NAIL DISORDERS

SIGNIFICANCE OF SURGERY TO CORRECT ANATOMICAL ALTERATIONS IN PINCER NAILS

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Background: Pincer nail deformity and its causes can pose a therapeutic challenge. Ill-fitting shoes and subungual exostosis of the toes may be attributed to pincer nail formation. However, in some cases, the causes of pincer nail deformity could not be determined. The role of mechanobiology in nail configuration and deformities has rarely been considered.

Objective: The present study investigated the effectiveness of surgical procedures to correct pincer nail deformity, in terms of anatomical changes measured by radiographs.

Methods: Two surgical procedures, nail bed widening with matrixectomy or a dermal graft, were used on 30 nails in 20 patients with pincer deformity. Changes in the width, height, and curvature indices were assessed. Radiographs were obtained to evaluate the presence of osteophytes and measure the interphalangeal angle in terms of mechanobiology in nail configuration.

Results: Preoperative and postoperative assessment results revealed marked improvement objectively and subjectively. The mean width index was greater after surgery than that before surgery (84.4% vs. 64.8%). Both mean height and curvature indices were smaller after surgery than
before preoperative (23.0% vs. 76.7% and 1.3% vs. 2.2%, respectively).

Conclusion: Nail bed widening with matrixectomy, which corrects anatomical alterations in pincer
nails, is suggested to be suitable for patients with pincer nail deformity.