Nucleoresection Combined with Punch Extraction: A Keloid Surgical Technique Worth Promoting

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ACKGROUND

The treatment of large –area keloids remains challenging. Surgical intervention can effectively reduce keloid volume, creating favorable conditions for postoperative superficial radiotherapy. However, selecting the optimal surgical approach requires careful consideration by clinicians. Traditional direct excision with suturing or flap techniques, while reducing keloid volume, increases tension in the affected skin area –a key factor contributing to keloid formation and recurrence. Additionally, direct excision and suturing are not feasible for extensive keloids.

METHODS

Keloid nucleoresection addresses this by removing the core tissue while preserving the overlying skin, achieving "zero volume reduction without altering surface area," thereby avoiding postoperative skin tension. The combined punch extraction technique further optimizes outcomes by homogenizing skin flap thickness, draining subflap hematomas, and enhancing the efficacy of nucleoresection.

RESULTS

From November 2021 to October 2024, 369 keloid patients underwent keloid core excision combined with punch extraction, with routine postoperative superficial electron beam irradiation. Thefollow–up period ranged from 6 to 40 months. None of the patients experienced extensive or severe recurrence postoperatively. Partial localized minor recurrences tended to become flattened and softened after intralesional drug injections.The VSS and VASscores significantly decreased. ($p<0.05$)

CONCLUSION

The combination of keloid nucleoresection and punch extraction offers an effective treatment for large–area keloids and represents a surgical approach worthy of widespread promoting. Postoperative superficial radiotherapy can effectively reduce recurrence rates.