

Retrospective Study on the Effectiveness of Punch Drilling Combined with Superficial X-ray Radiotherapy and Intralesional Drug Injection for Keloid Treatment

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Background:

Keloids, pathological scars with complex etiology including genetic predisposition and trauma, remain a therapeutic challenge due to high recurrence rates. This study intends to conduct a retrospective study on the patients who received punch drilling therapy for keloid in our hospital to provide a new method and objective basis for the treatment of keloid.

Methods:

A retrospective analysis of 42 keloid patients treated at Dermatology Hospital of Southern Medical University was conducted. Outcomes were assessed using Vancouver Scar Scale (VSS) and Visual Analogue Scale (VAS) scores preoperatively and scar image data were collected, alongside complication rates and patient satisfaction surveys.

Results:

Significant reductions were observed in both scar scores: Median VAS decreased from 3.5 (range: 2.0–8.0) to 1.5 (1.0–4.0), and VSS from 7.0 (3.0–12.0) to 5.0 (1.0–8.0) ($P < 0.001$). Postoperative complications were minimal, with 95% of patients reporting marked improvement in scar appearance and satisfaction.

Conclusion:

The combination of punch drilling, adjuvant radiotherapy, and intralesional steroids injection demonstrates high efficacy in keloid treatment, characterized by low invasiveness, rapid recovery, and reduced recurrence. This protocol provides a promising strategy for refractory keloid management.

Keywords:

Keloid, Punch Drilling, Superficial Radiation Therapy, Intralesional Drug Injection;