

## Perforator dorso-nasal flap - a simple and safe procedure for nasal alar defects

*Retalho perforante dorso-nasal - uma técnica simples e segura para defeitos cirúrgicos da asa do nariz*

### Introduction

Although practiced for several centuries, nasal reconstruction remains as one of the most challenging surgical procedures. The introduction of the principle of three-dimensional reconstruction, or repair of the three structures (mucosa, cartilage and skin), was an important milestone in its improvement[1]. However, the same degree of importance was attributed to the concept of the fourth dimension (the aesthetics need), introduced in 1986 by Burget and Menick[2]. According to them, nasal reconstruction is not just filling a loss of substance, but also searching for an aesthetic result that looks normal[3].

The objective of this paper is to present one case of skin cancer of the nose in which the nasal defect was successfully treated with perforator dorso-nasal flap.

### Case report

An 87 year-old fair skin male presented to our department with a recurrent basal cell carcinoma (BCC) of the left alar region of the nose previously treated by contact cryosurgery one year before. Under general anesthesia, the lesion was excised with surgical margin of 0.5 cm resulting an early surgical defect measuring 2.5 x 2.0 cm that was extended to the entire alar area to keep the aesthetic concept of the nasal subunits. Then, the perforator dorso-nasal flap was

used to close the defect. Its long length allows the reconstruction of the entire left alar region of the nose (Figure 1). The post-operative period progressed uneventfully. The flap showed no signs of ischemia. The pathological examination confirmed morpheiform BCC, being the surgical margins free of tumour. Currently, the patient is in the third year of follow-up, with no local or regional recurrence, and with a very acceptable cosmetic result (Figure 2).

### Comment

BCC is the most common non-melanoma skin cancer in men. It usually affects older fair skin patients (average sixth decade of life) with chronic ultraviolet exposure. About 85% of tumors appear in the head and neck, of which 30% occur at the nose[4]. Although surgical excision is the first line treatment, there are several alternative procedures with high cure rates namely cryosurgery, radiation therapy, photodynamic therapy, and more recently, chemotherapy with vismodegib for advanced cases[5, 6].

The dorso-nasal perforator flap was first described by Edgerton et al.[7], in 1967. It is a transposition flap for reconstruction of the alar region, being the dorso-lateral subunit of the nose the harvest area. Technically, under local or general anesthesia, the skin flap is dissected from the dorso-lateral region of the nose. Then, it is elevated and transposed carefully to cover the surgical defect. Usually, its length allows to restore part of the entire alar region. Finally, the sliding of contiguous skin allows the free tension closure of the donor area. The viability of the dorso-nasal perforator flap is ensured by the pedicle located at the tip of the nose. Through the pedicle, the flap is supplied by a perforating branch of the anterior ethmoid artery that emerges between the two alar cartilages.

In conclusion, the dorso-nasal perforator flap is a simple, safe and viable surgical procedure for the reconstruction of the alar



**Figure 2.** Six months postoperative the aesthetic result was quite acceptable.

defects, being an alternative to the several already known techniques. Unlike some flaps, when the dorso-nasal perforator flap is performed there is no disturbance of nasolabial commissure. Thus, it provides good functional and aesthetic results and preservation of nasal subunits.

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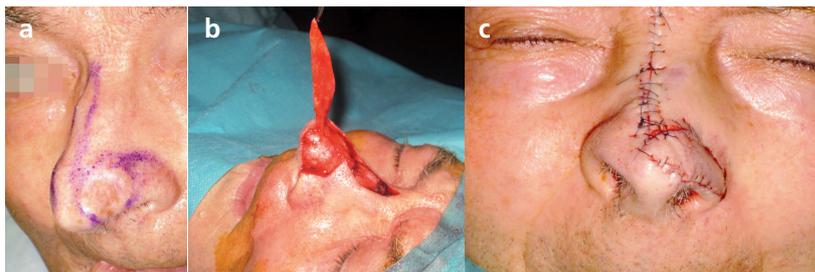
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**Figure 1.** Recurrent basal cell carcinoma of the left alar region (a). The lower extremity of the perforator dorso-nasal flap contains the pedicle where emerges a perforating branch of the anterior ethmoid artery, responsible for its vitality (b). The sliding of the paranasal geniana skin allowed the free tension closure of the donor area (c).