. O uso de enxertos autógenos tem mostrado resultados estéticos satisfatórios para a cobertura remanescente após a excisão da lesão.

Termos de indexação: *Transplante autólogo. Carcinoma basocelular. Neoplasias nasais.*

INTRODUCTION

The increase in life expectancy of the world population raised reflexes in the elderly population's health, among them, the growing incidence of skin cancer. Such dysfunction may appear at any age but it usually reaches its highest rates from 60 years old, being 66.9 the average age and the gender distribution exhibited prevalence of 37.2% of females and 62.3% of males [1,2].

Basal cell carcinoma constitutes about 80% of all non-melanoma skin cancers followed by squamous cell carcinoma and melanoma. Is the most common malignancy in people with white skin and is most commonly found mainly affects areas of the body that are most exposed to sunlight, such as the head and neck region. Basal cell carcinoma is a local and invasive carcinoma of the epidermis basal cells, these are mostly caused due to sun exposure. They should be identified at the earliest to prevent massive invasion of tissues and for effective treatment. Although mortality is considerably less and rarely metastasizing, it causes morbidity and an enormous socioeconomic impact [1-7].

Basal cell carcinoma usually occurs as a solitary lesion, the most common clinical presentation of basal cell carcinoma is nodular or nodular with a central rodent ulcer because of the overlying ulceration, are almost always asymptomatic and related by patients as an injury that does not heal. They have slow and progressive growth and without beginning, which can be confused with acne lesions, abrasions, nevi or allergies by patients. The lesions are fragile and can bleed when they get in the way and have varied clinical symptoms: papules, exulcerations, ulcerations with raised edges, plaques, atrophies and infiltrations. They are common features in basal cell carcinomas in the presence of tortuous and irregular vessels on the surface and pearly colour of the edges or surface of the lesion. Basal cell carcinoma may be pearly, whitish, reddish (erythematous) or light brown, dark or black in colour, when it is called pigmented basal cell carcinoma [8,9].

As a form of diagnostic confirmation, incisional biopsy is recommended before surgery. Histologically, basal cell carcinoma presents as a proliferation of nests and cords of small to medium-sized basaloid cells with peripheral palisading of nucleus, stromal retraction artifact and numerous mitotic and apoptotic figures. Tumour cells show enlarged hyperchromatic nucleus with inconspicuous nucleolus and scant amount of cytoplasm [6,7].

Cutaneous basal cell carcinoma recurrence is associated with inadequate surgical margins. The resection margins of the lesion in a pathological analysis are classified as free, compromised or limited, by the following criteria: free margins - limit of resection without any contact with neoplastic cells; compromised margins - presence of neoplastic cells in one or more analysed specimen margins; exiguous margins – resection limit close to localization of neoplastic cells [10].

The current mainstay of basal cell carcinoma treatment involves surgical modalities, such as electrodesiccation and curettage, excision, cryosurgery, and Mohs micrographic surgery. surgery included rehabilitation with direct closure, flap, grafting or complex procedures [11,12].

The aim of the present case report is to describe an autograft procedure performed in patient with a basal cell carcinoma in the nasal dorsum region.

CASE REPORT

The registration was conducted in full compliance with ethical principles, in accordance with the Helsinki declaration, revised in 2013. The patient agreed with the disclosure of data and photographs by signing the Free and Informed Consent Form, making it clear that the information would be used exclusively for the purpose of scientific dissemination and that the patient's anonymity would be preserved. The report was approved by the local ethics committee on research in human beings under number 2.464.994.

A 56 years old female patient, leukoderma, attended the Maxillofacial Surgery and Traumatology Service of the Federal University of Pernambuco - Brazil, complaining of asymmetry in the nasal dorsum region, with differentiated staining and raised edges. In anamnesis procedure she reported having suffered sun exposure for long periods and a non-healing lesion. During the anamnesis the patient reported large sun exposure and a non-healing lesion. Clinical examination revealed a lesion on the nasal dorsum with increased volume, undefined borders, pinkish colour and pearly appearance (figures 1 A and B).



