Our Dermatology Online

Case Letter

Median nail dystrophy of Heller – A rare case report

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Sir,

Median nail dystrophy of Heller is an uncommon and curious condition in which a spilt or truecanal develops in one or more nails, usually thumbnails. The split is usually just off center extending from the split there are often a few fine cracks projecting towards, but not reaching the edges of the nail on each side [1]. In such condition, the central nail groove extends from distal end to proximal end. Common age for onset of occurrence in such condition is 25- 30 years but there is no sex prediction. The onset of nail dystrophy may be associated with local trauma, habitual tic, family history or initiation of isotretinoin treatment. The underlying pathology is temporary defect in the nail matrix associated with dyskeratinization. Spontaneous or recurrent remissions are usually seen with this nail dystrophy. No treatment proved 100 % effective but counselling, change in habit, topical tacrolimus ointment, topical tazarotene ointment, and intra-lesional triamcinolone acetonide injection found to be considerably supportive. The case reported here is an interesting because there was absolutely no history of trauma or pressure on matrix. Aim of presenting the case is rarity of the condition.

A 15-year-old girl presented with splits in both thumb nails from last 3 months (Fig. 1). The patient was apparently asymptomatic till she emergence of canaliform & splitfrom marks below the cuticle of either thumb nail. The splits moved forward with the growth of nails to the present status. At present the splits on each nail are just off center. Extending from the split there are many line cracks projecting towards, but not reaching the edges of the nails on each side giving appearance like an inverted fir tree (Fig. 1). There was neither any history of trauma nor any history of the damage caused by playing with nails as a habit tic. The drug history and family history of similar illness was negative. The general, physical, systemic and routine investigations were normal. Finally, the diagnosis of median nail dystrophy of Heller was made on clinical grounds. The patient is advised to apply an emollient cream and topical tacrolimus (0.1%) for the nail folds.

Median nail dystrophy (MND) also known as "Dystrophiaunguis mediana canali formis," "Median canaliform dystrophy of Heller" [2] consists of longitudinal splitting or canal formation in the midline of the nail, a split which often resembles a fir tree, occurring at the cuticle and proceeding outward as the nail grows [2]. The cause of median nail dystrophy of Heller is unknown, but it is certainly due to some temporary defects in the matrix, interfering with nail formation or trauma has been implicated as a causative factor [3,4]. Sometimes intentional trauma in the form of pushing back of cuticle and proximal nail fold (habitual tic-Habitual picking of the nail base) is hypothesized in its pathogenesis [5]. A few cases of median canaliform dystrophy have been attributed to oral retinoid use. In some cases initiation of oral Isotretinoin therapy may develop Median nail dystrophy and show resolution after discontinuation of drug therapy [2,6]. The majority of cases of median canaliform dystrophy are idiopathic, and the condition reverts to normal after a period of months to years. Rarely, familial occurrences of MND have been reported [7]. The management of such improperly understood nail disorders is quite challenging for a dermatologist. If a patient has an obsessive-compulsive or impulse-control disorder and suffers from habit tic, an opinion of a psychiatrist should be sought and appropriate psychotropic drugs such as fluoxetine,

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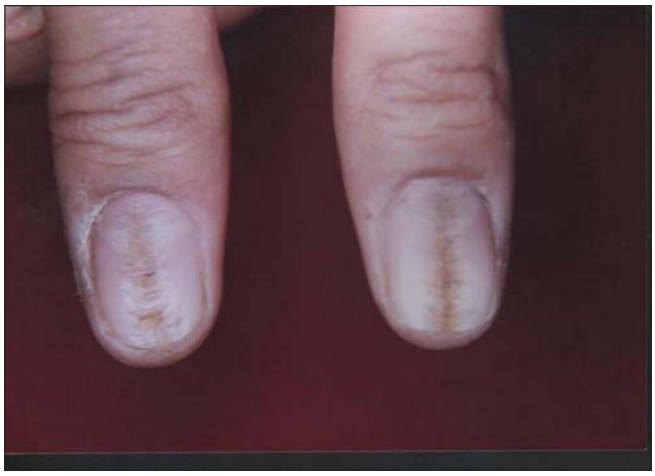

Figure 1: Bilateral thumbnails showing true canal with inverted fir tree.

a serotonin reuptake inhibitor (SSRI), should be instituted before irreversible nail damage sets in. [3] For MND no therapy has been shown to be consistently successful. Commonly practiced treatment for dystropic nails is triamcinolone injection in affected nail bed [3]. Drawbacks with injectable therapy are intolerance, various side effects and the variable efficacy. The recently advanced treatment therapy for MND is topical application of 0.1% tacrolimus ointment daily without occlusion. These topical immunomodulatory drugs gave good results in one patient after 4 months of once daily application [3]. Another study reported a treatment for MND affecting both thumbnails with topical corticosteroid [2]. Whereas Jain et.al. reported it in 8 years boy involving both thumb and great toe nails [7] she was treated with a topical corticosteroid application around the proximal nail fold two times a day. We found no remarkable changes after 4 weeks treatment. She was then treated with 0.1% tacrolimus ointment application on the proximal folds of both thumbnails without occlusion overnight. After 4 months, significant clinical improvement of both thumbnails was observed. It is speculated that calcineurin inhibitors are an effective treatment due to their interference with the inflammatory component of MND [3]. Berbis stated mechanism of topical tazarotene ointment (a third-generation retinoid) in MND and helpfulness to normalize the process of keratinization [6]. We started topical tacrolimus ointment (0.1%) and emollient in our patient to normalize the process.

To conclude this report, median canaliform dystrophy is a heterogeneous group of a rare nail conditions with far from satisfactory line of management. We reported this case to highlight the fact that often in such cases, the history of 'habit-tic 'may not be acknowledged by the patient.

CONSENT

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

The authors certify that they have obtained all appropriate patient consent forms, in which the patients gave their consent for images and other clinical information to be included in the journal. The patients understand that their names and initials will not be published and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

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