

## Acquired Fibrokeratoma on Palm: An Unusual Site

Cheena Langer, Dev Raj Dogra, Naina Kala Dogra

### Abstract

Acquired fibrokeratoma is a rarely reported disorder. It most commonly involves fingers and toes and usually has size less than 5 mm. Very few cases have been reported in the Indian literature. We report one such case, occurring at an unusual site involving palm of the hand.

### Key Words

Acquired Fibrokeratoma, Palm, Skin-Coloured Papule

### Introduction

Acquired fibrokeratoma is a rare benign lesion of unknown cause. It stems from fibrous tissue and presents as a solitary, smooth, dome-shaped or finger-like, skin-coloured papule. (1) Its base has a collarette of slightly raised skin and occasionally the surface may appear warty. Predisposing factor is minor trauma or repetitive irritation. (2,3) Acquired fibrokeratoma may be mistaken for supernumerary digit, cutaneous horn, neurofibroma, viral wart, onychomatricoma, dermatofibroma and Koenen tumor of tuberous sclerosis. It is usually present on the fingers and toes. However, we report an interesting case of fibrokeratoma at unusual site, the palmar aspect of the hand; hence the case is worth reporting.

### Case Report

A 22 year old male, with no significant medical history, presented with a three-year history of a skin lesion on the palm of right hand. Being a cricket player there was history of recurrent trauma to the area. The lesion started in the form of skin coloured papule gradually increased in size over a period of 6 months and was persisting till now. No history of similar complaint in the family.

On examination a single well defined skin coloured papillomatous growth of size was 15×4×3 mm was present on the palm of the right hand with a collarette of slightly raised skin at its base (*Fig 1*). On palpation, it was firm, no tenderness or induration found. The lesion was completely excised and patient was followed up for six months without recurrence. Histopathology confirmed the

diagnosis showing marked hyperkeratosis, acanthosis and papillomatosis of epidermis (*Fig 2*) and bands of thick collagen along with perivascular and periappendageal chronic inflammation in the dermis (*Fig 4*).

### Discussion

The term acquired digital fibrokeratoma, was first coined by Bart *et al* (1) in 1968 as it resembles a 'rudimentary supernumerary digit'. There are reports that it occasionally originate from other sites like proximal nail fold, sole of foot, palm of hand, elbow and pre-patellar area (2,3) thus a better term acquired fibrokeratoma has been suggested.(3)

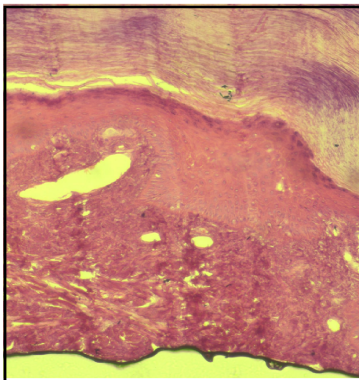
Acquired fibrokeratoma is a benign tumor, involving fingers and toes that presents as a small solitary, painless skin colored lesion, but reports of multiple lesions have also been reported. (4) The size of lesion is usually less than 1 cm but occasionally cases with giant fibrokeratoma >1 cm has been seen. (5) It mostly affects adults, males more than females. Trauma is the most common predisposing factor, especially on the digits. Pathophysiology of an acquired fibrokeratoma is unknown but it is seen that its dermis is denser than of the normal skin and contains more capillaries and fibroblasts with coarser elastic fibers that suggest the formation of newer collagen by the fibroblasts in the tumor. There has been increase in the factor XIIIa positive dermal dendrocytes in the fibrokeratoma on immunohistochemistry, a factor that was found in fibrovascular tumors, suggesting their

From the Post Graduate Department of Dermatology, Venereology & Leprology, Government Medical College, Jammu

Correspondence to : Dr. Dev Raj Dogra Head of Deptt., Department of Dermatology, Venereology & Leprology Government Medical College Jammu



