

# Median Nail Dystrophy due to Habit Tic: A Case Report

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**Submitted** 1 August 2021

**Accepted** 24 December 2021

**Published** 31 July 2022



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## Citation

“*Baaniya B, Shah N. Median nail dystrophy due to habit tic: a case report. JBPKIHS. 2021;4(2):45-48*”



<https://doi.org/10.3126/jbpkihs.v4i2.38191>



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## Abstract

Median dystrophy of nails may present with diagnostic difficulty. We present a case of a 30-year old male with multiple serial transverse ridges involving the median part of the bilateral great toe nails and the right thumb nail of approximately 10 years duration. On probing, the patient was found to have the habit of picking over the proximal nail folds. Habit of tic may not be noticed by the patient, however, may be the cause of dystrophy of nails.

**Keywords:** Habit tic; Median nail dystrophy; Nail

## Declarations

**Ethics approval and consent to participate:** Not appropriate

**Consent for publication:** Informed consent could not be obtained from the patient as he lost to follow-up. However we have made sure that the identification of the patient has not been disclosed.

**Availability of data and materials:** Will be available upon request by the readers.

**Competing interest:** None

**Funding:** None

**Authors' contributions:** BB: literature search, manuscript formatting. NS: Concept, diagnosis and literature review. All authors have read and approved the final manuscript.

**Acknowledgement:** None

**M**edian nail dystrophy is a median or paramedian longitudinal ridge or groove in nails with transverse depressions extending laterally. It is usually the result of a habit tic, however, may be produced by glomus tumor, personal digital assistants, playing guitar and drugs. Median nail dystrophy of Heller and habit tic deformity have been thought to be variants of the same entity [1]. We describe a case of median nail dystrophy resulting from the habit tic.

## CASE

**A** 30-year-old male presented with transverse ridging with blackish discoloration on right thumb nail and both great toe nails for ten years. He denied any history of lesion elsewhere on the skin. On questioning, he admitted to repetitively picking at the nails near the proximal fold. There was no history of intake of oral retinoids, or other medications. On examination, transverse ridges arising from a median longitudinal groove were seen on the right thumb nail and both great toe nails. There was a loss of cuticle over the affected nails. Lunulae appeared to be wide in this individual (**Fig. 1**). There was no lesion elsewhere on the skin or other nails. A potassium hydroxide mount of the nail clipping did not show any fungal element. He was advised for a psychiatric consultation; however, he was unwilling. Counseling regarding the etiology and the need to stop picking was emphasized. No medication was prescribed. The patient was lost to follow up.

## DISCUSSION

**M**edian nail dystrophy and median canaliform dystrophy of Heller are considered to be the same



**Figure 1:** Right thumb nail and bilateral great toe nails showing median longitudinal grooves with transverse ridges.

condition. Trauma could be one of the causes. This case is the result of repetitive picking at the nails. Such cases have been occasionally reported and history of picking with the nail of another finger at the proximal nail fold is apparent. There have been cases which have resulted with the use of personal digital assistants where the thumbs are used repetitively [2]. A case of median dystrophy in the right thumb has been reported in a guitar player which improved when he took a three months break from playing guitar [3]. Isotretinoin induced median nail dystrophy has also been described and should be kept in mind as a possible adverse effect of retinoid therapy [4]. Wider than usual lunulae have been seen in cases of median nail dystrophy, and it has been speculated that these predispose the patients to trauma induced dystrophy as the nail matrix is more exposed [1]. People with a wider lunula may be more predisposed to developing isotretinoin induced median nail dystrophy as well. There have been several reports on median nail dystrophy due to habit tic, some of which are summarized in **Table 1**. As per our literature review, thumbnails seem to be the most commonly involved nails. Additional involvement of the toenails is occasionally seen as in our case.

Dermatoscopic findings have been described to include periungual scale, transverse grooves, macrolunula, longitudinal grooves, erythematous proximal lunula, branching grooves, traumatic onycholysis, and hemorrhage[12]. Treatment may consist of cessation of manipulation, and additionally a selective serotonin reuptake inhibitor (SSRI) when associated with depression or obsessive compulsive disorders. A psychiatry consultation may be warranted in such cases. Tacrolimus ointment 0.1% and flurandrenolide tape have also been used for treatment [1, 15].

## CONCLUSION

**M**edian nail dystrophy is usually the result of a habit tic. This factitious disorder of the nail is common but often misdiagnosed, thus resulting in many unnecessary investigations. It is usually associated with psychiatric co-morbidities like anxiety, obsessive compulsive disorder or depression, hence proper psychiatric evaluation and management is a crucial part of treatment. Besides that, other treatment modalities are directed towards cessation of manipulation by using tape or adhesive.

**Table 1:** Case reports and series of median nail dystrophy due to habit tic

Author(s)	Country/ Date of publication	Number of cases	Nails involved	Associated factors	Treatment
Griego et. al. [1]	United States of America/ 1995	1	Bilateral thumb nails	Moderate nodulocystic acne, patient's mother reported having manipulated the patient's cuticles during infancy	Flurandrenolide tape
Edwin et. al. [5]	Afghanistan/ 2008	1	Bilateral thumb nails	Compulsive or impulse control disorder	Taping method for 2 months with moderate improvement
Ring et. al. [6]	United States of America/ 2010	2	Bilateral thumb nails	Frequent picking	Cyanoacrylate adhesive to be placed at the proximal nail fold
Andrew et. al. [7]	Canada/ 2014	1	Bilateral thumb nails	Frequent picking, anxious personality	Temporary occlusion of the nail folds with tape (but patient party preferred expectant approach)
El-Heis et. al.[8]	United Kingdom/ 2016	1	Bilateral thumb nails	Continuous rubbing of thumbnails and pushing the cuticles	Emollients twice daily
Horne et. al. [9]	United States of America/ 2018	2	Bilateral thumb nails	Frequent picking, stress related to alopecia areata	Not mentioned
Olszewska et. al. [2]	Poland/ 2009	2	Thumb nail (side not mentioned)	Habitual personal digital assistants use	Discontinue personal digital assistants use
Singal [10]	India/ 2017	1	Bilateral thumb and toenails	Frequent picking	Wear socks and shoes, thrice daily application of white soft paraffin
Jimenez- Cauhe et.al. [11]	Spain/ 2020	1	All 10 fingers	Not mentioned	Not mentioned
Elmas et. al. [12]	Turkey/ 2021	8	Thumbnail in 7 patients, 4th fingernail in one patient. Bilateral involvement in 3 patients	Rubbing and picking their nails. One patient was diagnosed with obsessive-compulsive disorder.	Temporary occlusion of the nail folds with a tape
Carmela et. al. [13]	United States of America/ 1997	1	Several fingernails	Frequent picking, history of major depression	Fluoxetine hydrochloride, 20 mg/d orally
Wu JJ [3]	United States of America/ 2009	1	Right thumbnail	Guitar playing	Improvement on taking a break from playing the guitar
Geizhals et.al. [14]	United States of America/ 2019	1	Not mentioned	Not mentioned	Once-daily application of benzethonium chloride to the proximal nail fold

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