Figure 1 – Initial clinical aspect of the patient, profile view, where lesion is observed in the nasal dorsum region with differentiated staining, raised edges and asymmetry (A) initial clinical aspect of the patient, focusing on the lesion (B).

To attain a complete diagnosis, an incisional biopsy was performed thus the result was basal cell carcinoma (figure 2). Based on such result the team opted for excision of basal cell carcinoma followed by autografting. In the surgical procedure, the donor area was chosen based on the non-presence of pigmented lesions or hair follicles, so the pre-axillary region was considered the better option. The lesion region was continually cleaned and the local anesthesia was performed, followed by lesion excision with a scalpel mounted with number 11 blade, considering safety margin and checking if there was no penetration of the lesion (figures 3 A and B).

The lesion extension marks in the donor region was subsequently performed with aided by a sterile paper for printing the borders at the site. The donor surface anaesthesia was then performed, followed by the tissue divulsion and obtaining the graft (figure 4 A). The tissue was placed in its receptor region and sutured through separate stitches, without tensioning its margins, with mononylon thread 6.0 (figure 4B).

The donor region was sutured and a dressing was performed in both areas using Fibrinase ointment with Chloramphenicol. In the postoperative period, the prescribed treatment was Ampicillin 500mg, 1 tablet orally from 6 to 6 hours for 5 days; Codeine phosphate 30 mg associated with paracetamol 500 mg, 1 tablet orally from 8 to 8 hours in case of pain; Fibrinase with Chloramphenicol – 1 tube applying 3 times a day on the region; Cryotherapy on the first day and continuous thermotherapy after 24 hours. The patient was also advised not to expose to solar radiation and to use sunscreen.

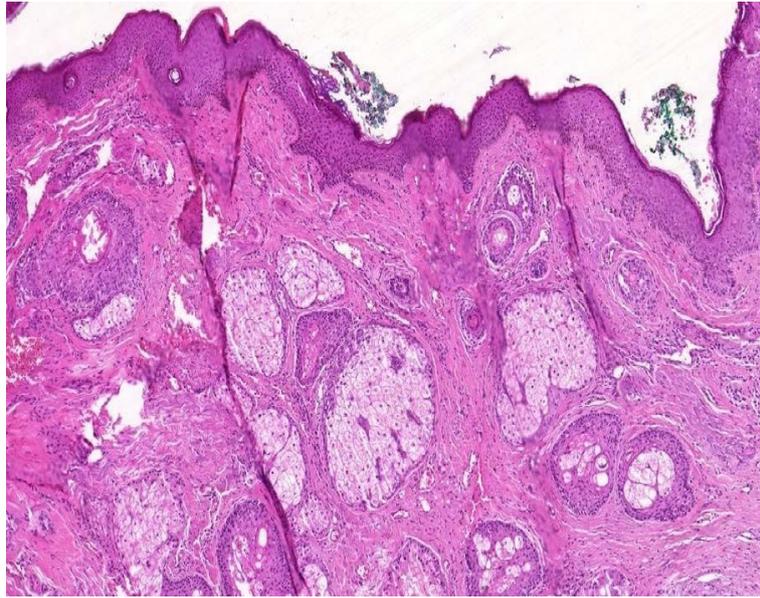


Figure 2 – Histopathological slide of the incisional biopsy performed in the patient, which shows characteristics of basal cell carcinoma as destruction of the epithelium with ulcerated areas and rounded cell blocks, formed by cells that resemble those of the basal layer of the epidermis.

