

## Isolated paralysis of the infraspinatus muscle in athletes

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### Introduction

In athlete, one of the important causes of a painful shoulder that can mimic a rotator cuff abnormality is isolated paralysis of the infraspinatus. We experienced eight cases of athletes who suffered isolated paralysis of the infraspinatus with shoulder pain.

### Material and Methods

From 1987 to 2001, in eight athletes, isolated paralysis of the infraspinatus was determined by both clinical symptoms and electromyographic (EMG) findings. Ultrasonography and/or magnetic resonance imaging (MRI) were also performed to determine the soft tissue abnormality around the shoulder joint. Ganglia over the spinoglenoid notch were confirmed in seven cases using MRI and/or ultrasonography. Three were performed surgical treatment, and two were treated using computed tomography (CT)-guided aspiration. There were eight male and their mean age was 27 years old (range, 17~40).

We compare the results of those two treatment procedures.

### Result

Examination revealed atrophy of the infraspinatus and weakness of external rotation and abduction in all cases.

EMG showed isolated paralysis of the infraspinatus muscle in all cases. MRI showed well-defined areas of increased signal intensity over the spinoglenoid notch in T2-weighted or fast-scan images in six.

In surgically treated patients, all patients recovered uneventfully, and repeated EMG showed reinnervation at 5 to 11 months after operation. Another patient, a senior high-school volleyball player with no cystic lesion, showed reinnervation of the infraspinatus on EMG at five months and returned to volleyball after ten months. In cases treated using CT-guided aspiration, they had regained full activity without pain and returned to sport.

### Conclusion

- 1 We reported eight athletes of isolated paralysis of the infraspinatus.
- 2 Our results demonstrated that both operative treatment and CT-guided aspiration are effective for relief of symptoms, if the conservative treatment was failed.
- 3 Although the long-term results of CT-guided aspiration procedure should be clarified, this procedure is one option when the patient cannot accept the surgical intervention.

**Key word:** Suprascapular nerve, Infraspinatus muscle, Ganglion