

Arthroscopic synovectomy of wrist joint and histological analysis treated with biologics in rheumatoid arthritis

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Purpose: In patients treated with biologics, there are persistent swelling and painful wrist joint even biologics were effective. Wrist joint has narrow joint space with small amount synovium. However capsular release of wrist joint by arthroscopic synovectomy has potential to improve range of motion (ROM) in wrist joint. Here we report cases treated by arthroscopic synovectomy in wrist joint and analysis of histology of synovium with biologics.

Patients and Methods: Six cases of RA including 6 wrist joints, five male and one female, mean age of 46.2 years old, mean disease duration of 4.4 years, mean follow-up periods of 35 months. Five case of infliximab, one case of etanercept. DAS28, range of motion (ROM) of wrist were assessed before and after surgery. Immunohistological examination was performed to detect the expression of TNF- α , IL-6 and MMP-3 in synovium.

Results: Mean DAS28 was improved from 3.51 to 2.14 and mean CRP was changed from 2.09 mg/dl to 0.865 mg/dl one year after synovectomy of wrist. Flexion and extension of wrist ROM was significantly improved after surgery. Small amount of synovium proliferation with white and red color was recognized radio-ulnar joint. The expression of TNF- α , IL-6 and MMP-3 were recognized in synovium of wrist joints.

Conclusion: Wrist arthroscopic synovectomy was effective to improve ROM besides DAS28 of painful wrist treated with biologics. These findings suggested that hand quality in RA needed not only DAS28 improvement but also ROM by using synovectomy to reduce the expression of TNF- α , IL-6 and MMP-3 in synovium for development of RA.

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