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R. Valverde,^{a,*} D.M. Arranz,^a E. Ruiz-Bravo,^b and R.M. Díaz^a

^aSección de Dermatología, Hospital Infanta Sofía, San Sebastián de los Reyes, Madrid, Spain

^bAnatomía Patológica, Hospital Infanta Sofía, San Sebastián de los Reyes, Madrid, Spain

*Corresponding author.

E-mail address: ricardo.valverdega@salud.madrid.org (R. Valverde).

Management of Basal Cell Carcinoma with Perineural Invasion

Manejo del carcinoma basocelular con infiltración perineural

To the Editor:

The presence of perineural invasion in skin tumors constitutes a major risk factor for local recurrence.^{1,3} Perineural invasion is not a common finding in basal cell carcinomas, with an estimated incidence that, depending on the series, varies between 0.17%² and 3.8%.⁴ The frequency is higher in more aggressive histological subtypes and in recurrent tumors.^{1,2,4,5}

The patient was a 69-year-old woman who consulted for an 8-month history of a slow-growing, asymptomatic lesion on the right ala nasi. On examination there was a

slightly elevated, infiltrated plaque of 1.2 cm in diameter, with poorly defined borders, a smooth, shiny surface, and superficial telangiectasias (Figure 1A). A previous biopsy of the lesion at another center led to a histological diagnosis of superficial and morpheaform basal cell carcinoma with perineural invasion. The patient had no medical or surgical history of interest and, given the results of the biopsy, the lesion was completely excised using Mohs surgery. Two stages were required to achieve disease-free margins (Figure 2A). In view of the presence of perineural invasion, an additional Mohs stage was performed (Figure 1B), also with negative margins. However, subsequent study of paraffin-embedded surgical specimens from each stage, prepared after taking frozen sections for evaluation of the margins, showed no tumor infiltration in the specimen corresponding to the second stage but the presence of tumor tissue in the third stage (Figure 2B).

Perineural invasion enables a tumor to spread to sites well away from the primary site and to establish

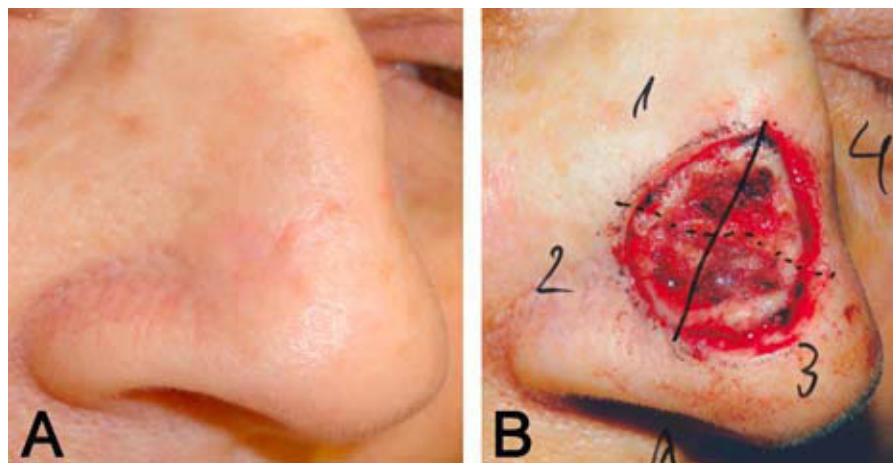


Figure 1 A, On the right ala nasi there was a 12-mm diameter plaque with poorly defined borders and a surface that appeared slightly atrophic. B, Third stage of Mohs surgery.

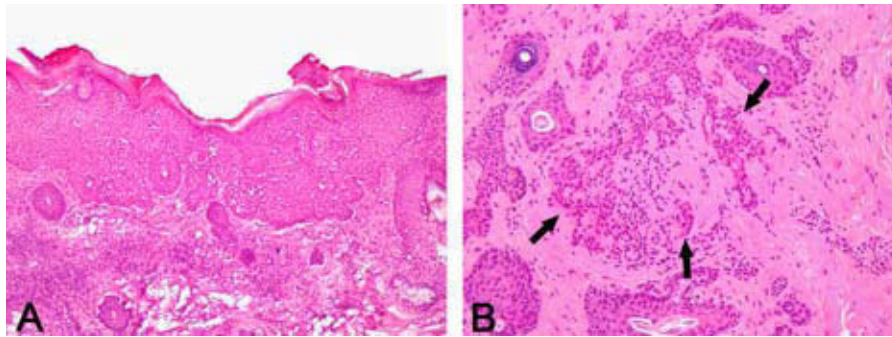


Figure 2 A, Superficial basal cell carcinoma in the first Mohs stage (Hematoxylin-eosin, original magnification $\times 100$). B, Residual tumor deposits (arrows). Dermal infiltrate of basaloid cells interspersed between the hair follicles (Hematoxylin-eosin, original magnification $\times 250$).

an independent lesion with clinical, histological, and pathogenic characteristics that distinguish it both from local spread and from vascular or lymphatic invasion.⁶ Histologically, perineural dissemination is characterized by a patchy pattern with areas of normal tissue between foci of neoplastic infiltration.^{4,6,7} This characteristic pattern, which some authors consider to be merely an artifact of processing and fixing the specimen, explains the persistence of tumor in apparently healthy tissue despite correct examination of all the margins.⁸

Due to the high risk of local recurrence, basal cell carcinomas with perineural invasion require specific management. The majority of authors agree on the use of Mohs surgery as the treatment of choice for this type of tumor^{2,4,7-10}; however, the use of other therapeutic options, such as adjuvant radiotherapy^{2,4,7,9} or performing an additional Mohs stage after obtaining negative margins,^{4,7,9} continues to be a subject of debate. Unfortunately there are no randomized studies that have compared the different therapeutic options.

We consider that the case presented here supports the use of Mohs surgery with an additional stage for the treatment of basal cell carcinoma with perineural invasion. This will ensure the greatest likelihood of complete resection of the tumor and will thus reduce the risk of recurrence.

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F. Messeguer,* E. Nagore-Enguádanos, C. Requena, and C. Guillén-Barona

Servicio de Dermatología, Instituto Valenciano de Oncología, Valencia, Spain

*Corresponding author.

E-mail address: francescmb@comv.es (F. Messeguer).