

Case Report

A Juxta-Articular Myxoma of the Thumb in a young male: A case report

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Abstract

Juxta-articular myxomas are benign tumours that are most commonly associated with larger joints. Cases involving hand have been rarely reported till date. We present a case of a juxta-articular myxoma at the metacarpophalangeal joint of the thumb in a 30-year-old male patient. The preoperative diagnostic work-up included ultrasound and X-ray of left hand. The histopathological examination of the resected tumor confirmed the diagnosis. Follow-up ultrasound six months after surgery revealed no obvious recurrence. At 6 months, the patient had full range of motion without pain.

Keywords: benign mass; ganglion; juxta-articular myxoma; thumb.

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Introduction

Juxta-articular myxomas (JAM) are benign soft tissue tumours of mesenchymal origin. These cystic masses have a tendency to recur post excision and resemble like a ganglion.¹ In some cases it can locally infiltrate and become painful making it hard to differentiate from a myosarcoma.² Juxta articular myxoma are mostly encountered near the large joint spaces (knee joint).³ Very few cases involving hand have been reported till date in the literature.^{4,5}

Case Report

A 30-year-old male patient reported a mass over the metacarpophalangeal joint of the left thumb. Initially, the tumor was very small, and gradually progressed to present size in two years. As the mass was situated on the dorsal aspect causing thumb deviation slightly on the volar side, grasping larger objects provoked mild pain. Clinical

examination revealed a solid, circumscribed round mass of 30 mm that was adherent to the ulnar-dorsal aspect of the metacarpal joint of the left thumb. As the skin and tendons were not involved, stability and mobility of the thumb was intact (**Figure. 1A**). The clinical impression of close contact to the joint was verified by ultrasound. X ray of the left hand in anteroposterior, oblique and lateral views was done to visualize the size of mass and to rule out arthritic changes and bone infiltration.

Without suspicion of malignancy, we decided to proceed with marginal resection rather than a biopsy to avoid a second surgery. Under wide-awake local anesthesia no tourniquet (WALANT), the tumor was resected completely without damaging the vital structures present in vicinity and on table integrity of tendon (APL, EPB and EPL), nerves and joint checked by asking the patient to move thumb and was found to be normal on table (**Figures 1B &**



Figure 1. Juxta-articular myxoma at the dorsal aspect of the metacarpophalangeal joint of the left thumb (A); Intraoperative view of the left thumb with excised tumor (B); Intact surrounding vital structures post excision of tumor (C); Hematoxylin eosine stained histological section showing encapsulated mass with hypocellular areas having bland spindle shape cells in an abundant myxoid stroma (D).

(C). Histopathological examination revealed nonmalignant spindle cells embedded in a myxoid matrix (**Figure 1D**). The diagnosis was confirmed immunohistochemically with the affirmation of CD34 and the exclusion of S100 and actin. Postoperative healing was good with pain free full range thumb movement. Regular follow-ups including ultrasound and clinical examination were initially scheduled every three monthly. At six months after surgery, the patient remained pain- and symptom-free. Compared with the contralateral side, he had full range of motion, equal power, and normal sensibility in the thumb. The patient was asked to continue physiotherapy till one year postoperatively.

Discussion

Myxomas have mesenchymal origin and are mostly benign in nature, are rarely locally aggressive and tend to re-occur after excision.⁶ In our case, the rare diagnosis of JAM in the hand was established. It is commonly presented as swelling or mass (57%), which may be painful. Swelling primarily occur in the subcutaneous adipose tissue and gradually can invade into the joint capsule, tendons and skin.⁵ It is more common in men in their third to fifth decades of life and associated with cystic growth commonly found near large joints, mostly knee joint (84%), shoulder, elbow, foot, ankle, and rarely in the hand/wrist.^{1,2,5} JAM occurs most

commonly due to joint trauma and osteoarthritis, but its pathology is not completely understood. Neither of these applied to the patient in the current study.

