



# Hemopigmented Villonodular Synovitis of Hand

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## Abstract

The location of giant cells tumor in synovial sheaths of fingers tendons is often frequent. We bring a case. An 18-years-old patient without particular medical history, since two years, had a bilobate tumefaction of right index's proximal interphalangeal, painless, firm, movably under the skin, without inflammatory sign. Standard radiography showed cortical thickening. A complete excision is performed. Pathological results revealed tenosynovial giant cells tumor without malignancy. Giant cells tumor of tendon sheaths represent the second soft parts of the hand after arthro-synovial cyst. The prognosis depends on invasion of digital noble structures.

## Subject Areas

Orthopedics

## Keywords

Giant Cells Tumor, Fingers Tendons, Synovial Sheaths

## 1. Introduction

The location of giant cells tumors in synovial sheaths of fingers tendons is often frequent. It is the localized form of hemopigmented villonodular synovitis and the second soft tissue tumor of the hand after the arthrosynovial cyst [1]. We report an observation of a case.

## 2. Observation

It is an 18-years-old Sir K.M, student in second year of bachelor, right-handed, without particular medical history.

The patient presented, since two years, a bilobate tumefaction on dorsum of proximal interphalangeal of the index, firm, movable relative to the two planes, without inflammatory signs (**Figure 1**). The joint is free.

The standard radiography has showed a thickening of the with respect to the tumor (**Figure 2**).

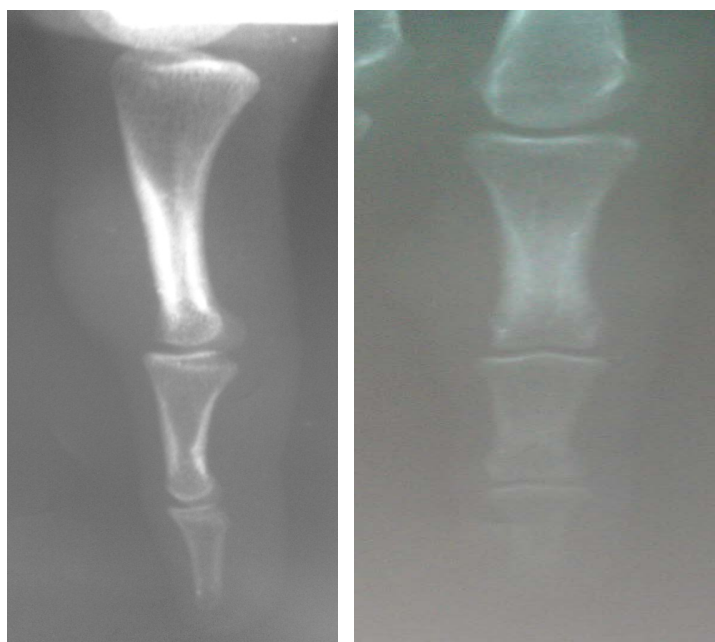
As treatment, it was performed a total resection biopsy through posterior approach of well limited tumor, in shirt button, passing under the extensor tendon without being adhered but acceding to the posterior face of the join without being invaded, buff, multinodular (**Figure 3**).

The pathological result has revealed a tenosynovial giant cells tumor without malignancy.

The evolution up to 4 months is good.



**Figure 1.** Preoperative tumor.



**Figure 2.** Radiography of index.



(a)



(b)



(c)

**Figure 3.** (a) (b) Intraoperative tumor; (c) Resected specimen.

### 3. Discussion

The giant cells tenosynovial tumor or localized hemopigmented villonodular synovitis [1] affects all tendon synovial preferably at hand. It is a tumor of younger between 30 - 50 years old, of unknown etiology, sitting mostly on flexors' sheaths. The index is the most frequently touched and its location is the most frequent on distal interphalangeal, then on metacarpal phalangeal and on proximal interphalangeal [2] [3]. In that case, it concerned the proximal interphalangeal of dorsum index at the expense of extensor's sheath.

Clinically, it is an isolated mass, firm, painless, movably under the skin, polylobate. A this stage, the differential diagnosis arises with foreign body granulomas of the hand, tendon sheaths of fibroids, the mucoid cysts, the rheumatoid nodular, the lipoma or the infection [4].

The standard radiology can showed an opacity of soft tissues, often a periosteal reaction, bone erosion or osteoarthritis [5]. In our case, a slight thickening of the cortex

next to the tumor was noted. On the ultrasound, it is a hypoechoic, homogeneous mass, adjacent to the tendon. The MRI shows hypointensity on T1 and hyperintensity on T2. [6]. Our patient could not benefit from those two diagnosis tests.

The surgery is the only therapeutic mean and consists in total resection of the tumor. Surgical difficulties are related to tumor volume, the local extension to noble elements: tendon and pedicle. In our patient, there was no invasion of noble elements.

The evolution is dominated by relapses [7]. After two years falling, no recurrence nor other complication was noticed.

#### 4. Conclusion

The giant cells' tenosynovial tumor of hand is benign tumor of soft tissues, at local malignancy. They are frequent. For the surgical resection, only treatment is sometimes difficult. The prognosis related to recidivism is frequent.

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