

Successful treatment of median canaliform nail dystrophy with topical tazarotene foam



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Key words: habit-tic deformity; median canaliform nail dystrophy; onychodystrophy; tazarotene.

INTRODUCTION

Median canaliform nail dystrophy (MCND) is an uncommon nail disorder that typically affects the thumbnails and is characterized by transverse ridges radiating from a paramedian canal or split in the nail plate, bearing resemblance to a fir tree.¹ Its etiology is unknown although it is thought to be caused by temporary defects in the nail matrix leading to dyskeratosis.¹ It may also be caused by trauma to the nail plate or nail bed, subungual tumors, or medications such as oral retinoids.¹⁻³ Treatment of MCND is challenging, as there are no therapies demonstrating consistent efficacy. Here, we present a case of MCND that dramatically improved with daily application of topical tazarotene 0.1% foam.

CASE REPORT

A 33-year-old female presented with asymptomatic nail dystrophy of the right thumbnail that had been present since she was a child. She denied any history of trauma or manipulation of the affected nail. She was overall healthy and was not taking any medications. On physical exam, there was a central split of the nail plate with transverse ridging in a fir-tree pattern on the right thumbnail (Fig 1, A). All other nails were normal. A diagnosis of MCND was made, and she was started on topical tazarotene 0.1% foam applied daily to the nail plate and proximal nail fold. On follow-up 2 months later, there was slight improvement of the proximal nail (Fig 1, B). On follow-up 5 months later, there was near-complete resolution of the MCND (Fig 1, C).

Abbreviation used:

MCND: median canaliform nail dystrophy

CASE DISCUSSION

Treatment of MCND remains a challenge. Data in the literature are limited to case reports with variable efficacy. Kim et al reported a case of MCND that was successfully treated with tacrolimus 0.1% ointment applied daily to the proximal nail folds for 4 months after initially failing topical corticosteroids.⁴ Another case of MCND was treated with oral fluoxetine and tacrolimus 0.1% ointment without mention of treatment response.⁵ Two patients demonstrated response to multivitamins containing biotin, vitamin B₆, C, E, and riboflavin.⁶ One case showed partial response to 1064-nm quasi-long pulsed Nd:YAG laser after 10 sessions.⁷ There is a single case report in the literature of MCND treated with topical tazarotene ointment without documentation of treatment response.⁸ Tazarotene is a third-generation topical retinoid and has been used to treat other causes of onychodystrophy, such as nail psoriasis.⁹ Its mechanism of action in the treatment of onychodystrophy is likely due to the normalization of keratinocyte differentiation.⁹ It is generally well-tolerated. The most common adverse reactions are local erythema and irritation at the site of application.⁹ We report a case of MCND that had been present since childhood and was successfully treated with tazarotene 0.1% foam. MCND is oftentimes associated with chronic manipulation or trauma of

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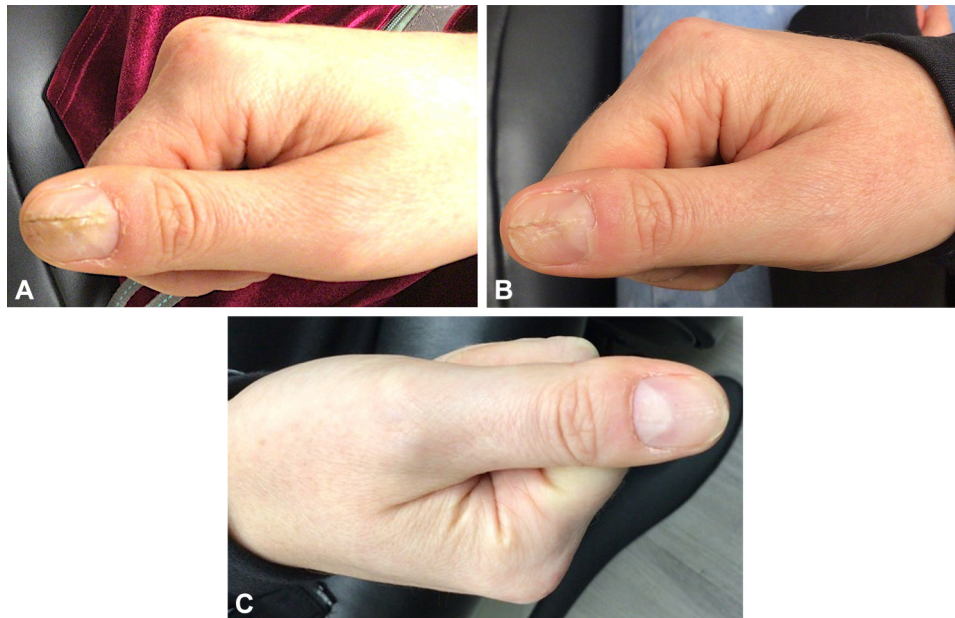


Fig 1. **A**, MCND of the right thumb prior to initiation of treatment. **B**, Improvement in MCND seen at the proximal aspect of the nail plate after 2 months of treatment. **C**, Near-complete resolution of MCND after 5 months of treatment. *MCND*, Median canaliform nail dystrophy.

the nail. It is possible that application of the tazarotene helped to distract the patient from manipulating the nail; however, the patient specifically denied any manipulation or trauma of the affected nail. The drastic improvement of this chronic condition seen within months of initiating treatment supports the use of topical tazarotene as a potential treatment for MCND.

CONCLUSION

We present a case of MCND that had been present for many years and improved dramatically with daily application of topical tazarotene 0.1% foam for 5 months. MCND is a challenging condition to treat with no consistently effective therapies. Topical tazarotene is a safe, well-tolerated medication that can be considered as a treatment option for MCND.

Conflict of interest

None disclosed.

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