Conservative Management of Stiff Shoulder - Effectiveness and Usage of Hyaluronic Acid Injection -

Koh Maruyama, MD, Ph. D.

Department of Orthopaedic Surgery, Nihon University School of Medicine, Tokyo, JAPAN

Hyaluronic(HA) is the main component of synovial fluid and exhibits high viscoelasticity and high capacity to hold water. It acts as the lubricant of joint movements and reduces the mechanical stress on joints. As the injection of HA(Na-HA) has superior effects on the improvement of joint pain and daily activities, it is widely used for osteoarthritis of the knee joint.

In 1990 we started to use it for the treatment of stiff shoulder and it was proved that Na-HA injection is effective for about 85% of this disorder. Results of both experimental and clinical studies of Na-HA are shown here.

- 1. Radioactivity concentration in the dosed joint tissue and main organs after intra-articular administration of 140.1% Na-HA into the shoulder joint of rabbits.
- 2. Effects of 1% Na-HA on brady kinin-induced knee pain in rats.
- 3. Improvement of pain, ROM and daily activities of stiff shoulder patients (1% NA-HA vs 0.01% Na-HA)
- 4. Effect of combined administration of local anesthetics for stiff shoulder patients.

Furthermore, selection of injection site and its technique is introduced by presenting several cases we treated.