

A case of congenital ectopic nails on the bilateral second fingers without bone deformity

Sir,

Congenital ectopic nails are an extremely rare deformity.^[1] Ohya first referred to this anomaly in 1931.^[2] Almost 40 cases have been reported in the literature, mostly in Japanese patients.^[3] In most cases these abnormal nails have been found on the palmar surface of the fifth finger;^[4] they have been associated in some cases with acquired or congenital growth anomalies or to polydactyly.^[3]

Histologically, the ectopic nail matrix is similar to the

normal nail matrix. The etiology is considered to be a teratoma or hamartoma – the ectopic presence of stray germ cells.^[4] This following report describes a case of bilateral congenital ectopic nail in the medial aspect of the second digit without bone deformity.

An 8-year-old girl presented with a painless hard keratotic projection on the medial aspect of the first phalanx on her bilateral second fingers, 8 mm wide and 4 mm long. On the hyperkeratotic surface, skin marking was distinguishable [Figure 1]. The projection had been present since birth but her family history was not contributory. The patient sometimes used to cut this nail but it again regrows. Neither active nor passive motions at any joint of those fingers were restricted. There were no other congenital abnormalities. X-rays of hands revealed no bone deformity on the first phalanx of the affected fingers [Figure 2]. We

surgically removed the ectopic nail of the left hand. Since surgery, there has been no recurrence for more than 9 months [Figure 3].

Ectopic nail is an extremely rare condition related to acquired or congenital anomalies.^[1,3] Almost 40 cases have been reported in the literature;^[3] 24 of them have been reported in Japan. As there is no logical epidemiologic explanation why most cases would occur in Japan, ectopic nail might be regarded as an unremarkable anomaly in other countries.^[2] Recently Tomita *et al.* have hypothesized that double finger nail and ectopic nail would have different appearances derived from the same embryologic pathogenesis;^[5] however, the difference in clinical characteristics between these two nail anomalies is quite apparent such as disturbance of the interphalangeal joint motion in double finger nail and no disturbance of



Figure 1: Preoperative view of the fingers with small keratotic projection at the medial aspect of the second finger



Figure 2: Radiography disclosed a small ectopic nail having no contact with affected finger periosteum



Figure 3: Nine months after surgery, no recurrence had been identified in left second finger

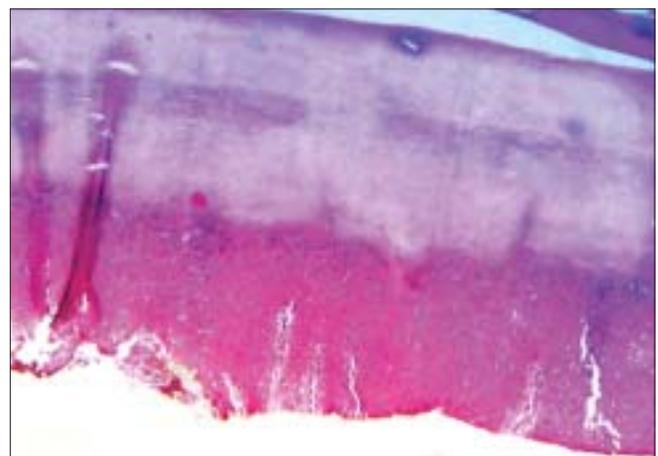


Figure 4: Histological examination showed stratified squamous epithelium with overlying thick keratinous layer without nerve bundle compatible with normal structure of nail and clinical diagnosis of ectopic nail (H and E, x20)

the joint motion in ectopic nail^[2] The pathogenesis of this abnormality has not been clarified. However, two possible causes for this anomaly have been hypothesized. One is that it might develop from stray germ cells (i.e. a teratoma or hamartoma) and another is that it might be a kind of rudimentary polydactyly. It is generally accepted that a Meissner body and nerve bundle are detected in rudimentary polydactyly.^[4] In most cases these abnormal nails occurred on the palmar surface of the fifth finger; however, our case occurred on the medial surface of the bilateral second finger. Some cases were examined by radiography of involved fingers or toes and showed deformity at the involved ungual phalanx via X-ray photographs, whereas other cases showed a normal phalanx. The most probable explanations for the discrepancy are differences of the depth and position of the ectopic nail matrix.^[4] The nail matrix of our case was situated on the proximal medial aspect of the bilateral second finger and not contacted with its periosteum. Under general anesthesia the projection regarded as a small nail was removed with the surrounding tissue and surgical wound was approximated directly. Histological examination showed stratified squamous epithelium with overlying thick keratinous layer without nerve bundle compatible with normal structure of nail and clinical diagnosis of ectopic nail [Figure 4].

Although, some methods of local flap reconstructions after the removal of ectopic nail have been introduced for cosmetic reasons and decreasing postoperative pain, simple surgical removal of an aberrant nail tissue and direct closure can generally provide satisfying results in childhood.^[2]

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