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## **ECTOPIC PLANTAR NAIL IN A 60-YEAR-OLD MAN: A CASE REPORT WITH DERMOSCOPIC AND SURGICAL FINDINGS**

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### **ABSTRACT**

Ectopic nail, also known as onychoheterotopia, is a rare disorder in which nail tissue develops outside the normal nail unit. Plantar involvement is particularly uncommon. We report a 60-year-old man with treated hypertension who presented with a painful, persistent lesion on the plantar surface of the left foot that had evolved for five years. Examination showed a rounded, exophytic, yellowish plaque measuring  $2.2 \times 1.5$  cm arising within a keratotic nodule on the plantar arch. Dermoscopy revealed furrowed and transverse bands resembling wooden slats, creating a barrel-stave-like appearance. Plain radiography showed no underlying bone abnormality. An initial surgical excision was followed by recurrence at the same site four months later because the ectopic nail matrix had not been completely removed. A second excision with complete removal of the matrix was performed. Histopathological examination confirmed nail tissue with normal keratinization and no atypia. No further recurrence was reported. This case highlights the diagnostic value of clinical and dermoscopic recognition and, most importantly, the need for complete removal of the ectopic nail matrix to prevent recurrence.

### **KEYWORDS**

Ectopic nail; Onychoheterotopia; Plantar foot; Dermoscopy; Surgical excision

## **MAIN ARTICLE**

### **INTRODUCTION**

Ectopic nail (EN), or onychoheterotopia, is characterized by the presence of nail tissue at a site anatomically separate from the normal nail unit [1]. The condition may be congenital or acquired. Acquired lesions are frequently associated with traumatic displacement or implantation of nail matrix tissue, whereas congenital forms may coexist with digital or osseous abnormalities [1,4]. Most reported ectopic nails occur on the fingers or toes; plantar ectopic nails are much less common and have mainly been described in isolated reports and small series [2,3]. Because plantar lesions may appear as persistent keratotic or nail-like plaques, recognition of their characteristic morphology and dermoscopic architecture can facilitate diagnosis [3]. We describe an unusual plantar ectopic nail in an adult, with recurrence after incomplete excision and a favorable outcome after complete matrix removal.

### **CASE PRESENTATION**

A 60-year-old man with hypertension under treatment presented with a persistent and painful lesion on the plantar surface of his left foot. The lesion had been present for five years. Physical examination revealed a rounded, exophytic, yellowish plaque measuring approximately  $2.2 \times 1.5$  cm, arising within a keratotic nodule on the plantar arch of the left foot (Figure 1). Dermoscopy showed a nail-like surface composed of furrowed and transverse bands reminiscent of wooden slats, producing a barrel-stave-like appearance (Figure 2). Plain radiography of the foot showed no underlying bone abnormality. The lesion was initially excised; however, the ectopic nail matrix was not completely removed (Figure 3). Four months later, a lesion recurred at the same site (Figure 4). A second surgical procedure was therefore performed, with complete excision of the ectopic nail matrix. Histopathological examination confirmed nail tissue with normal keratinization and no evidence of atypia. No further recurrence was reported after the second excision.

## **DISCUSSION**

Onychoheterotopia is an uncommon nail disorder in which an additional nail unit develops outside its expected anatomical location. Its pathogenesis remains incompletely understood. Proposed mechanisms include congenital ectopic germ cells or rudimentary polydactyly and, in acquired cases, traumatic splitting or implantation of germinal matrix tissue [1,4].

The adult onset in our patient and the absence of radiographic osseous abnormalities favored an acquired form, although a definite precipitating event was not identified in the available clinical record.

The plantar location is particularly unusual. Ena et al. described ectopic plantar nails in adult patients and later characterized clinical and dermoscopic features of ectopic foot nails in a larger series [2,3]. Dermoscopy can be useful because it demonstrates an organized nail-plate-like architecture that may distinguish ectopic nail from other keratotic plantar lesions. In the present case, the combination of furrowed and transverse bands produced a distinctive barrel-stave-like appearance.

