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Novel method of insulated intralesional radiofrequency ablation using an intravenous cannula for capillary lobular haemangioma, keloid, and acne scars

Background: Intralesional radiofrequency ablation (IL-RFA) using an insulated probe is a modification of conventional radiofrequency ablation. IL-RFA is a targeted therapy that selectively destroys the deeper pathologic tissue in the dermis without affecting the superficial epidermis. This modification helps to selectively target the pathological lesion and prevent damage to the epidermis. Thus it has the advantage of better cosmetic outcomes compared to conventional radiofrequency ablation. The use of ILRFA is relatively novel in dermatology. It is being used in other specialties and few dermatological conditions like keloids, hypertrophic scars, lymphangioma circumscriptum, venous malformations, etc., There is a paucity of information on the safety and efficacy of IL-RFA in dermatology. Here we describe the procedure of IL-RFA for capillary lobular haemangioma (CLH), keloid, and acne scars.

Procedure: The procedure was done under infiltration local anesthesia and aseptic conditions after obtaining consent from the patients. A small window was created in the proximal end of the plastic sheath of an intravenous cannula using a surgical blade. An intravenous cannula with an intact plastic sheath overlying it is inserted into the lesion and then the radiofrequency probe in was brought into contact with the cannula through the window to deliver the electric current. The radiofrequency energy in coagulation mode was delivered till the lesion becomes blanched in cases of CLH and keloid. Complete blanching of the lesion was taken as the endpoint. For acne scars, the cut mode was used and the IV cannula was moved in a fanning direction to ensure complete breakage of collagen.

Novelty and conclusion: IL-RFA has the added advantage of preserving the surface epithelium which is necessary for a better cosmetic outcome, quick healing, and also to lessen the recurrences. IL-RFA using an insulated intravenous cannula probe seems to be cost-effective, safe, and effective in selectively targeting deep-seated cutaneous lesions. Large-scale studies are required to evaluate the role of IL-RFA in dermatology.

Biography

Dr Girishkumar M C, MBBS, MD-DVL, his post-graduation from Osmania medical college Hyderabad and his presentations: 3 national papers, 5 papers at state conference Publications-1. He got awards - Received a certificate of appreciation as an organiser from Telangana state IADVL executive committee 2018 and Received prize in online quiz held by IADVL—TS.