

Rintala flap for basal cell carcinoma reconstruction.

A case report

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Case Report

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Background

Skin cancer represents the most common neoplasm worldwide, with estimates of approximately 3.5 million cases diagnosed per year corresponding to a non-melanomatous cancer, and basal cell carcinoma (BCC) represents 80% of the total. This evolution is essentially local, and metastatic forms are exceptional. The gold standard treatment is based on completed resection of the tumor, with disease free edges.

We present the case of a 65-year-old male with basal cell carcinoma of the nasal tip, who underwent resection of the lesion and repair of the defect using a Rintala flap.

This technique offers an excellent option for reconstruction of nose.

Keywords: Nose reconstruction, basal cell carcinoma.

Skin cancer continues to represent the most common neoplasm worldwide, with estimates that approximately 3.5 million cases diagnosed per year correspond to non-melanomatous cancer, and basal cell carcinoma (BCC) represents 80% of the total. The increase in incidence is mainly due to the aging of the population and the continuous exposure of the main risk factors for this condition, mainly sun exposure.

The most common age of presentation is 60 years; It is known that between 55 and 75 years basal cell carcinoma is 100 times more frequent than in children under 20 years, although currently there is a significant increase in young people under 40 years, mainly in the female sex.

At present, there are non-invasive procedures that guide its diagnosis, however, it is always considered necessary to take a biopsy to unequivocally obtain the histopathological diagnosis of basal cell carcinoma.

There are multiple treatments for basal cell carcinoma, ranging from localized therapy to surgical intervention, however, the procedure of choice is based on the clinical and histological characteristics of it. To this day, the main international guidelines such as the American Cancer Society, American Journal of Clinical Dermatology, and the International Agency for Research on Cancer continue to catalog surgery as the treatment of choice, since a high percentage of

cure is achieved compared to other techniques. The disadvantages of this operative technique are the same as any surgical procedure (infection, bleeding, slow wound healing), in addition to the possibility of altering the function and aesthetics of the skin.

Case report

A 65-year-old male patient, a farmer by profession, with a history of chronic exposure to sunlight related to his activities, as well as chronic alcoholism, began his condition 2 years earlier with the presence of a tumor in the nasal tip, asymmetrical, indurate, with the presence of central excoriation and the presence of reddish coloration, measuring 11x15 mm.

Evaluated as part of the diagnostic protocol by the dermatology service who performed incisional biopsy, with histopathological report of infiltrating basal cell carcinoma positive for malignancy. Later referred to the plastic and reconstructive surgery service for resection of the injury and repair of the defect.

It was decided to perform resection of the lesion and coverage of the defect using a Rintala type flap carrying out the procedure without complications. Later studying with favorable clinical evolution.

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Figure 1. Presurgical imaging. Nasal tip lesion is observed. Basal cell carcinoma.

Discussion

Basal cell carcinoma originates from the stem/progenitor cell found in the basal layer of the epidermis or the bulb of the hair follicle (which is rich in keratinocytic stem cells) and most CBCs do not come from precancerous lesions.

On the other hand, UV radiation is the main risk factor for this cutaneous neoplasm, since it generally induces an immunosuppressive action of the skin with compromise of the activity of dendritic cells in their antitumor activity. In addition to mutagenic photoproducts, UV B rays cause mutations in genes regulating cellular function, for example, the tumor suppressor gene p53. Together, UV A rays produce an indirect effect in which they generate cytotoxicity and release of free radicals that indirectly favor the effect of UV B rays.

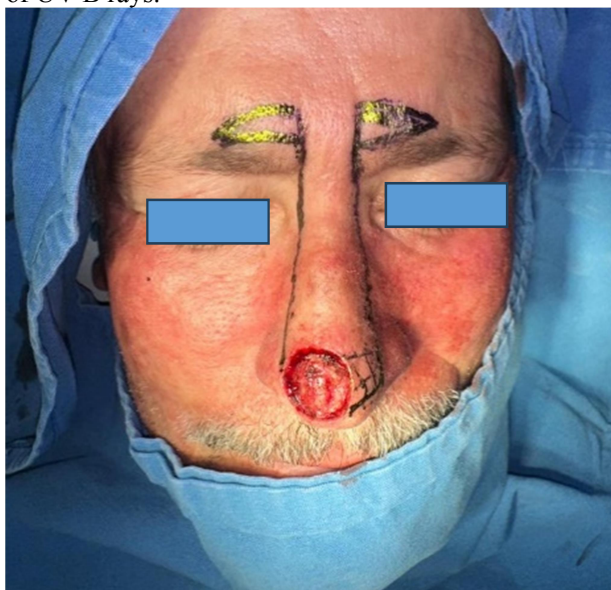


Figure 2. Resection of nasal lesion, and Rintala flap design.