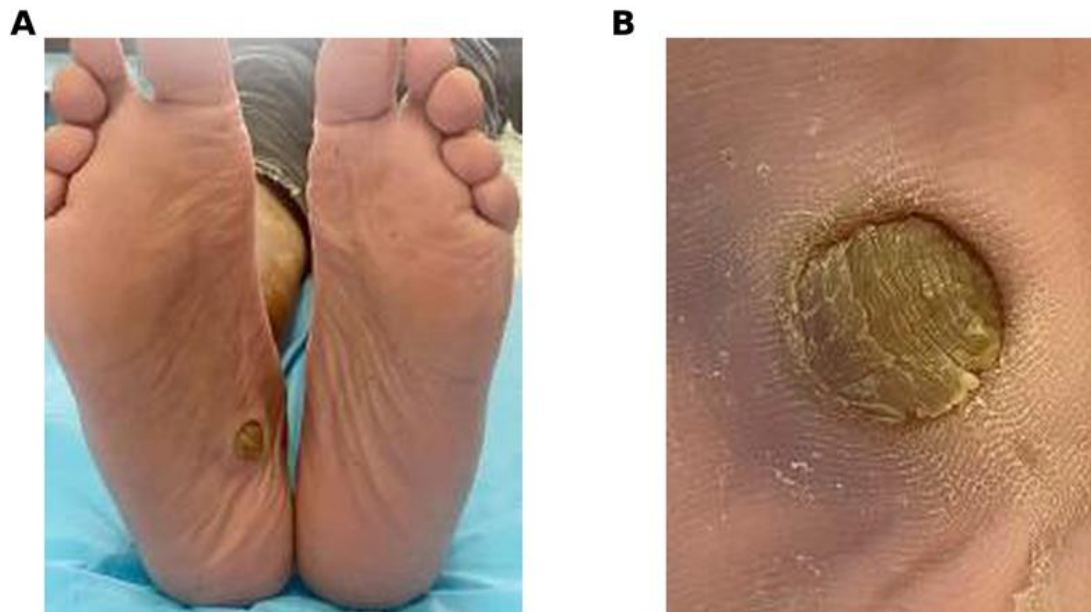
Radiographic assessment is useful in ectopic nail of the foot because congenital forms may be associated with underlying skeletal abnormalities [1,2]. In our patient, radiography was normal. Histopathology remains confirmatory when the diagnosis is uncertain and demonstrates tissue corresponding to a nail unit or nail matrix [1,4]. In this case, histological examination confirmed nail tissue with normal keratinization and no atypia.

The therapeutic lesson from this case is the importance of complete removal of the ectopic nail matrix. Surgical excision is the main treatment for symptomatic lesions, but persistence of matrix tissue can lead to regrowth [4,5]. The recurrence four months after the first procedure in our patient, followed by the absence of further recurrence after complete matrix excision, illustrates this principle directly. Meticulous identification and removal of the entire ectopic matrix should therefore be considered essential when definitive surgical treatment is planned.

## **CONCLUSION**

Ectopic plantar nail should be considered when a persistent painful keratotic lesion of the sole has a nail-like clinical or dermoscopic architecture. Plantar localization may be diagnostically challenging because of its rarity. Dermoscopy and radiography can support the diagnostic evaluation, while histopathology provides confirmation when required. Complete surgical excision, including the entire ectopic nail matrix, is crucial to minimize the risk of recurrence.

## FIGURES



*Figure 1. Clinical presentation of the ectopic plantar nail. (A) Lesion on the plantar arch of the left foot. (B) Close-up view showing a rounded yellowish nail-like plaque arising within a keratotic nodule.*



*Figure 2. Dermoscopic appearance of the ectopic nail, showing furrowed and transverse nail-like bands with a barrel-stave-like pattern.*



*Figure 3. Appearance after the first surgical excision. The ectopic nail matrix was incompletely removed during this procedure.*



*Figure 4. Recurrence of the ectopic nail at the same plantar site four months after the first excision.*

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