

## Orthopaedics-2021: Self-exercise for piriformis syndrome

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**Introduction:** Piriformis syndrome (PS) is defined as excessive and prolonged contraction of the piriformis muscle (PM), which produces low back and lower leg pain. Diagnosis of PS is confirmed by conversion from a positive to negative flexion-adduction-internal rotation (FAIR) test after a diagnostic injection into the PM, while both the straight leg raise and the Lasègue tests are negative. Intractable PS is treated by an injection of 50-100mg of botulinum toxin into the affected muscle under the fluoroscope or ultrasound, and a perform-at-home self-exercise program for piriformis muscle stretching. The action of injected botulinum begins slowly and reaches the tolerable pain level after 2-3 months, and ends the relaxation effect at around 6 months. This study was performed to evaluate the efficacy of piriformis exercise in patients who received botulinum toxin into the affected muscle.

**Methods:** 500 patients who received botulinum toxin into the affected muscle divided into 2 groups, piriformis exercise group and control group. The piriformis exercise begins with a push-up position using hands and toes (A), followed by placing the affected leg across and

underneath the body trunk so that, if possible, the affected knee is outside the trunk (B). The unaffected leg is extended straight back behind the trunk, keeping the pelvis straight (C). The hips are moved backward toward the floor; the body is leaned forward with the forearms toward the floor; the affected leg is kept in place, until a deep stretch is felt (D). The stretch is held for 30 s, and then the patient slowly returns to starting position. The self-exercise program requires the patient to assume a certain position 20 times a day. This study was excluded the patients who could not perform self-exercise due to old age and previous lower leg operation. Re-injection rate after recurrence of piriformis syndrome was compared between 2 groups.

**Results:** PS was more frequent in male (M/F=370/130). Mean age was  $58.5 \pm 10.3$  years. Re-injection rate within 1 year after the first injection was significantly reduced in the piriformis exercise group (P group/C group=15%/35%).

**Conclusions:** A self-exercise program reduces and prevents the recurrence of PS within the 1-year-study period...

### Biography-

Kyung-Hoon Kim is currently work in pain clinic. He is from Pusan National University Yangsan Hospital, Bumeuri, Mulgeumup, Yangsan, Kyungsangnamdo, Korea.