Factors Associated with Pain Intensity in Idiopathic Ulnar Impaction Syndrome (Does Longer Ulna Induces Severer Pain in Idiopathic Ulnar Impaction Syndrome?)

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Introduction

- The main pathophysiology of idiopathic ulnar impaction syndrome is degenerative changes which are induced by impingement between ulnar head and carpus, therefore it is commonly considered that longer ulnar variances tend to induce severer ulnar sided wrist pain.

- However, there are no studies about the relationship between ulnar variance and pain intensity in any kinds of literature.

- The purpose of this study is to investigate factors associated with pain intensity of ulnar sided wrist in idiopathic ulnar impaction syndrome.

Materials & Methods

- From June 2005 to March 2016, Retrospectively reviewed 124 patients (139 wrists, Rt: 70, Lt : 69, Both : 15) underwent ulnar shortening osteotomy and arthroscopic TFCC debridement at our hospital.

- Sex, age, duration of ulnar wrist pain, dominant hand or not, amount of physical work exposure, preoperatively ulnar variance, degree of ulnocarpal degeneration, presence of degenerative complex TFCC tear were included as possible factors influencing on wrist pain intensity & activity limitation were included

- Preoperative DASH score, VAS score, and length of ulnar variance were measured and duration of ulnar wrist pain, dominant hand or not, and the amount of physical work exposure were interviewed preoperatively

- The amount of physical work exposure was estimated by the self-report for work-related exposures within 1 month.

- Patients reported average daily time for 6 physical exposures using a modified Nordstrom questionnaire (Estimated by the self-report for work-related exposures within 1 month)

- The degree of degeneration (stage in Palmar classification) and presence of degenerative triangular fibrocartilaginous complex tear was assessed with preoperative simple radiography and intraoperative arthroscopic findings

- The relationship between wrist pain intensity and activity limitation and associated factors were statistically analyzed with multiple regression models

Results

- In 124 patients (M: 81, F : 58) mean age was 40.3(17 – 68)

- Degree of ulnocarpal degeneration(Palmar classification)

- Degenerative complex tear (Y: 33, N:139)

- Amount of physical work exposure & presence of degenerative complex TFCC tear had positive correlation with wrist pain intensity and wrist activity limitation

- Whereas other factors including especially length of ulnar variance were not associated with the intensity of ulnar-sided wrist pain and wrist activity limitation

Conclusion

- Longer ulna does not always induces severer wrist pain & activity limitation and patients with job needed excessive wrist use or degenerative complex TFCC tear tended to have severer wrist pain and activity limitation in idiopathic ulnar impaction

- Therefore, patients who have degenerative complex TFCC tear or cannot modify their physical work exposure should be considered early surgical treatment and it is desirable not to decide to do surgery only with length of ulnar variance.