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## **Dermatology Online Journal**

### **Title**

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### **Permalink**

<https://escholarship.org/uc/item/16j6x5n3>

### **Journal**

Dermatology Online Journal, 22(11)

### **ISSN**

1087-2108

### **Authors**

El-Heis, S  
Al Abadie, M

### **Publication Date**

2016-01-01

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**Letter**

**Habit tic nail deformity - a rare presentation in an 8 year old boy**

**S El-Heis<sup>1</sup>, M Al Abadie<sup>2</sup>**

**Dermatology Online Journal 22 (11): 22**

**<sup>1</sup>Medical Research Council Lifecourse Epidemiology Unit - University of Southampton  
Southampton General Hospital, Southampton, UK**

**<sup>2</sup>Department of Dermatology, New Cross Hospital, Royal Wolverhampton NHS Trust & Medical School,  
Birmingham, UK**

**Correspondence:**

Sarah El-Heis  
Medical Research Council Lifecourse Epidemiology Unit  
University of Southampton  
Southampton General Hospital  
Southampton  
SO16 6YD  
UK  
Tel. +44 (0)23 80777624 Fax +44 (0)23 80704021  
Email: sarahelheis@googlemail.com

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**Abstract**

Habit tic nail deformity is a nail dystrophy resulting from habitual, repetitive trauma to the nail. It is usually acquired in adulthood, however, we report a case of habit tic nail deformity in an 8 year old boy. The diagnosis was made clinically with further history revealing that the boy repeatedly rubbed his thumbnails and pushed the cuticles. Emollient cream (Balneum®) was recommended twice daily and both the patient and his mother were educated on the behavioral nature of this condition. There was marked improvement at 6 months of treatment and further improvement at 12 months.

We note that habit tic nail deformity is not exclusive to adults. Diagnosis can be made clinically. History and physical examination provide valuable clues and psychosocial links must be explored and addressed. Management is challenging and compliance with treatment is variable. Patient education, barrier methods, and behavioral therapy can be helpful in preventing further trauma to the nails.

**Keywords: habit tic, nail deformity**

**Introduction**

Although habit tic nail deformity is not uncommon, patients do not commonly present with the nail deformity as their main concern; it is often an incidental observation made by the examining physician [1]. The topic is described in major dermatology text books but published articles on this remain limited. The condition is usually acquired in adulthood [1], but there have been reports of this occurring in children [2].

**Case synopsis**

We present a rare case of habit tic nail deformity in an 8 year old boy who presented to the dermatology clinic with nail changes of 2 years duration that were thought to relate to a resistant fungal infection. On clinical examination, the changes suggested habit tic nail deformity as evidenced by transverse, parallel ridging and central depression of both thumbnails (Figure 1a). There was no evidence of dermatitis in the periungual areas, paronychia, nail thickening, or onycholysis. Further history from the mother revealed that her son had a habit of continuously rubbing his thumbnails and pushing the cuticles. The mother had thought that the habit was related to a presumed itchy fungal infection. No psychosocial links to the habit were identified. We explained the behavioral nature of the condition to the patient and his mother and advised the use of emollient cream twice daily. This approach diminished the trauma to the thumbnails and resulted in marked improvement at 6 months of treatment (Figure 1b) and further improvement at 12 months (Figure 2).



**Figure 1.** Appearance of thumbnails prior to treatment (A) and at 6 months of treatment (B).



**Figure 2.** Appearance of thumbnails following 12 months of treatment.

## Discussion

Habit tic nail deformity results from repeated injury to the proximal nail fold and subsequent damage to the nail matrix, which results in transverse grooves proximally that move distally as the nail grows. Injury often occurs as a result of nervous picking or pushing of the nail cuticle, commonly involving thumbnails but any fingernails may be affected. Self-destructive behavior with compulsive manipulation resulting in nail deformity is referred as onychotillomania. This designation describes a group of conditions including habit tic nail deformity, nail picking, nail biting (onychophagia), hangnail pulling, and finger sucking [3]. There have been associations with underlying psychopathology with self-injury as a result of obsessive compulsive disorder or depression.

Median nail dystrophy of Heller can be difficult to differentiate from habit tic nail deformity. Typically, it presents as a longitudinal midline split or canal with oblique radiating ridges and a characteristic fir-tree pattern. Trauma to the nail matrix has been implicated and some consider it a subset of habit-tic deformity [4]. In our case, the history of habitual rubbing of the nails, the presence of the central depression, and the lack of the fir-tree pattern were suggestive of habit tic deformity rather than median nail dystrophy.

Management of habit tic nail deformities is challenging. Compliance with treatment is variable, particularly in children; patient and parent education are paramount. Barrier methods such as bandaging of the affected nails are effective in preventing further trauma, however, compliance is low. There is evidence that cyanoacrylate adhesive glue use can produce good results [1]. Behavioral therapy should be considered when underlying psychopathology is identified. In persistent cases related to obsessive–compulsive behaviors, treatment with serotonin reuptake inhibitors may be considered [5].

## Conclusion

Our case highlights that habit tic nail deformity is not a condition exclusive to adults and that a detailed history and careful physical examination can provide valuable diagnostic clues. The condition can indicate underlying psychosocial links that must be explored and addressed. Treatment may require several approaches such as barrier, pharmacological, behavioral, and psychological therapy alongside patient education.

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