Myxoid matrix contains typically a small number of spindle-shaped fibroblast-type cells and are characterized by an abundance of extracellular mucinous material with poorly developed vasculature. Tumor is macroscopically described as gelatinous, soft or friable, cystic, and pearly white to yellow-tan in color, with sizes around 2 to 6 cm.^{1,2,5}

JAM is treated by complete surgical excision. Depending upon the location and lesion, additional procedures (such as meniscectomy) may be indicated to warrant complete excision, whereas incomplete resection may lead to high recurrence rate which is around 34% and usually occurs within 18 months.^{1,2,5} Recurrent tumor should be aggressively excised to lessen the risk of recurrence, but the possibility of local recurrence cannot be denied and preoperative counseling should be done.⁶ Limb-salvage is possible in the hand, because small tumors become symptomatic in early stage. Pain is not a criterion for differentiating benign from malignant hand lesions.⁷

A few differential diagnoses should be considered while assessing a patient with a swelling on the hand or wrist.

The most common diagnosis would be a ganglion; it is smaller than JAM,⁵ show no septation on USG/MRI, and have a poorly formed myxoid component.⁹ A hibernoma of the hand contains brown fat tissue shows spindle cells and myxoid structures like a myxoma but it is positive for PS100 and CD34.¹⁰ Rapidly growing mass should raise the suspicion of a sarcoma which is diagnosed on histopathology and may need re-operation.⁶⁻⁸ Nodular fasciitis is a benign reactive myofibroblastic lesion that occurs after trauma and presents as a rapidly growing subcutaneous mass. On microscopy it shows spindle-shaped cells in myxoid matrix with collagen and positive for smooth muscle actin and negative for markers such as b-catenin, S100, CD34, High- Mobility Group AT-Hook 2, cytokeratin, epithelial membrane antigen, caldesmon, and desmin.¹¹ Intramuscular myxoma can be differentiated from JAM as it is more common in females and tend to

occur in the large muscles of thigh and shoulder. It rarely demonstrates cystic change, has a very low recurrence rate and associated with Mazabraud's syndrome and McCune-Albright syndrome as well as mutations in Arg201 in the Gs alpha gene.⁵

Conclusion

In our patient, the diagnosis of JAM was confirmed after immunohistochemical staining that was positive for CD34 but negative for S100 and actin. Although a rare tumour, JAM in hand can cause lifelong functional morbidity if not operated at appropriate time. A small to medium size tumour can be easily operated under WALANT as a day care surgery.

References

1. Ozcanli H, Ozenci AM, Gurer EI, Tuzuner S. Juxta-articular myxoma of the wrist: a case report. *J Hand Surg Am.* 2005;30(1):165e167.
2. Irving A, Gwynne-Jones D, Osipov V, Nicholson M. Juxta-articular myxoma of the palm. *J Surg Case Rep.* 2012;2012(6):12.
3. Fletcher JW, Watson HK, Weinzweig J. Recurrent myxoma of the hand. *J Hand Surg Am.* 2000;25(4):772e775.
4. Sponsel KH, McDonald JR, Ghormley RK. Myxoma and myxosarcoma of the soft tissues of the extremities. *J Bone Joint Surg Am.* 1952;34(4):820e826.
5. Meis JM, Enzinger FM. Juxta-articular myxoma: a clinical and pathologic study of 65 cases. *Hum Pathol.* 1992;23(6):639e646.
6. Echols PG, Omer GE Jr, Crawford MK. Juxta-articular myxoma of the shoulder presenting as a cyst of the acromioclavicular joint: a case report. *J Shoulder Elbow Surg.* 2000;9(2):157-9.
7. Nicholson S, Milner RH, Ragbir M. Soft tissue sarcoma of the hand and wrist: epidemiology and management challenges. *J Hand Microsurg.* 2018;10(2): 86e92.
8. Sandhu SS, Elston JB, Harrington MA, Payne WG. Juxta-articular Myxoma of the Hand. *Eplasty.* 2016;16: ic41.
9. Murphey MD, McRae GA, Fanburg-Smith JC, Temple HT, Levine AM, Aboulafia AJ. Imaging of soft-tissue myxoma with emphasis on CT and MR and comparison of radiologic and pathologic findings. *Radiology.* 2002;225(1): 215e224.
10. Bouya A, Tibouda M, Jaafar A. Carpal tunnel syndrome due to hibernoma of the wrist: case report. *Hand Surg Rehabil.* 2019;38(1):79e81.
11. Choughri H, Coindre JM, Leclere FM. Intra-articular nodular fasciitis of the proximal interphalangeal joint of a finger: a case report. *Hand Surg Rehabil.* 2019;38(1):74e78.