Correction of Pincer Nail Deformity - Using a Vertical Z-Plasty

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Abstract

Purpose: Pincer nail deformity is an important health problem that causes discomfort in daily life. It is a deformity characterized by transverse overcurvature of the nail that increases distally. Recently several methods have been reported for the treatment of pincer nail deformity, such as dermis graft, or ADM(acellular dermal matrix) graft. But these procedures have some disadvantages, such as donor site morbidity, foreign body reaction or extra cost. In our procedure, using a vertical z-plasty without additional graft material, we experienced excellent prognosis. We report this simple procedure as a new treatment modification of pincer nail deformity.

Methods: From March 2010 to March 2012, this technique has been performed on 6 toes in 5 patients. We designed vertically oriented Z-plasty in apex of toe. The triangular medial flap(M flap) is designed along to the over-curved nail bed. And lateral flap(L flap) is designed lateral portion of M flap. After dissection, the triangular flaps are transposed and redraped with deepithelization(Figure 1). The nail bed flap was sutured with 5/0 nylon and artificial nail is inserted.

Results: In our procedure, the distal part of the nail bed is elongated in a transverse direction by using a vertical z-plasty technique without additional matrix. In all unilateral and bilateral cases, the deformity was eliminated successfully with no recurrence in over 1 year of follow up. The growing nail turned back into its natural form and all symptoms were relieved.(Figure 2)
Conclusions: Widening and flattening the nail bed provide a long-lasting effective treatment of the pincer nail deformity and pain relief. Our vertical Z-plasty method is found to be simple and effective treatment modality for pincer nail deformity.

References