

Orthonyxia as a Preventive Strategy for Nail-Related Pressure Injury in Diabetic Patients: A Case Series

Wound healing and outcome

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Background

Nail-related pressure and ingrown toenails are a frequent but often under-recognized source of local tissue stress in patients with diabetes mellitus, potentially contributing to soft tissue injury and increasing the risk of complications. Conservative, non-invasive strategies aimed at reducing mechanical load may play an important role in preventive care for high-risk patients.

Methods

We present a case series of 32 patients managed in a private podiatry clinic. All patients underwent orthonyxia using a fiberglass brace system to address nail-induced periungual pressure. Patients were followed at regular intervals, with a median visit frequency of approximately 6 weeks. Long-term follow-up was available, with several cases monitored over extended periods.

Results

Orthonyxia was associated with consistent reduction of periungual pressure and improvement of local clinical symptoms across the cohort. Regular follow-up enabled maintenance of nail configuration and minimized recurrent nail-edge trauma. No clinically significant periungual injury was reported in the available follow-up data. These findings were supported by photographic documentation in a subset of representative cases, demonstrating sustained clinical improvement over time.

Representative Clinical Cases

Case One

Baseline



12
month
follow-up



Case Two

Baseline



12
month
follow-up



Case Three

Baseline



5
month
follow-up



Conclusion

32
patients

~6 wk
median visit frequency

- Consistent reduction of periungual pressure
- Improvement of local clinical symptoms
- Maintenance of nail configuration
- Recurrent nail-edge trauma minimized
- No clinically significant periungual injury reported



Orthonyxia appears to be a safe, well-tolerated, and non-invasive intervention for reducing nail-related mechanical stress in patients with diabetes. By minimizing localized pressure and repetitive trauma, it may contribute to preventive strategies in diabetic foot care, particularly in patients at increased risk of tissue injury. Further prospective and controlled studies are needed to better define its clinical effectiveness and role within standardized diabetic foot prevention protocols.

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