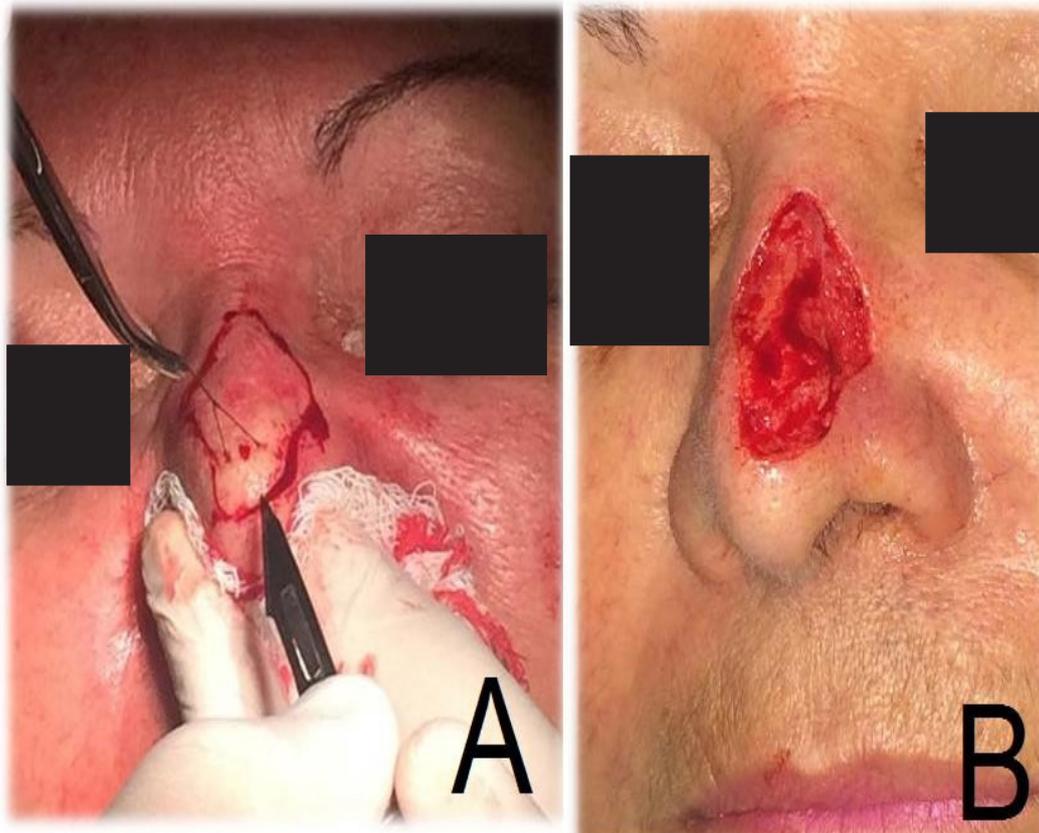


Figure 3 – Excision of the lesion with margin of safety with a scalpel mounted with a number 11 blade (A) and visualization of the recipient area, with good vascularization and integral margins (B).

