



LASERS

FRACTIONAL CO₂ LASER AS A DRUG DELIVERY SYSTEM IN THE TREATMENT OF BASAL CELL CARCINOMA WITH TOPICAL BLEOMYCIN

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Background - The most appropriate treatment for Basal Cell Carcinoma(BCC) is surgery through a radical excision. Whenever a radical excision is not an option due to an unfavourable cosmetic defect or accompanying disease, other treatment options may be used. Bleomycin has been previously used intralesionally in the successful treatment of BCC. The use of lasers as drug delivery agents was described in 1987.

Case Report - A 76y,female came with a 7*5cm erosive plaque over the left supraauricular area of the scalp. Dermoscopic & histopathological examination confirmed the diagnosis of BCC. The patient was not physically fit to undergo a radical excision of the lesion. Fractional CO₂ Laser was used to create vertical micro channels, similar to borewell holes, in the lesion. Bleomycin 15U powder was reconstituted with 1cc NS and 1cc 2% Lidocaine. This solution was then applied topically over the lesion during the fractional CO₂ session. 6 passess of the fractional CO₂ followed by topical application were performed per session of therapy. A total of 2 session were performed 2 months apart. Repeat histopathological examination from two sites in the lesion 3 months post the second session revealed no evidence of Basal Cell Carcinoma in it.

Discussion - The use of lasers for promoting drug delivery is promising, however a greater number of controlled studies with longer follow-up periods are necessary. The standardization of the energy and density used in the laser applications, as well as the standardization of the concentration of each substance to be applied via drug delivery processes is required.

