A Silver Medal Winner at the 13th World Wu Shu (武术) Championship 2015 17 Months After Selective Thoracic Fusion for Adolescent Idiopathic Scoliosis

A Case Report

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Study Design. Case report.
Objective. To report the successful rehabilitation and the training progress of an elite high performance martial art exponent after selective thoracic fusion for Adolescent Idiopathic Scoliosis (AIS).

Summary of Background Data. Posterior spinal fusion for AIS will result in loss of spinal flexibility. The process of rehabilitation after posterior spinal fusion for AIS remains controversial and there are few reports of return to elite sports performance after posterior spinal fusion for AIS.

Methods. We report a case of a 25-year-old lady who was a national Wu Shu exponent. She was a Taolu (Exhibition) exponent. She underwent Selective Thoracic Fusion (T4 to T12) using alternate level pedicle screw placement augmented with autogenous local bone graft in June 2014. She commenced her training at 3-month post surgery and the intensity of her training was increased after 6 months post surgery. We followed her up to 2 years post surgery and showed no instrumentation failure or loss of correction.

Results. After selective thoracic fusion, her training process consisted of mainly speed training, core strengthening, and flexibility exercises. At 17 months of post operation, she participated in 13th World Wu Shu Championship 2015 and won the silver medal.

Conclusion. Return to elite high performance martial arts sports was possible after selective thoracic fusion for AIS. The accelerated and intensive training regime did not lead to any instrumentation failure and complications.

Key words: Adolescent Idiopathic Scoliosis, Instrumentation, martial art, selective thoracic fusion, silver medal, spinal flexibility, sports, Taolu exponent, World Wu Shu Championship 2015, Wu Shu.

Level of Evidence: 3

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Posterior spinal fusion for Adolescent Idiopathic Scoliosis (AIS) will result in loss of spinal flexibility.1,2 Spinal flexibility affects sporting performance particularly for competitive athletes. Fabriant et al3 reported the level of dural fusion level and Lenke curve types as independent predictors of return to athletic activity (same level or higher) postoperatively. The process of rehabilitation after posterior spinal fusion (PSF) for AIS remains controversial.

In a survey of 23 spinal deformity surgeons, 76% of surgeons would allow patients who underwent PSF to return to contact sports by 6 months, and 77% would allow return to collision sports by 1 year after surgery. However, there have been no previous reports of the rehabilitation process involving an elite high-performance athlete (martial art exponent) after PSF for AIS. In this case report, we would like to report the training progress of a national Wu Shu exponent which resulted in a triumphant return in the 13th World Wu Shu Championship, 17 months after selective thoracic fusion for AIS.

CASE REPORT

This patient was a 25-year-old lady who was a national Wu Shu exponent. She was a Taolu (Exhibition) exponent. She and her partner competed in the “Daolian” (dual demonstrative combat event) competition segment. She presented to us with AIS in early 2014. She was diagnosed with AIS since the age of 12-year old and noted progressive worsening