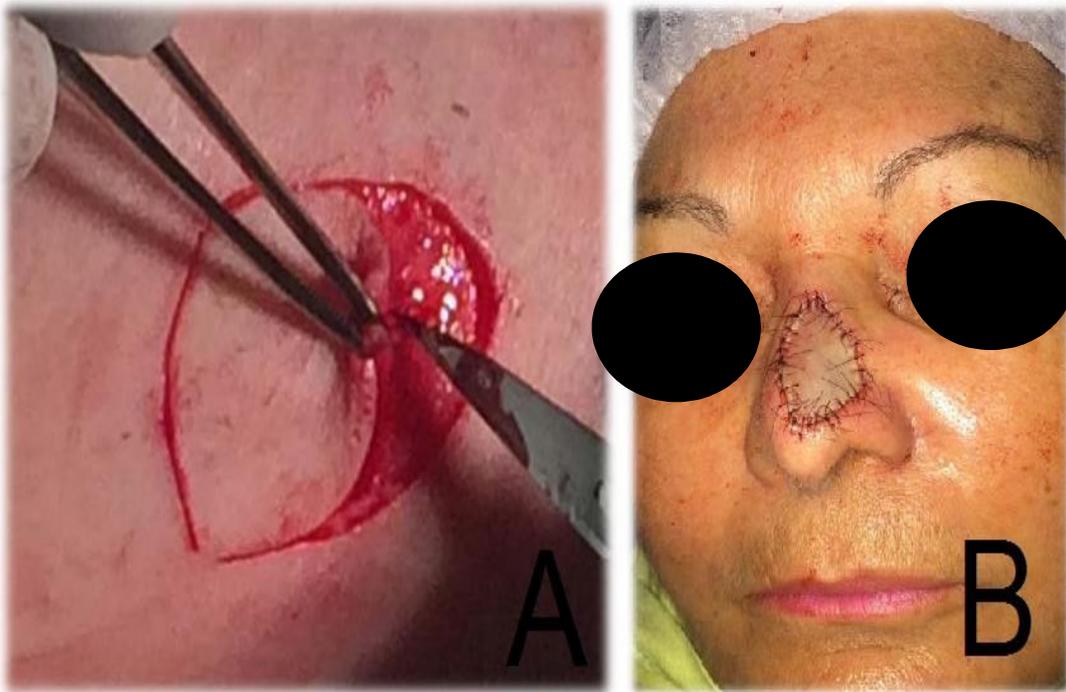


Figure 4 – Obtaining the graft in the major pectoral area (A) and Graft positioned in the recipient region and sutured with 6.0 mononylon thread, with simple suture at separate stitches without tensioning (B).

The pathological sample was sent to the histopathology department where the tumour destructive action was observed in the epidermis (ulcerated areas), besides such alteration occupied dermis as rounded cell blocks, formed by cells that resembled the epidermis basal layer (oval nucleus, dense chromatin, scarce cytoplasm and basophil). Each block had a solid centre (completely filled by cells). At the periphery, the cells tend to form a clearer layer, where the nuclei are arranged perpendicularly to the cluster surface (palisade arrangement), which is a very characteristic aspect of basal cell carcinoma. The border with the dermis at the depth is clear, indicating that the infiltrative capacity of the tumour was small. An inflammatory infiltrate is also noted in its depth (figure 5).

We observed the absence of postoperative complications; the graft edges coaptation after 7 days from the procedure; the removal of the suture with 14 postoperative days and patient's follow-up by 30, 60, 90, 180 and 365 postoperative days (figure 6), still being currently followed, obtaining an excellent result of the autograft aesthetics.

DISCUSSION

Skin cancer has a predilection for the head and neck region, occurring more in males, in the seventh decade of life and in the leukoderma population. Its most prevalent ethology is sun exposure and the most prevalent types are basal cell carcinoma, being responsible for 80% of all non-melanoma skin cancer, followed by squamous cell carcinoma [1-7]. In the present case report, the patient is also leukoderma and presented with a basal cell carcinoma in the nasal region, but she is in her sixth decade of life and is a woman.

Basal cell carcinoma is usually asymptomatic, of the nodular or nodular ulcerated subtype and occurs as a solitary lesion. They have a slow growth and varied clinical symptoms: papules, exulcerations, ulcers with raised edges, plaques, atrophies and infiltrations, with irregular surfaces and pearly colour of the edges [8,9]. The patient of the present case report had a basal cell carcinoma with asymmetry in the nasal dorsum region with differentiated staining, small protrusion, indefinite borders and pearly appearance.

