

## Infantile Ingrown Toenails: Series of 7 Cases

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### Abstract

**Observation:** Ingrown toenail in the infant (Infantile ingrown toenails) is a rare congenital case appears when the thin sharp edge of the big toenail embeds into the hypertrophic lateral nail folds of the hallux leading to inflammation in the nail fold. Congenital hypertrophy of the distal soft tissue of the phalanx may produce a dome-shaped lip that covers the nail plate and lead to this condition. This is often bilateral and usually appears at birth. We described 7 cases of infantile ingrown toenails.

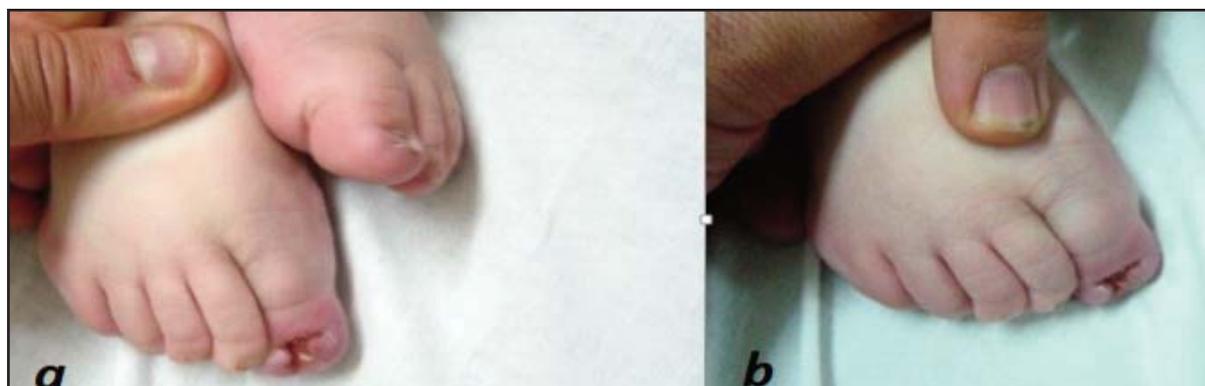
### Introduction

We described 7 cases of Infantile ingrown toenails

### Case Report

We described 7 cases of Infantile ingrown toenails between 2005 and 2016 (**Table 1**). All our patients had congenital hypertrophy of the nail folds of the hallux at birth which partially cover the nail plate.

All were male. Their age ranged between 21 days and 4 months ( mean :48 days). The story began since birth or shortly thereafter in all our cases. The condition was bilateral in all the 7 described cases with 5 of them with dome shaped toe nail (**Figures 1a and b**),(**Figure 2**), (**Figure 3**), (**Figure 4**), (**Figure 5**), (**Figure 6**), (**Figures 7a and b**). Clinical exam revealed swelling and inflammation in the nail fold in all the cases.



**Figures 1 a and b.** Hypertrophy of the nail folds of the hallux on right foot

**Table 1.** The 7 case report series of our study

patient	Fig	Age	Gender	Treatment
1	Figure 1a and b	120 days	Male	surgical
2	Figure 2	30 days	Male	eosin aqueous systemic antibiotic
3	Figure 3	60 days	Male	eosin aqueous systemic antibiotic
4	Figure 4	32 days	Male	eosin aqueous systemic antibiotic
5	Figure 5	31 days	Male	eosin aqueous systemic antibiotic
6	Figure 6	21 days	Male	eosin aqueous systemic antibiotic
7	Figure 7a and b	40 days	Male	eosin aqueous systemic antibiotic

**Discussion**

Ingrown toenail in the infant (Infantile ingrown toenails) is a rare entity appears when the thin sharp edge of the big toenail embeds into the hypertrophic lateral nail folds of the hallux leading to inflammation in the nail fold [1].

The normal nail fold consists of proximal portion ( proximal nail fold ) that covers the matrix ,and of two lateral nail fold (internal and external ) that surround and partially cover the lateral margins of the nail. congenital hypertrophy of the lateral nail fold of the hallux is characterized by an overgrowth of the soft tissue of the internal part of the lateral nail fold that present as a hypertrophic lip partially covering the nail plate [2].

At birth, or soon thereafter, newborns present with bilateral ingrown hallux toenails associated with pain, tenderness, erythema, purulence, and hypertrophy of the skin and fat of the distal end of the great toes extending over the dorsum of the nail plates. Inflammatory and infectious granulation tissue develops with time [3].

Martinet et al was the first who described congenital hypertrophy of the lateral fold of the hallux as a possible explanation for the asynchrony of growth between the nail plate and the periungual of soft tissues[4]. In our case report series, all the cases were described in winter, which may reflect the effect of tight cloths and socks as a possible cause.

Sarifakioglu et al evaluated a total of 250 infant patients from newborn to 2 years of age.



**Figure 2.** Bilateral hypertrophy of the nail folds of the hallux



**Figure 3.** Bilateral hypertrophy of the nail folds of the hallux



**Figure 4.** Bilateral hypertrophy of the nail folds of the hallux



**Figure 5.** Bilateral hypertrophy of the nail folds of the hallux

Nail alterations were seen in only 17 (6.8%). Most of the patients had toe nail involvement. In 12 of 17 (70.6%) infants, there was one type



**Figure 6.** Hypertrophy of the nail folds of the hallux on right foot



**Figures 7 a and b.** a. Bilateral hypertrophy of the nail folds of the hallux b. Hypertrophy of the nail folds of the hallux on left foot

of nail alteration; in 4 of 17 (23.5%) infants, there was two types of nail alterations; and in 1 of 17 (5.9%) infants, there was three type of nail alterations. The most frequent diagnosis was onychoschizia in 6 of 17 (2.4%) and congenital hypertrophy of the lateral nail fold together with ingrown nail in 6 (2.4%) infants [5].

In most of the reported cases, the condition improved spontaneously with time [6]. Honig et al evaluated the great toenails of 302 newborn infants to identify a specific conformation which might predispose these children to chronic paronychia. Forty-one infants who appeared to have great toenails impeded by tissue distally were followed for 12 months. All had essentially normal appearing nails by six months of age. None developed chronic paronychia. The results suggest that the changes originally noted were variations in the normal development of the great toenail [6].

We treated 6 of our 7 patients with topical alcohol eosin 2% and systemic antibiotic during the acute attack with good response. The condition improved spontaneously with time .we needed surgical treatment in 1 case only (Figures 1a and b).

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