Arthroscopic management of perilunate injuries: Does it work?”

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Perilunate injuries are highly unstable carpal dissociations characterized by a complete loss of contact between the lunate and surrounding carpal bones. They can be pure perilunate dislocations (PLDs) or perilunate fracture-dislocations (PLFDs) associated with carpal fractures around the lunate. The key to successful treatment of perilunate injuries is early surgical intervention to restore normal alignment of the carpal bones and stability. Generally accepted treatment has consisted of open primary repair or reconstruction of the ligaments with open reduction and internal fixation of the fractures. However, it is clear that open surgery introduces additional surgical trauma to the important capsular and ligamentous structures, which may be associated with a high rate of complications, such as the development of joint stiffness due to capsular fibrosis or failure of proper bone healing because of damage to the blood supply. Furthermore, posttraumatic arthritis, which may modify the functional outcome, is major concern following the open surgery, with an incidence of 38–86%. Arthroscopic technique has the theoretical advantage of facilitating the healing of fractures and torn ligaments because it can minimize capsular and adjacent soft tissue injury and provide preservation of an already tenuous blood supply. In fact, several pioneers suggested that an arthroscopic reduction and percutaneous fixation, as an alternative to an open approach, can effectively treat acute perilunate injuries.

In this lecture, current evidences regarding the prognosis of arthroscopic-assisted reduction and percutaneous fixation compared to open approach (i.e. closed, volar, dorsal, or combined), and whether the carpal tunnel to release in the presence of acute carpal tunnel syndrome will be discussed. In addition, technical pearls and pitfalls of arthroscopic technique for these challenging injuries, which is my preferred technique, will be discussed.