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Images in clinical practice

Tenosynovial giant cell tumor of the foot in a child.

Souissi Merirm [1,2], Arfa Wajdi*[1,2], Jlalia Zied [1,2**], Jenzri Mourad [1,2].

1: Department of pediatric orthopedics Kassab Institute, Tunis, Tunisia
2: College of Medicine, Tunis, Tunisia
* Corresponding author
** Academic Editor
Correspondence to:
arfa.wajdi@gmail.com
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Abstract

Tenosynovial Giant Cell Tumor (TGCT) is a rare benign soft tissue tumor arising from the synovium and peri-articular structures. This tumor is usually diagnosed in adult age, the hands are the most frequent location. The gold standard for TCGT treatment is the adequate surgical excision. We herein report a case of a TGCT of the hallux in a 5-year-old patient.

Keywords
Giant cell tumors ; Child; foot; soft tissue neoplasms.

Introduction

Tenosynovial Giant-cell tumor (TGCT) is a benign solitary tumor arising in the extremities, more commonly in the flexor tendons of the hands [1]. It usually affects individuals between the third and fifth decade and is reported incidentally in children [2]. We present a rare case of a TGCT affecting the hallux extensor tendon in a 5-year-old patient.

Observation

A 5-year-old girl, with no previous medical history presented to the outpatient clinic for swelling on the dorsal aspect of her right hallux evolving for two years. The mass was firm, painless, mobile and the skin was normal (Figure 1).
The mobility of interphalangeal articulation wasn't affected. No bone lesions were seen in the standard X-rays.
The MRI revealed well circumscribed mass measuring 16*16*6 mm, encountering the hallux extensor tendons, with hemosiderin deposit, suggesting a giant cell tumor (Figure 2). Patient underwent complete surgical resection. Intraoperatively, the mass was encapsulated and had macroscopic encephaloid aspect. It had an intimate contact with the tendon sheath and the articulation capsule which were excised (Figure 3). Histopathological examination revealed giant cell tumor of the tendon sheath without malignant cells and clear resection margins. Postoperative course was uneventful, and no recurrence were noted during the follow up.

Comments

TGCT are benign soft tissue lesions of the extremities arising from the synovium, tendon sheath, bursae and small joint periarticular structures [2,3]. These tumors are very rare in children. Reported pediatric incidence is up to 4% for both upper and lower extremities.
Painless slow-growing soft tissue mass is the most frequent clinical presentation [4,5]. MRI is a gold standard examination for the preoperative diagnosis. Specific findings of hemosiderin deposit are evocative of TGCT [6]. Complete surgical excision with sufficient safe margins is the best management option. tyrosine-kinase inhibitors are indicated for some diffuse or recurrent forms [7].
Significant risk factors for recurrence include radiographic presence of osseous pressure erosion, incomplete excision, increased cellularity or mitosis, cytogenetic abnormalities such as trisomy 7 and inhibited expression of nm23 gene [8].

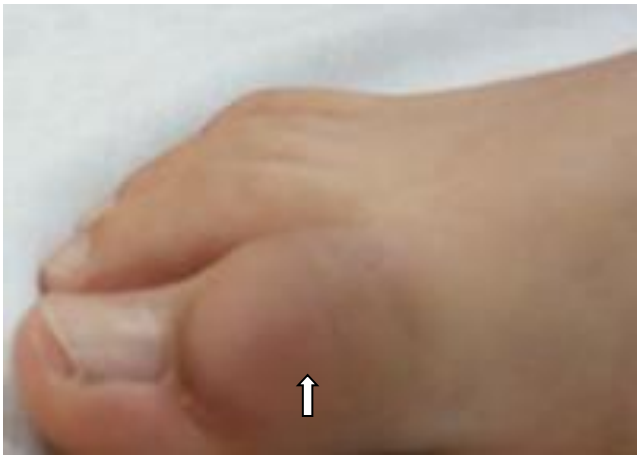

Figure 1: Swelling opposite to the interphalangeal articulation of the right Hallux.

