

# Treatment of Nodular Basal Cell Carcinoma With Cryotherapy and Reduced Protocol of Imiquimod

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*Various treatment options are available for basal cell carcinoma (BCC). We report a case of a patient with a nodular BCC on the nose who was treated with combination therapy consisting of cryotherapy with liquid nitrogen followed by imiquimod cream 5% 5 times weekly for 6 weeks. Clearance of the lesion was histologically confirmed.*

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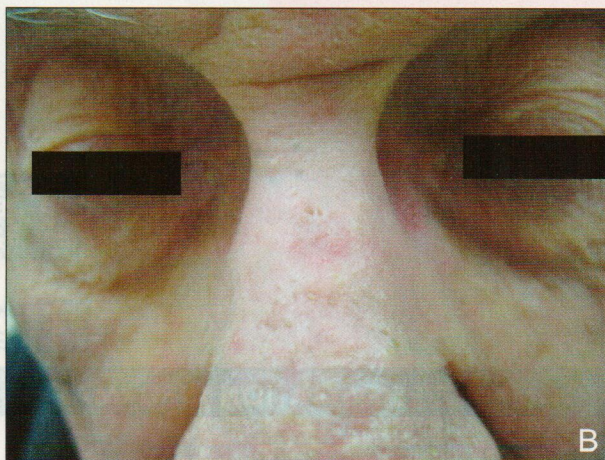
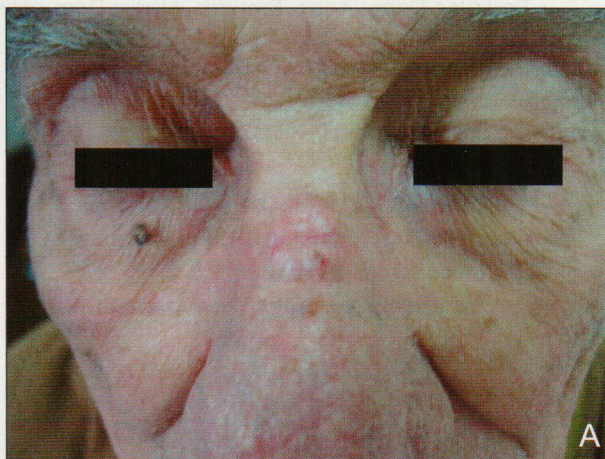
Various treatment options are available for basal cell carcinoma (BCC), including surgery, cryosurgery, radiotherapy, and local therapy. In 2004, imiquimod received US Food and Drug Administration approval for the treatment of superficial BCC. This molecule also was used off label for nodular BCC in various case series.<sup>1-5</sup> We report a case of a patient with a nodular BCC on the nose who was treated with combination therapy consisting of cryotherapy with liquid nitrogen followed by imiquimod cream 5% 5 times weekly for 6 weeks. Clearance of the lesion was histologically confirmed.

## Case Report

An 82-year-old man presented to the dermatology department with a lesion on his nose of 2 years' duration that had gradually increased in size. On clinical examination a lumpy nodular tumor measuring 1.6 cm in diameter with telangiectasia was present (Figure, A). A 3-mm punch biopsy was performed. Histologic examination revealed lobules of basaloid cells, which confirmed a diagnosis of nodular BCC.

Given his age and the size and location of the tumor, conservative treatment was proposed.

He underwent cryotherapy with liquid nitrogen for 25 seconds. Two weeks later he was administered



A lumpy nodular tumor on the nose with telangiectasia before (A) and 2 weeks after combination therapy with liquid nitrogen cryotherapy and imiquimod cream 5% (B).

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imiquimod cream 5% 5 times weekly for 6 weeks. On follow-up 2 weeks after the end of the treatment period, clinical clearance was observed (Figure, B) and was confirmed on histologic examination with two 3-mm punch biopsies. Histologic examination did not reveal tumor cells. Follow-up was scheduled for every 6 months, and after 18 months there was no sign of recurrence.

### Comment

The standard treatment of nodular BCC is surgery. In our patient, several attempts were made to perform more conservative treatments. The use of conservative treatment is especially important when BCCs are large or are located in an area where surgery may be disfiguring. Imiquimod, through its immunomodulatory activity, is an alternative therapy for the treatment of nodular BCC. The biologic effects of this molecule are mediated by activation of toll-like receptors 7 and 8 that stimulate the secretion of proinflammatory cytokines and produce an antitumor immune response. Additionally, apoptosis is induced by activation of the B-cell chronic lymphocytic leukemia/lymphoma 2 gene, *BCL2*.<sup>6</sup>

Several case series have reported variable efficacy with the use of imiquimod in the treatment of nodular BCC; various protocols of different durations have been implemented. Local side effects were frequent and sometimes presented with high intensity.<sup>1-5</sup> To increase the chances of lesion clearance and to minimize side effects by reducing the total treatment duration, we combined a method of physical destruction and local treatment with the use of imiquimod. This

protocol enabled complete clearance of the nodular BCC.

### Conclusion

Our case involves the clearance of a nodular BCC with a treatment regimen that combined a strong cryotherapy with liquid nitrogen followed by the application of imiquimod cream 5% for 6 weeks.

### REFERENCES

1. Love WE, Bernhard JD, Bordeaux JS. Topical imiquimod or fluorouracil therapy for basal and squamous cell carcinoma: a systemic review. *Arch Dermatol*. 2009;145:1431-1438.
2. Bianchi L, Costanzo A, Campione E, et al. Superficial and nodular basal cell carcinomas treated with an immune response modifier: a report of seven patients. *Clin Exp Dermatol*. 2003;28(suppl 1):S24-S26.
3. Shumack S, Robinson J, Kossard S, et al. Efficacy of topical 5% imiquimod cream for the treatment of nodular basal cell carcinoma: comparison of dosing regimens. *Arch Dermatol*. 2002;138:1165-1171.
4. Eigentler TK, Kamin A, Weide BM, et al. A phase III, randomized, open label study to evaluate the safety and efficacy of imiquimod 5% cream applied thrice weekly for 8 and 12 weeks in the treatment of low-risk nodular basal cell carcinoma [published online ahead of print July 3, 2007]. *J Am Acad Dermatol*. 2007;57:616-621.
5. Vidal D, Matías-Guía X, Alomar A. Fifty-five basal cell carcinomas treated with topical imiquimod: outcome at 5-year follow-up. *Arch Dermatol*. 2007;143:266-268.
6. Schön MP, Schön M. Imiquimod: mode of action. *Br J Dermatol*. 2007;157(suppl 2):S8-S13.