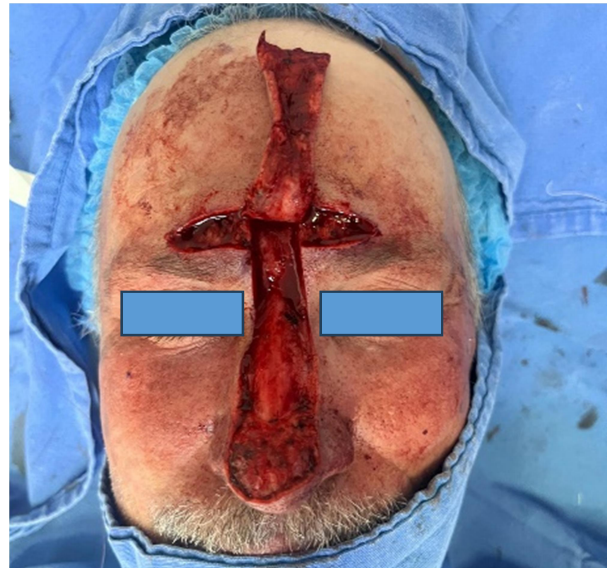


Figure 3. Rintala flap confection.

Approximately 80% are found in the head and neck; and between 15-43% in the trunk. There are differences with respect to its location by sex, in women they are observed more in the frontal area and periorbital region, on the other hand, in men it is mostly fixed in the pinna, genian area and neck, and in both sexes the area of greater affection is the nose and the nasolabial folds.

At present, there are non-invasive procedures that guide its diagnosis, however, it is always considered necessary to take a biopsy to unequivocally obtain the histopathological diagnosis of basal cell carcinoma. Histologically, CBC is characterized by basal cell islets or cords with basal oval nuclei, cells located in the periphery are described in "palisade" (classic characteristic); and are surrounded by a fibromucinous stroma.



Figure 4. Closure of Rintala flap edges.



Figure 5. Postsurgical outcome after suture removal

There are many modalities for the treatment of skin cancer such as: curettage, cryosurgery, Mohs surgery by freezing or paraffin variety, and conventional resection.

There are several reconstruction methods ranging from the simplest, such as scarring by second intention, through primary closures and skin grafts, to the most complex such as flaps. Skin grafts of different thicknesses are used to reconstruct patient defects after tumor resections with high probability of incomplete resection and in people at high operative risk. Primary closures are indicated for minor defects, located in the central area of the nose.

Neighborhood skin flaps are used in reconstructions because they look very similar to the area to be reconstructed. They are preferred over skin grafts, as these will have a scar in the donor area and present complications such as lack of regularity on their surface and pigmentation.

There are several types of flaps: for small defects there are those of transposition and the flag flap; for midline or lateral defects Staahl flap is indicated; For lateral defects of up to 2cm and defects in the nasal dorsum are those of glabella; for the reconstruction of the nasal tip the bilobed flap has

been indicated, mainly for defects up to 2cm, and for the reconstruction of the nasal wing the nasolabial flap and the V-Y advancement flap are recommended. This last flap was also related in the reconstruction of the lateral slopes.

In defects greater than 2cm in the nasal tip or that compromise more than one aesthetic subunit or the total thickness of the nose, the frontal flap is indicated.

Rintala flap. This flap allows to advance directly downwards the unit of the nasal dorsum extended also towards the glabellar region to cover defects of the dorsum and nasal tip. To allow descent, two Burow triangles should be removed on either side of the base of the pedicle. The advantage of this flap is to provide skin more like the nasal tip.

In the case of our patient, it was decided to perform a rintala flap due to the size and location of the lesion, finding this type of procedure as the best alternative for its versatility and reliability, as well as the possibility of providing an optimal aesthetic result to the patient.

Conclusion

Basal cell carcinoma resection surgery should be basically curative, so the surgeon's intention should be complete removal of the tumor. This criterion must be associated with adequate aesthetic results to be considered in face surgery, an area where cutaneous oncological pathology most frequently appears.

When facial skin defects secondary to the removal of tumors, such as different types of carcinomas, cannot be solved with usual techniques through direct suturing due to the size of the lesion, the knowledge and practice of other alternatives such as flaps is justified.

The choice of treatment will depend on the available resources, the skill in handling them and in the case of the surgical option, the skill in the management of the techniques by the person who does the treatment, the anatomical location of the lesion, its size and the individual characteristics of the patient. None of these treatments is fully effective and all are likely to fail in some cases. For these reasons, it is desirable to have new treatment alternatives that have specific advantages over other techniques and that may be more convenient for some cases, even those

that have recurrences or do not respond completely to other treatments.

Conflicts of interests

There was no conflict of interest during the study, and it was not funded by any organization.

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