Relationship between Habitual Posterior Instability of the Shoulder and Scapular Dyskinesis

-Does the Scapular Manual Fixation Have a Great Effect on the Result of the Jerk Test-

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✅ Scapular dyskinesis is highly related to various shoulder problems, such as rotator cuff disease, throwing injury of the shoulder, and instability. (Kibler WB: J Am Acad Orthop Surg 2012)

* We devised two functional evaluations of the scapula to show the relationship between scapular dyskinesis and posterior shoulder instability:
  - Scapular Mobility Jerk Test (SAJT): the 18th ESSKA Congress
  - Scapular Assistance Jerk Test (SAJT): the 44th JSS meeting

● I have no financial relationships to disclosure.
A procedure for SMJT. An examiner touched the scapula spine with his hand, and evaluated scapular mobility in the jerk test. This case showed that the scapula was well abducted when the shoulder was adducted horizontally in the jerk test.
Positive case of the SMJT

This case showed that scapular mobility was clearly restricted, and the shoulder was subluxated posteriorly in a shoulder horizontal adduction position during the jerk test.

This result of the SMJT showed the relationship between scapular dyskinesia and posterior shoulder instability.
**A procedure of the SAJT (scapular assistance jerk test):**
An examiner assists a movement of scapular abduction and internal rotation, passively in the jerk test.
- This passive assistance of scapular movement can make posterior shoulder instability improved clearly.

**Positive case of both SMJT (above) and SAJT (below)**

Posterior subluxation was disappeared due to scapular passive abduction.
To observe whether masked posterior instability of the shoulder can be found by *passively manual fixation of the scapula* during the jerk test.

- Passively manual fixation of the scapula *generates temporary scapular dyskinesia*. 

【Purpose】
92 cases, 182 shoulders with the negative jerk test:
*All shoulders showed no posterior instability.

male: 76 cases, female: 16 cases
average age: 18.7 yrs. (18-32 yrs.)
The jerk test was performed, *fixing the scapula passively,* to create temporary scapular dyskinesia.

*Can the FSJT make a stable shoulder with negative JT turn into an unstable one with positive JT?*

- **Positive FSJT:** a stable shoulder with negative JT changes into an unstable one with positive JT due to temporary scapular dyskinesia.
- **Negative FSJT:** a stable shoulder remains stable, regardless of temporary scapular dyskinesia.
*In all 128 shoulders, the results of the JT were positive, while about one third of them (68 shoulders: 37.4%) were evaluated as positive in the FSJT.*
【Case 1: Lt. shoulder】

Negative JT & SMJT

Passively fixed scapula during the JT (temporary scapular dyskinesia)

Negative FSJT

No posterior instability
Case 1: rt. shoulder

Negative JT & SMJT

Positive FSJT

Passively fixed scapula during the JT

Posterior subluxation
【Discussion】

- The result of FSJT showed that in about one third of the 182 shoulders without posterior instability, temporary scapular dyskinesis created by passive scapular fixation during the jerk test caused the hidden posterior instability to become apparent, just like the above case.

【Conclusion】

- Our study indicated that scapular dyskinesis had a great influence on the generation of masked shoulder posterior instability.
Thank you for your attention!!

Our hometown, Kagoshima has an active volcano called Sakurajima and many hot springs.

【References】