

## MULTIDIRECTIONAL INSTABILITY

### ROLE OF THE REHABILITATION: DOES IT WORK?

MDI can be defined as instability of the shoulder joint in more than one direction due to the obstruction of the stabilizing mechanisms of the shoulder joint. According to our investigation, symptomatic multidirectional instability of the shoulder joint can be classified into four groups:

Group 1 : Anatomical remarkable lesion

Irrespective of both arm at side and arm at elevated position show the relative downward tendency of the humeral head from glenoid fossa.

Group 2 : The stabilization mechanism has failed due to the obstacle of rotator cuff function

Symptoms appeared with the arm elevated. The humeral head is placed inferiorly from the glenoid in the position of arm at side and relative upward tendency from the glenoid fossa in the elevated position.

Group 3 : Cannot attain stabilization of gleno-humeral joint due to the obstacle of scapulo-thoracic joint

Symptoms appeared with the arm elevated. The humeral head demonstrated relatively upward tendency from the glenoid fossa with inadequate upper rotation of the scapula in the elevated position of the shoulder. Furthermore, when the upper rotation of the scapula was assisted from body surface, the humeral head came up to be adapted with glenoid with sufficient rotator cuff function.

Group 4 : Cannot attain stabilization by the breakdown of the scapulo-humeral rhythm

In spite of acquiring the stability of scapulo-humeral joint adding a load, instability may be promoted, but cooperation of the movement of the shoulder and of the upper limbs is not observed in condition of unexpected shoulder movement and elevation of the arm without loading

On the other hand, asymptomatic cases which demonstrated downward tendency of the humeral head in arm at side, sufficient rotator cuff and scapulo-thoracic functions were observed.

#### Rehabilitation

Although the enforced physiotherapy differed for every group, as order of an improvement item, correspondence was aimed at in order of an improvement of poor posture, scapulo-thoracic joint function, rotator cuff function, and scapula-humeral rhythm.

#### Selection of the exercises

When both rotator cuff and scapulo-thoracic functional fall were observed, resisted abduction test was examined with manual stabilizing scapula. If symptoms decreased and muscle power increased, approach to scapulo-thoracic joint will be selected prior to approach for rotator cuff. When their symptoms and power were changeable depending on the examination position, for example standing or sitting, thorax, waist, and lower extremity were target of treatment.

Surgical treatment will be adapted if it is in the following states even if it performs an exercise cure by the above views:

1. Downward tendency of the humeral head from glenoid in any position of shoulder joint

2. Did not acquire any effect from physical exercise remaining symptoms

3. Symptoms and signs were repeated although temporary recovery of functional condition was seen.

There are few such cases and most is the cases included in the Group 1. Surgical treatment was conducted in two years from six months after the rehabilitation started.

#### Conclusion

Since the MDI has the laxity of shoulder joint in the background, there is a tendency for the cause of symptom to be limited and aimed only to laxity. However, there were small number cases where the function which it originally has could not be proved due to laxity. As a result, sufficient treatment is expected by performing diagnosis of the functional damage and the exercise cure for it.