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Case Report

Isolated trapezium fracture about a case and review of the literature

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	Abstract
Published on: 18 Apr 2024	<p>Isolated fractures of the trapeziums' are rare; they represent 3 to 5% of fractures of the carpal bones and can go unnoticed. They are often associated with other fractures of the hand and wrist, in particular the Bennett fracture, the mechanism remains poorly known, and the diagnosis can be difficult. The purpose of our work was to emphasize the importance of the clinical examination which must be thorough and specific radiological implications. Computed tomography (CT) should be performed at the slightest doubt. Poorly treated, these fractures can be the cause of painful sequelae in the trapezo-metacarpal joint type of disabling rhizarthrosis. Reporting to us the case of a 23-year-old young patient with an isolated fracture of the trapezium displaced from his right wrist, surgically treated. The fracture consolidated without complications, after six weeks and the patient returned to work after three months and did not present pain with the mobilization of the thumb, nor loss of strength. Conclusion: The isolated trapezoid fracture is very rare in traumatology. Its suspicion must lead to more advanced para-clinical investigations because neglected, it can be the cause of painful sequelae at the level of the trapezo-metacarpal joint with an important maintenance on daily activity.</p>
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	Keywords: trapezium, literature

INTRODUCTION

Isolated fracture of the trapezium are rare, they represent 3 to 5% of fractures of the carpal bones and can go unnoticed. They are often associated with other fractures of the hand and wrist, in particular the Bennett fracture, the mechanism remains poorly known, and the diagnosis can be difficult. The purpose of our work was to emphasize the importance of the clinical examination which must be thorough and specific radiological

implications. Computed tomography (CT) should be performed at the slightest doubt. Poorly treated, these fractures can be the cause of painful sequelae in the trapezo-metacarpal joint type of disabling rhizarthrosis.

Presentation of the case

C. I am 23 years old, victim of deliberate beatings and injuries, followed by a fall on my right wrist in extension. On examination, he presented edema and pain in the right thenary region, total functional impotence of the right thumb. The diagnosis was made on an X-ray of the hand; a CT scan was made confirming the diagnosis. The fracture was vertical, external, displaced (Walker type IV) (Figure 1), without associated lesions.



Fig 1: a: preoperative X-ray of the hand from the front and in profile showing the fracture of the trapezium b: Preoperative CT

The treatment was surgical, under locoregional anesthesia, first by the dorso-lateral route, which allowed the reduction of the fracture and the stabilization was entrusted to a pinout (Fig 2).



Fig 2: Immediate postoperative radiography of the osteosynthesis of the trapezium fracture

RESULTS

The fracture consolidated without complications, after six weeks and the patient resumed his work after three months and did not present pain during the mobilization of the thumb, nor loss of strength with an opposition of the thumb rated at 10 according to the rating of kapandji, with hindsight of 28 months, the result was considered excellent (Fig 3,4,5).



Fig 3: Face X-ray at 06 weeks postoperative



Fig 4: Face X-ray at 03 months postoperative

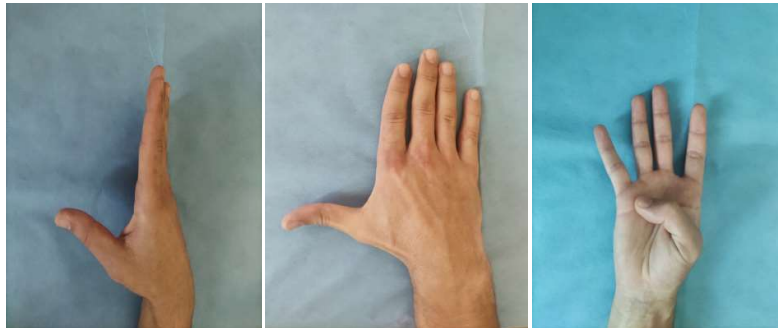


Fig 5: Clinical result after removal of the osteosynthesis material

DISCUSSION

Isolated fractures of the trapezium remain rare or rather often unknown. The associated lesions are those of the thumb spine, in particular the Bennett fracture. Simple radiographs are poorly performing for the diagnosis of trapezoid fractures due to the radiological overlap with the trapezoid. The specific occurrence of kapandji from the front and in profile better shows the body of the trapezoid and the base of the first metacarpal. Computed tomography allows an accurate diagnosis of these fractures. As with any joint fracture, anatomical reduction is the rule. Orthopedic treatment by plastered immobilization with thumb in the opposition position gives good results for isolated and non-displaced fractures of the trapezium. In case of displacement or association with another fracture of the thumb, surgical treatment is necessary and requires an anatomical reduction. Osteosynthesis can involve thin kirschner pins, or screwing. Trapeziectomy can be considered in comminuted fractures. Postoperative plastered immobilization is not essential if the osteosynthesis seems solid, but usually it is resorted to for 15 to 30 days.

CONCLUSION

The isolated trapezoid fracture is very rare in traumatology. Its suspicion must lead to more advanced para-clinical investigations because neglected, it can be the cause of painful sequelae at the level of the trapezo-metacarpal joint with an important maintenance on daily activity.

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