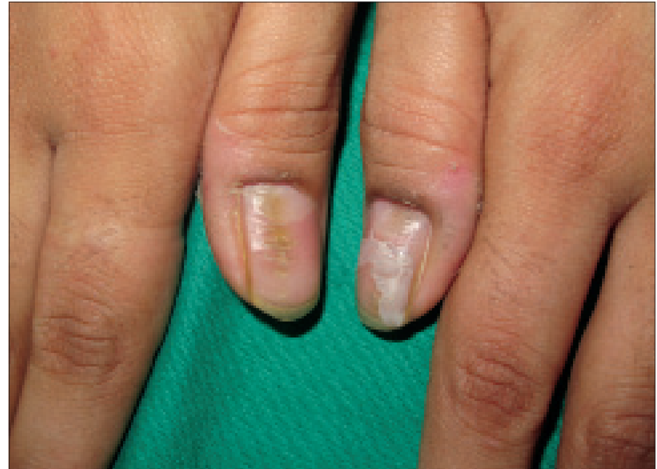

Figure 1: Both the thumbnails showing inverted fir tree-like ridging

Median canaliform dystrophy of Heller

Sir,

Median canaliform dystrophy of Heller is a rare entity characterized by a midline or a paramedian ridge or split and canal formation in the midline of the nail plate of one or both the thumb nails.[1] Intentional trauma in the form of pushing back of cuticle and proximal nail fold (habitual tic) is hypothesized in its pathogenesis.[2] A few cases of median canaliform dystrophy have been attributed to oral retinoid use.[3,4] The majority of cases of median canaliform dystrophy are idiopathic, and the condition reverts to normal after a period of months to years. The treatment of median canaliform dystrophy is far from satisfactory; however, a few workers have used topical tacrolimus 0.1% ointment with significant improvement in nail plate appearance.[5]

A 25-year-old college student presented to the dermatology outpatient division with backwardly-angled ridges on her thumbnails resembling a fir tree and was concerned about the cosmetic appearance. We tried to elicit history of intentional pushing back of cuticular portion of the proximal nail fold, but she denied the same. The patient did not report any history of contact with known allergens and irritants. She did not have any family history of nail disorders. On examination, her right thumbnail showed paramedian longitudinal inverted fir tree-like dystrophy, while her left thumb showed similar changes that were masked by nail polish [Figure 1]. The rest of the fingernails and toenails were apparently normal. The median groove started under the proximal nail fold and gradually extended toward the distal nail edge. Nail plate and subungual scraping for fungal elements were negative on potassium hydroxide mount. She was diagnosed to have median canaliform dystrophy of Heller. She was prescribed topical tazarotene 0.05% ointment to be applied at bedtime and was asked to follow-up after 3 weeks.

Median canaliform dystrophy of Heller, also known as solenonychina, dystrophia unguis mediana canaliformis, and nevus striatus unguis, is a condition of the nail in which longitudinal splitting occurs.[6] The exact etiology of this intriguing condition is yet to be elucidated. However, subungual skin tumors, such as glomus tumors,[7] myxoid tumors, and other tumors have been described resulting in longitudinal grooving and lifting of the nail plate from the bed.[2] In 2005, Sweeney *et al*. have reported a familial clustering of cases of median nail dystrophy.[8] Self-inflicted nail trauma in the form of manipulation of the cuticular portion of nail fold has been implicated as one of the causes of median nail dystrophy. Typically, the condition is characterized by a split in the middle portion of nail plate, which resembles a fir tree with back angles of branches. In case of subungual tumors such as papilloma or glomus tumor, a tube-like structure (solenos) forms distal to it.

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, a serotonin reuptake inhibitor (SSRI), should be instituted before irreversible nail damage sets in. Topical immunomodulatory drugs such as tacrolimus gave good results in one patient after 4 months of once daily application.[5] However, the authors have not detailed the exact mechanism of action of topical tacrolimus in their patient. We started topical tazarotene ointment (a third generation retinoid) in our patient as it is known to normalize the process of keratinization.[9]

To summarize, median canaliform dystrophy belongs to a heterogeneous group of a rare nail conditions with far from satisfactory line of management. We report this case to highlight

the fact that often in such cases, the history of 'habit tic' may not be acknowledged by the patient.

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