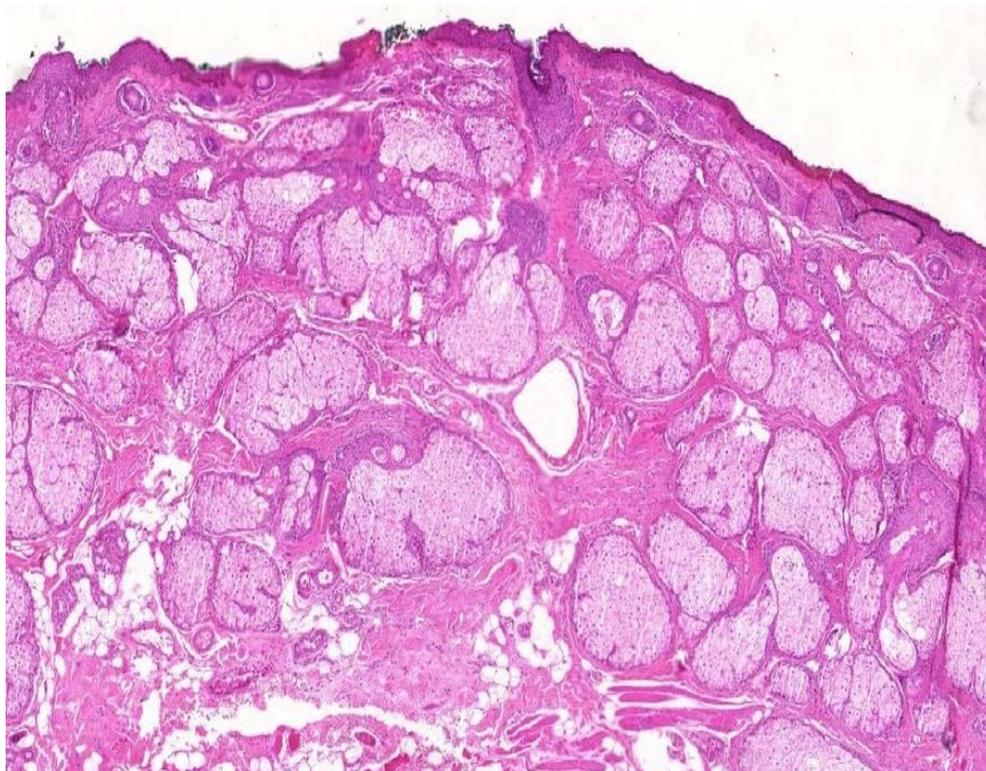


Figure 5 – Pathological lamina in which it shows ulcerated areas, dermis layer occupied by rounded cell blocks, formed by cells that resemble basal layer of epidermis. In the periphery area, it can be observed cells arranged in palisade. The dermis border at the depth is clear, indicating that the tumour infiltrative capacity is small, an inflammatory infiltrate is also noted in its depth.



Figure 6 – An postoperative year with a good aesthetic and functional result observed.

Incisional biopsy is recommended before surgery for a better diagnosis and a histopathological analysis is necessary later to verify the pathological specimen, as the cutaneous recurrence of basal cell carcinoma is associated with inadequate surgical margins. As a histological pattern, basal cell carcinoma presents itself as a proliferation of nests and strands of small to medium-sized basaloid cells with peripheral palisade of nuclei [6,7,10]. The incisional biopsy was performed to confirm the patient's diagnosis and after the total resection of the lesion, the margins were considered free of the lesion, and after one year of postoperative the patient didn't show clinical signs of recurrence.

The treatment of basal cell carcinoma mostly involves surgical modalities with direct closure, flap or graft [11,12]. In the reported case, an autologous pre-axillary graft was used, showing good symmetry and vascularization of the recipient area.

CONCLUSION

The use of autogenous grafts has shown satisfactory aesthetic results to cover remnant areas after excision of lesion in facial areas. This allows us to conclude that this method is quite effective besides an excellent option for the treatment of basal cell carcinoma. The result obtained in the case reported was aesthetically and functionally satisfactory and the patient was followed for a long period and did not present with necrosis or recurrence in the reconstructed area.

Collaborators

CS AGUIAR was responsible for the construction of the article, MMVA MELO was the therapist in charge, physician RMVA MELO is the physician responsible for the case, responsible for the pre and postoperatively, patient LMCA LIMA contributed to the scientific construction in addition to contributing to the article in the pre and postoperative follow-ups. AF CALDAS JÚNIOR is the co-supervisor of the article and REVA MELO is the surgeon responsible for the case and supervisor of the article.

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