

Unilateral Patella Cubiti: Report of a Rare Case and Review of Literature

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Abstract: Patella cubiti or ulnar patella is a supernumerary bone in the triceps tendon separated from the olecranon. It is a rare elbow abnormality in which either the entire olecranon or part of it remains separated from the proximal ulna. We report the case of a 22-year-old patient admitted to the emergency department for sores on the outer face of the left elbow following a stabbing attack. X-rays of the frontal elbow and profile showed a well-defined bone formation with well-defined contours and separated from the olecranon and the olecranon fossa, radiographs of the contralateral elbow were without particularities. After 2 months the patient recovered his normal amplitudes. Surgical removal of the ulnar patella was performed by some while the rest preferred excision of cartilage with bone graft and fixation with tension band cabling. Childhood trauma is suspected of playing a causal role at least in one-sidedness.

Keywords: Patella Cubiti, elbow anomaly, olecranon.

INTRODUCTION

PATELLA cubiti is a condition of the elbow wherein a patella-like bone lies proximal to the olecranon process within the investments of the triceps tendon. A review of the literature reveals less than 25 cases reported to date. The condition was first described by anatomists in 1776, then by Virchow in 1864, by Tillesson in 1874 and by Pfitzner in 1892, who named this bone "sesamum cubiti[1]".

The first clinical report is credited to Cotton [2] who in 1900 reported 2 cases in a paper entitled "Separation of the Epiphysis of the Olecranon." In 1902 Kienboch [3] reported a single case and named the condition "patella cubiti." In a subsequent article with Desenfans in 1937 in *Presse Medicale* he reported 3 cases and offered a new name, "os epiphysaire del olecranon" [4]. Nevertheless, the term "patella cubiti" has remained.

In definition Patella cubiti or ulnar patella is a supernumerary bone in the triceps tendon separated from the olecranon. It is a rare elbow abnormality in which either the entire olecranon or part of it remains separated from the proximal ulna.

CASE REPORT

We report the case of a 22-year-old patient admitted to the emergency department for sores on the outer face of the left elbow following a stabbing attack (figure1). The patient reported a concept of closed

trauma at the age of 12 years not followed. On examination outside the wound, the patient had a curvature facing the posterior aspect of the elbow with limited range of motion: Extension: 30 °- 30 ° Flexion: 120°

X-rays of the frontal elbow and profile showed a well-defined bone formation with well-defined contours separated from the olecranon and the olecranon fossa (figure 2) the X-rays of the contralateral elbow were without particularities, the diagnosis of a patella cubiti was labeled.

Admitted to the operating room for suturing the wound and surgical exploration, the patella cubiti was well dissected and excised (figure 3).

The ulnar nerve was normal in appearance and neurolysed. Passive and then active rehabilitation was started early in the postoperative period.



Fig-1: Clinical photo of the left elbow showing a wound on its outer surface and a curvature facing the olecranon



Fig-2: X-ray of the elbow showing the patella cubiti



Fig-3: Postoperative elbow radiograph after excision of the patella cubiti

After 2 months the patient recovered his normal amplitudes:

Extension: 10°- 10° Flexion: 130°.

The Malgaine line and Nelaton's lower-summit triangle were preserved.

The pronation and supination movements were normal.

DISCUSSION

Some animals, such as reptiles, have a sesamoid bone in the triceps tendon, whereas in bats this bone is attached to the ulna by fibrous tissues [1]. This forms the basis of the congenital theory in which the epiphysis of the proximal ulna fails to unite with the tree. However, some authors believe that the proximal ulna forms a pseud arthrosis with the rest of the ulna well before the appearance of the epiphyseal center of the olecranon. In 1903, Kienbock reported that a man had a large sesamoid bone resembling the patella was above his olecranon [1].

An English author, Gunn, had previously reported a case of patella cubiti in a woman, aged forty-six, with no previous history of elbow injury, who 'was knocked down by a bicycle. In roentgenograms, taken four days later, a fracture was found through the proximal end of the ulna, extending into the articular surface above the level of the fracture. A patella cubiti was also noted. In Gunn's case, the fracture healed by bony union after four months, but f-here was no change in the appearance of the cubital patella. His conclusions

were that the latter was a persistence of a separation of the olecranon epiphysis[3].

Trauma as etiology for patella cubiti has been debated since 1903. According to Gunn, Kienbock has proposed a traumatic etiology for abnormal bone [1]. Habbe has a word of caution before accepting the traumatic aetiology. He states 'any fracture of the olecranon or a part of the process which fails to undergo union but instead forms a pseudoarticulation, particularly if it increases in size, might be listed as an additional case of cubital patella. Rather in the true case of patella cubiti there will be either no history of trauma pertinent to the finding or the trauma would have occurred in childhood' [1]. O' Donoghue reported a case where trauma caused fracture through the cartilaginous epiphyseal plate of patella cubiti which was surgically fixed, whereas Levine reported bony fracture through patella cubiti which was surgically excised [7, 8].

Surgical removal of the ulnar patella was performed by some while the rest preferred excision of cartilage with bone graft and fixation with tension band cabling.

The indications for surgery were either pain, fracture or fixed flexion deformity. Intraoperatively, a mobile pseudarthrosis was noted between the cubital patella and proximal ulna [6, 9, 10]. Surgical removal of

cubital patella was performed by some while the rest preferred cartilage excision with bone grafting and fixation with tension band wiring.

CONCLUSION

Patella cubiti is rarely diagnosed, The trauma during childhood is suspected of playing a role of causality at least in one-sided, Although the treatment of patella cubiti remains controversial, R. Mittal [11] proposes to avoid surgery in patients who do not have a rigidity of the elbow.

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