Surgical Approaches and Experiences for Keloid Treatment and the Adjunctive Therapy

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BACKGROUND

Current treatment options for keloids include surgical excision and local corticosteroid injections. However, the high rate of recurrence remains a significant challenge. Current guidelines and expert consensus suggest that treatment strategies should be tailored based on the size of the lesion. Keloids with a diameter of less than 2 cm are typically managed with corticosteroid injections alone, while those larger than 2 cm are often treated with surgical excision followed by adjuvant radiotherapy. Despite these approaches, managing patients with multiple or scattered keloid lesions remains particularly difficult.

METHODS

We present several cases in which the choice of surgical method was guided by the anatomic location and the morphological characteristics of the lesions.

RESULTS

For larger keloids on the ear, core excision is the preferred surgical approach, as it helps preserve the natural shape of the auricle. Large keloids on the lower jaw or trunk often originate from acne or folliculitis. In such cases, the choice of surgical technique is guided by the JSW Scar Scale (JSS), the lesion's growth pattern, and its surface characteristics.

When the JSS elevation score is 3 and the lesional surface is rough, the optimal approach is complete excision, followed by low–tension primary closure, skin grafting, or the use of local flaps.

If the surface is smooth and the lesion remains within the wound boundary, core excision is the first choice. However, if the surface is smooth but the lesion extends beyond the wound boundary, excision followed by skin grafting using tissue harvested from the keloid itself is recommended.

In patients with multiple, partially confluent keloids, the micro –punch technique is employed when the JSS elevation score is less than 3, whereas core excision is indicated when the elevation score is 3.

Electron beam irradiation is administered within 24 hours post –surgery. Compression therapy, intralesional injections, and 595–nm pulsed dye laser treatments can be selected as adjuvant therapies to reduce recurrence and optimize outcomes.

CONCLUSION

The choice of surgical method can be guided by the anatomic location and the morphological features of the keloid lesions. Electron beam irradiation, compression therapy, intralesional injections, and 595–nm pulsed dye laser treatment can be selected as adjuvant therapies, based on the characteristics and distribution of the keloids.