INTRODUCTION

Sciatica is a common condition. However, the exact pathophysiology of sciatica has not been fully elucidated. Both mechanical and biochemical components lead to the symptoms of sciatica. Mechanical compression of the spinal nerve can cause disruption of conduction, neuronal damage, and vascular insufficiency. Inflammation also has an important role in sciatica. A study in animals has shown inflammation followed by nerve damage from application of autologous nucleus pulposus to the cauda equina nerve roots in the absence of mechanical compression. Potent inflammatory substances such as phospholipase A2 have been found in human herniated lumbar insufficiency.

ABSTRACT

Objective: To evaluate the use of selective nerve root block as a treatment for sciatica.

Patients and Methods: Thirty one patients presenting to Tuen Mun Hospital from February 2003 to October 2003 with sciatica and a confirmed prolapsed lumbar intervertebral disc were treated with selective nerve root block. Nineteen patients treated conservatively for sciatica by another team of clinicians in the Department acted as a comparison group. Patients were evaluated using the Japanese Orthopaedics Association lumbar score, Oswestry disability index, visual analogue scale for pain grading, and the straight leg raising test before and after treatment.

Results: Patients receiving selective nerve root block treatment had a significant improvement in pain and functional scores at last follow-up (24 weeks after selective nerve root block). The Japanese Orthopaedics Association lumbar score improved from 16.63 to 23.27 (p < 0.0001); the Oswestry disability index decreased from 46.20% to 25.83% (p < 0.0001); the visual analogue scale pain grading decreased from 5.67 to 3.00 (p < 0.0001); and straight leg raising increased from 53.67° to 72.76° (p < 0.005). This group also had lower pain ratings and better functional scores than the comparison group 4 weeks after treatment.

Conclusion: Selective nerve root block has a therapeutic as well as a diagnostic role in the management of sciatica, providing rapid relief of sciatic pain.

Key Words: Intervertebral disk displacement, Radiculopathy, Sciatica