**Fig. 1** Skin-colored, 15×4×3 mm Sized Solitary, Protruded Papule on the Palmar Aspect of Hand Showing Collarette of Slightly Raised Skin



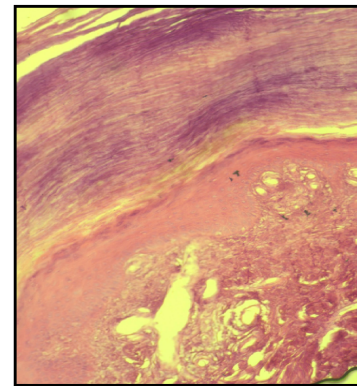
**Fig. 3** Biopsy Showing Dermis with Bands of Thick Collagen Along with Perivascular and Periappendageal Chronic Inflammation (H and E, ×100)

role in the regulation of collagen synthesis in these tumors.(6,7) There are very few reported cases of fibrokeratoma on the palm and we report a rare case that involves palm. (2)

Histopathologic examination of the lesion shows hyperkeratosis and irregular acanthosis in epidermis and thick collagen bundles with dilated capillaries oriented in the direction of the longitudinal axis in dermis. Kint *et al* (8) described 3 types of histopathology in acquired fibrokeratoma viz: Type I contains fibroblast between collagen bundles, fine elastic fibers and numerous capillaries in dermis. Type II is hyperkeratotic with an increased number of fibroblasts in the cutis and reduced elastic fibers. Type III is a poorly cellular and edematous structure and no elastic fibers.

Our case showed typical histopathologic findings of acquired fibrokeratoma and was compatible with - type I fibrokeratoma.

Differential diagnosis of acquired fibrokeratoma is supernumerary digit, cutaneous horn and neurofibroma.



**Fig.2** Biopsy Showing Marked Hyperkeratosis, Acanthosis and Papillomatosis of Epidermis (H and E, ×200)

Supernumerary digit is a congenital digital anomaly with neural bundles in the dermis, usually occurs at the base of the fifth finger. Cutaneous horn is epidermal tumor which consists of a column of keratin arising from a wide range of benign, premalignant or malignant underlying processes. Neurofibroma is soft, polypoid skin colored tumor, with histopathology showing loosely spaced spindle cells and wavy collagenous strands in the dermis.(3) Other conditions to be differentiated are viral wart, onychomatricoma, dermatofibroma and Koenen tumor of tuberous sclerosis. The treatment for acquired fibrokeratoma is simple excision typically by shaving the lesion, recurrence is rare.

#### References

1. Bart RS, Andrade R, Kopf AW, Leider M. Acquired digital fibrokeratomas. *Arch Dermatol* 1968; 97:120-129.
2. Verallo VV. Acquired digital fibrokeratomas. *Br J Dermatol* 1968; 80(11):730-6.
3. Henric JR, Allen HB. Acquired digital fibrokeratoma. *Cutis* 1979; 23(3):304-6.
4. Frydman AF, Mercer SE, Kleinerman R, Yanofsky VR, Birge MB. Acquired fibrokeratoma presenting as multiple plantar nodules. *Dermatol Online J* 2010; 16(10):5.
5. de Freitas PM, de Sb Xavier MH, Pereira GB, Rochael MC, de Oliveira Cortes JL, Quevedo LP, et al. Acquired fibrokeratoma presenting as a giant pedunculated lesion on the heel. *Dermatol Online J* 2008; 14(12):10.
6. Suh HS, Ryu BJ, Choi JH, Sung KJ, Koh JK. A case of acquired digital fibrokeratoma: immunohistochemical stain with anti-factor XIIIa antibody. *Korean J Dermatol* 1994; 32:1131-1135.
7. Nemeth AJ, Penneys NS. Factor XIIIa is expressed by fibroblasts in fibrovascular tumors. *J Cutan Pathol* 1989; 16:266-271.
8. Kint A, Baran R, De Keyser H. Acquired (digital) fibrokeratoma. *J Am Acad Dermatol* 1985; 12:816-821.