A Mobile Pisotriquetral Loose Body as a Cause of Severe Ulnar Sided Wrist Pain

Mobile Loose Body at Pistotriquetral Joint

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Introduction

An osteochondral loose body is an uncommon cause of pain and dysfunction of the elbow and knee. Pistotriquetral (PT) loose bodies are rare [1–4]. We report a case of a mobile PT loose body, triggering symptoms only when it moves at the distal PT joint. The patient presented to two clinics with the repeated history of severe wrist pain. X-rays taken at the former clinic showed a fragment in the distal PT joint: a likely cause of the severe wrist pain. However, when the patient was referred to our institution, symptoms were gone, and x-rays revealed a loose body in the proximal part of the PT joint.

Case Report

A 48 year-old, right-handed waitress presented with repeated episodes of reversing severe ulnar, volar sided left wrist pain for past 7 years. The average time of pain was about 30 min. At first, the severe wrist pain had been alleviated in a few

minutes. Often the pain was relieved when the patient flexed her wrist passively, and once the pain was gone, she was free of any symptoms for weeks or even months. However, the agonizing pain had gradually increased in time and frequency over the past years. In the worst case, the severe pain had lasted for 24 h. She had no history of injury.

Return of symptoms brought her to a local orthopedic clinic. A lateral wrist radiograph revealed a radio-opaque ossicle distal to the pisiform (Fig. 1). After the wrist was passively flexed, the pain was gone, and a radiograph of the wrist showed the fragment in proximal pisiform.

Two days after the recurrence, she was referred to our institution without symptoms. Physical examinations, radiographs, and CT indicated a loose body at the proximal pisiform (Figs. 2 and 3). The fragment was detectable but immobile under the skin. Arthroscopy of ulna-carpal joint was performed. The loose body could not be identified with the arthroscope in the 6R portal, but 6U portal (proximal pisiform) approach allowed us to locate the loose body and pisiform (Fig. 4). The free body at the proximal PT joint could not be moved to the distal PT joint by probing. Osteoarthritis-like change was not observed in the joint. To remove the fragment, we extended the portal skin incision for 1 cm (Fig. 5). She had been treated with ulnar gutter splint for 3 weeks after surgery. After 2 months of treatment, she was able to return to work. There is no further recurrence after 3 years of follow-up.

Discussion

Various causes of the acute severe ulna-sided wrist pain have been reported [5–7]. Common causes are acute calcific tendinitis in flexor carpi ulnaris (FCU) of the wrist, PT arthrosis, extensor carpi ulnaris tenosynovitis, ulnar impaction syndrome, TFCC injury and fractures (i.e. at the pisiform, triquetrum, hamate, metacarpal base, and ulna styloid).

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Fig. 1 The radiographs taken when the patient had symptoms show the loose body (*arrow*) in the distal pisiform

Traumatic episodes indicate TFCC injury or fractures. Arthritis or tenosynovitis is likely to cause chronic, mild, dull and continuous pain. Physical examinations are helpful in differential diagnosis as well as the plain X rays with oblique views, CT and MRI.

A PT loose body is the rare entity. Only a few reported a PT fragment as a cause of ulnar sided wrist pain. A mobile PT loose body with periodic change of location in the PT joint is even rarer, and we cannot find a literature which reported on similar condition affecting the PT joint. The patient did not have traumatic episodes, which ruled out TFCC injury or fractures. The quality of pain was acute, sharp, severe and

Fig. 2 The radiographs taken when the patient was free of symptoms show the loose body (*arrow*) in the proximal pisiform

Fig. 3 3DCT taken when the patient was free of symptoms demonstrates the loose body (*arrow*) in the proximal pisiform

intermittent; chronic diseases such as arthritis or tenosynovitis seemed to be weak as candidates. The X rays taken at the previous two clinics confirmed a mobile loose body at the PT joint. Moreover, the periodic pain was present only when the free body was at the distal end of the joint.

Williams et al. reported that most of the symptoms of previous cases are intermittent ulnar side wrist pain on flexion (USWPOF) [4]. However, in our case, the intermittent ulnar side wrist pain was not induced by USWPOF maneuver. On the contrary, the pain was relieved. Since the passive flexion of the wrist possibly reduced the tension of flexor carpi ulnaris tendon, this maneuver might relieved the pain by promoting distal to proximal migration of the loose body.

Fig. 4 Arthroscopic view from 6U portal showing the free body at the proximal PT joint. The free body could not be pushed forward to the distal PT joint by probe. *FB* free body, *P* pisiform, *T* triquetrum

Fig. 5 Intra-operative findings showing the removed loose body (*arrow*)

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Conflict of interest All named authors (Yoshitaka Hamada, MD; Naohito Hibino, MD; Anna Kobayashi, MD) hereby declare that we have no conflicts of interests of interest to disclose.

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