All Arthroscopic Foveal Repair of TFCC with Suture Anchor in Young Adult Patients

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Introduction

Tears in the triangular fibrocartilage complex often appear in association with ulnar wrist pain and limited wrist function in work or sport. This study addressed the all arthroscopic repair of foveal tears in the TFCC with suture anchor, in a sample of 37 young adult patients.

Material & Methods

From July 2010 to February 2014, 37 patients underwent TFCC fovea repair with suture anchor by wrist arthroscopy. The mean follow-up period was 25.6 months (range, 22–28 months), and the patients’ average age was 21.4 years. The study included 27 men and 10 women. All patients had TFCC fovea tears and no wrist fractures. The 1.4mm all suture ICONEX (Stryker) was used to repair the tears and the wrist brace was applied for 4-6 weeks. After operation, patients were rehabilitated, reexamined, and followed up at the clinic. Complications were also recorded.

Under traction device, mild hyperflexion of wrist was suggested. The 6U portal should be very near the ECU tendon. The power shaver applied from 6U portal that can easy check the condition of TFC (hook test). After distal release of TFC, then by the ECU tendon that can easy to fovea area. We can debride this area and also check the position by the fluroscopy. The sheath of anchor (ICONEX) was applied to fovea site and outside-in technique applied and suture the TFC back to fovea region. After reduction and compress the DRUJ we tight the suture. The knot of suture was behind inside the ECU tendon. Twenty patients received PRP injection over tear site.

Post operation, fifteen cases (15/37) received CT scan to evaluate the position of anchor.

Results

The results were graded with a Mayo Modified Wrist Score. Twenty-five of the 37 wrists were rated excellent, 10 were good, and 2 were fair. Overall, 35 of 37 patients (93.1%) rated satisfactorily and returned to same level sporting or work activities. Two patients experienced mild pain during work or exercise. Although motion remained normal for these patients, grip strength on the affected hand was at least 85% of that on the other hand.

Discussion

1. Mild hyper flexion was suggested when doing arthroscopic procedure. That more easy to find the fovea area with sheath of anchor.
2. Debride the distal part of TFC that easy found the fovea region, also make the TFC more easy proximal attach to fovea site.
3. By the direction of ECU tendon that can get the fovea site. The CT scan post operation revealed all good position of anchor in our series.
4. The anchor’s fiber-wire get more strong fix than regular suture. Also provide more healing potential.
5. After tight the suture, the knot was behind and inside of ECU tendon. No any skin irritation in our series.

Conclusion

Arthroscopic repair of early foveal tears of the triangular fibrocartilage complex with suture anchor is a satisfactory method of repair. The procedure can enhance patients’ wrist function by relieving pain and increasing tolerance for work or sport.