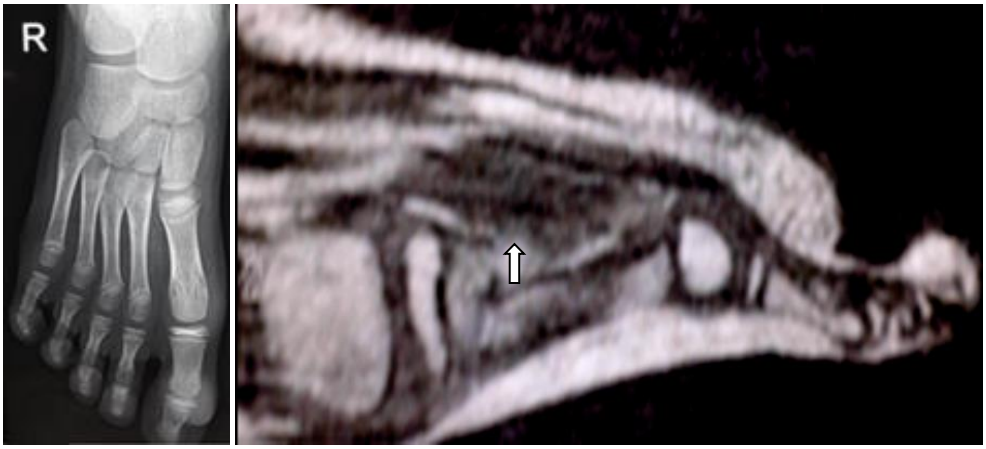

Figure 2: X-rays showed no bone lesions, MRI noted well circumscribed mass measuring 16x16x6 mm, coming in contact with the hallux extensor tendons, with hemosiderin deposit.

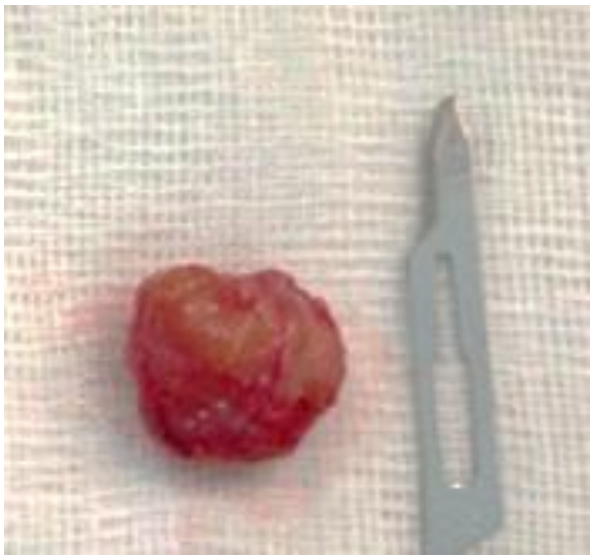

Figure3: macroscopic aspect of Well encapsulated encephaloid mass.

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Conflict of Interest: None

References

[1] Kager M, Kager R, Fałek P, Fałek A, Szczypiór G, Niemunis-Sawicka J, et al. Tenosynovial giant cell tumor. Folia Med Cracov. 2022; 62:93-107.
[2] Tu NV, Quyen NVS, Ngoc MH, Trung HP, Nguyen BS, Trung DT. Tenosynovial giant cell tumor of cruciate ligament: A case report and review. Int J Surg Case Rep. 2022; 91:106771.
[3] Ansel S, Yan X, Chong P, Lo S, McCleery M, Mahendra A, et al. Tenosynovial giant cell tumor: a case report. J Med Case Rep. 2023; 17:419.
[4] Du X, Xia A, Sun J, Ye Y. Localized tenosynovial giant cell tumor in children. J Child Orthop. 2023; 17:420-27.
[5] Mastboom MJL, Verspoor FGM, Uittenbogaard D, Schaap GR, Jutte PC, Schreuder HWB, et al. Tenosynovial giant cell tumors in children: A similar entity compared with adults. Clin Orthop Relat Res. 2018; 476:1803-12.
[6] Söylemez MS, Shattat KMI, Çelik A, Söylemez UPO, Tosun I, Yıldırım AT. Intra-Articular Tenosynovial Giant Cell Tumor Mimicking Septic Arthritis: A Report of Two Cases. J Orthop Case Rep. 2022; 12:1-5.
[7] Kitagawa Y, Takai S. Optimal Treatment for Tenosynovial Giant Cell Tumor of the Hand. J Nippon Med Sch. 2020; 87:184-90.
[8] Ansari SMM, Tambe SA, Nayak CS. Giant cell tumor of tendon sheath in children. Indian J Dermatol Venereol Leprol. 2019; 85:496-98.

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