

Acquired Digital Fibrokeratoma

Acquired digital fibrokeratoma, also known as acral fibrokeratoma, is a benign cutaneous lesion that primarily affects the digits. The exact etiology of this condition remains unclear, although it is thought to be associated with trauma or subclinical injury to the skin. This lesion commonly arises in middle-aged adults, though it can occur at any age. Despite being benign, acquired digital fibrokeratoma can present diagnostic challenges due to its similarity to other skin lesions.

Clinical Features and Pathogenesis

Acquired digital fibrokeratoma typically presents as a solitary, firm, raised lesion on the digits, especially on the fingers or toes. It is usually asymptomatic and non-painful. The lesion is generally flesh-colored to pink and tends to remain small, typically measuring less than 1.5 cm in diameter. One of the characteristic features of this lesion is the presence of a collarette of raised scaly skin around its base, which serves as a distinguishing clinical sign. Additionally, the lesion may exhibit a thickening of the overlying skin, sometimes resembling a cutaneous horn or keratotic plaque.

While the precise pathogenesis remains debated, traumatic or repetitive micro-injury to the skin is believed to be a major contributing factor. This injury is thought to stimulate fibroblasts and keratinocytes, leading to fibroplasia and keratinization, which results in the formation of the lesion. The condition is more commonly seen in individuals with acral or peripheral skin exposure, such as those involved in manual labor, though this association is not consistently reported.

Differential Diagnosis

The diagnosis of acquired digital fibrokeratoma is often clinical, based on the distinctive appearance of the lesion. However, given the variety of conditions that can present with similar lesions, it is crucial to distinguish it from other solitary papules and nodules. Differential diagnoses include warts, periungual fibromas, aggressive digital papillary adenocarcinoma, and cutaneous horns.

- **Warts (*Verruca vulgaris*):** Caused by human papillomavirus (HPV), warts often present with a rough, hyperkeratotic surface and may appear similar to fibrokeratomas. However, warts tend to have a cauliflower-like appearance, often with black dots due to thrombosed capillaries.
- **Periungual Fibromas:** These are similar in appearance but are typically associated with tuberous sclerosis and are usually located around the nails rather than on the digits.

- **Aggressive Digital Papillary Adenocarcinoma:** This rare malignant tumor can mimic fibrokeratoma clinically. It often requires biopsy for confirmation, and its malignant potential distinguishes it from benign fibrokeratomas.
- **Cutaneous Horns:** Though similar in appearance due to keratotic buildup, cutaneous horns are generally larger and more pointed than the fibrokeratomas.

To confirm the diagnosis, a biopsy is often required, especially when clinical differentiation is challenging. Histopathological examination reveals fibrotic tissue with keratinized stratified squamous epithelium, which is indicative of fibrokeratoma.

Treatment and Management

Acquired digital fibrokeratomas are benign lesions, and as such, treatment is often not mandatory unless there is a desire for cosmetic improvement or functional relief. Surgical excision is the treatment of choice for those seeking removal, and it is typically performed through a shaving technique where the lesion is carefully excised at or just below the level of the skin surface. Because the lesion is non-malignant and tends to be well-circumscribed, excision usually results in excellent cosmetic outcomes without recurrence.

In some cases, if the lesion is smaller or not causing significant issues, treatment may be deferred, and the lesion may be monitored for changes. The prognosis for fibrokeratoma is excellent as the lesion is benign, and recurrence is rare after complete excision.

While most cases of acquired digital fibrokeratoma are isolated and self-limiting, it is important to monitor for the possibility of recurrent lesions or for the development of new growths. Patients should also be educated on avoiding further trauma or injury to the affected area to reduce the risk of new lesions developing.

Conclusion

Acquired digital fibrokeratoma is a benign and often self-limited skin lesion commonly affecting the digits. Its pathogenesis is believed to be linked to trauma or repetitive injury, leading to localized fibroplasia and keratinization. While the condition is typically diagnosed clinically, a biopsy may be necessary to rule out other lesions with similar presentations. Treatment is usually surgical, involving excision or shaving of the lesion, with an excellent prognosis. Understanding the clinical features, differential diagnoses, and management strategies for acquired digital fibrokeratoma is essential for dermatologists to provide effective care and prevent unnecessary interventions.

References

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