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Authors Meng-Qiang Fan a b ∆, Xiao-Lei Chen c ∆, Jiang Hua a b, Li-Pei Wang d, Yong Huang e *, Jie-Feng Huang a b *, Vojnosanitetski pregled (2020); Online First September, 2020.

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INTRAOSSEOUS EPIDERMAL INCLUSION CYST OF THE RIGHT RING FINGER FOR 40 YEARS

Meng-Qiang Fan a b △, Xiao-Lei Chen c △, Jiang Hua a b, Li-Pei Wang d, Yong Huang e *, Jie-Feng Huang a b *

a Department of Orthopaedics, The First Affiliated Hospital of Zhejiang Chinese Medical University, Hangzhou 310006, China;
b The First Clinical College, Zhejiang Chinese Medical University, Hangzhou 310006, China;
c Basic Medical College, Shanghai University of Traditional Chinese Medicine, Shanghai 201203, China;
d Basic Medical College, Zhejiang Chinese Medical University, Hangzhou 310053, China;
e Department of Orthopaedics, Hospital of Chengdu University of Traditional Chinese Medicine, Chengdu 610075, China
△: co-first authors.
*: co-correspondence Author

Correspondence Author. Yong Huang, Department of Orthopaedics, Hospital of Chengdu University of Traditional Chinese Medicine, 39 Shi’erqiao Road, Jinniu District, Chengdu, 610075, China. Fax: +86 28 87769902. E-mail address: hyboneshakalaka@126.com

Correspondence Author: Jie-Feng Huang, Department of Orthopaedics, The First Affiliated Hospital of Zhejiang Chinese Medical University, 54 Youdian Road, Shangcheng District, Hangzhou, 310006, China. Fax:+86 571 87034117. E-mail address: 40983285@qq.com.

The e-mail address of each author:
Meng-Qiang Fan 741216599@qq.com
Xiao-Lei Chen 252493010@qq.com
Jiang Hua hjzjszyy@163.com
Li-Pei Wang clover1000@163.com
Yong Huang hyboneshakalaka@126.com
Jie-Feng Huang 40983285@qq.com

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Abstract

Introduction. Intraosseous epidermal inclusion cysts (IEpC) are benign bone lesions lined with squamous epithelium. Finger phalanges are the second most common site of predilection after skull. Case Report. We present a case of a typical IEpC at the distal phalanx of the right ring finger following a remote history of crush injury to the finger. The patient underwent distal phalanx amputation of the right ring finger. At follow-up 2 years later, the stump healed well and without recurrence. Conclusion. IEpC with a history of up to 40 years is very rare, and although the patient presents with a typical ‘clubbing finger’, the diagnosis was eventually confirmed by surgery and pathology.

Keywords: Intraosseous epidermal inclusion cysts, bone lesions, squamous epithelium, finger

Apstrakt

Uvod. Intraosossoznakoizlaganja inkluzije (iepc) su dobroćudne kostisasquamous Nim elumom. Falizanges je druga najuobičajnijalokacija nakon lobanje. Prikaz slučaja. Predstavljamo slučaj tipičnog IEpC-antadistalni phalanx od desnog prstena prstaposle udaljene istorije povrede prsta. Pacijent je prošao kroz iskrivljavanjedesni prstenu. U nastavku praćenja 2 godine kasnije, Stamp se dobrozlećila i bez ponavljanja. Zaključak. IEpC sa istorijom do 40 godina je vrlo retka, a iako pacijent predstavlja tipskoklorisnoprst, dijagnozajena kraju potvrđenapracijomipatologija.

Keywords: intraosossoznakoizlaganja uključenost, oštećenjakostiju, squamous epitelium, prst
Introduction
Intraosseous epidermal inclusion cysts (IEpC) are benign bone lesions lined with squamous epithelium. The skull is the most common site, mainly involving the parietal and temporal bones. Finger phalanges are the second most common site of predilection followed by maxilla, mandible, temporomandibular joint, vertebrae, tibia and femur. Although the etiology of these tumors is not fully understood, they are thought to be due to cortical rupture of the bone leading to proliferation of epidermal cells in the bone matrix.

We present a case of a typical IEpC at the distal phalanx of the right ring finger following a remote history of crush injury to the finger. The article was approved by the hospital ethics committee. Informed consent that his pictures would be submitted for publication were obtained from the patient.

Case Report
A 56-year-old man presented to the hospital with a 1-month history of painful enlargement and progressive swelling of the distal phalanx of the right ring finger. During this period, he did not receive any treatment, nor did he take relevant drugs such as anti-inflammatory and analgesic drugs.

He reported a history of the finger injury without fracture 40 years ago. It got healed but the swelling was slowly increasing in size. The patient did not go to the doctor for treatment because the finger showed no symptoms such as pain and febrile except slight swelling over the years. He had no symptom or personal history of rheumatoid arthritis.

On physical examination, the finger showed typically ‘clubbing finger’ (Figure 1,2,3) with local tenderness. X-Ray showed bone destruction and MRI revealed abnormal signals in bone tissue in distal phalanx of the right ring finger (Figure 2,3). The patient underwent distal phalanx amputation of the right ring finger. During the operation, we found that the swelling part was well wrapped and showed milky soft tissue appearance. Histopathological examination revealed intraosseous epidermal inclusion cyst (IEpC) (Figure 4). The wound healed well 2 weeks after the operation, and the stitches were removed. At follow-up 2 years later, the stump healed well and without recurrence.
Figure 1. (a,b) The right ring finger showed obvious clubbing finger.

Figure 2. X-Ray showed bone destruction in distal phalanx of the right ring finger.
Figure 3. MRI revealed abnormal signals in bone tissue in distal phalanx of the right ring finger (a,b,c). Figure b and c are contrast-enhanced MRI. The arrows indicate the typical cystic region.

Figure 4. Histopathological examination revealed intraosseous epidermal inclusion cyst.

“▲” Squamous epithelium; “→” The stratum corneum thickens and separates.
Discussion

IEpC are usually seen in subcutaneous tissue, however, intraosseous IEpC is a rare benign lesion. Finger phalanges are the second most common site of predilection after skull. The most common age range is 25-50 for men and less for women. Phalangeal cysts can result from any type of injury caused by traumatic implantation of epidermal fragments into the bone, or from the migration of nail bed fragments into the phalangeal.

The typical manifestation of IEpC in finger is 'clubbing finger'. According to relevant reports of epidermal cyst, our patient's 'clubbing finger' is the most typical and the patient's 40-year history is very rare. The imaging findings of IEpC are typically well-defined osteolytic lesions with or without soft tissue swelling. This is different from infection or metastasis, which would be a poorly defined osteolytic lesion. The differential diagnoses of phalangeal lesions are broad, and include inflammatory (i.e. chronic infection), as well as benign and malignant processes. Distally-based erosive, cystic lesions include those secondary to tophaceous gout or a localized giant cell tumor of tendon sheath, giant cell reparative granuloma, simple bone cyst, aneurysmal bone cyst, osteoid osteoma, and epidermoid inclusion cyst. The usual treatment is to curettage and removal of the cyst capsule. Recurrence can occur if there is incomplete excision. Bone grafting is rarely indicated. In our case, with the bone mass of the distal phalanx was destroyed by the cyst, the decision was made to perform a amputation.

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