

# Spinal Cord Infarction Following Cervical Nerve Root Block : a Case Report

Sanggyu Seo, Ki Hun Whang  
Department of Rehabilitation Medicine,  
Dong Eui hospital, Busan, Korea

## Background

Cervical nerve root block is a common method for managing radicular pain and is associated with rare occurrences of severe complications. However, it is important to note that spinal cord infarction, an exceedingly uncommon adverse event, may present with immediate neurological deficits following cervical nerve root block. This is a case report of a 40-year-old female patient who experienced right-sided muscle weakness and hypesthesia in the facial and scalp areas after a cervical nerve root block. The report highlights the rare occurrence of spinal cord infarction caused by trauma.

## Method

A 40-year-old woman with chronic cervical radicular pain, and no underlying medical conditions, received a C1-2 cervical nerve root block. She lost consciousness for a few seconds after the injection, and upon regaining consciousness, the patient experienced weakness on the right side of her body, as well as numbness in the right facial and scalp areas. A magnetic resonance imaging(MRI) revealed a focal hyperintensity in the spinal cord in the region of posterior spinal artery at the C0-2 level. By the third month, the patient's limb strength had improved from 1/5 to 4/5, allowing her to resume her daily activities. Throughout the first year, she experienced persistent stabbing pain and touch-induced anaesthesia in the right facial area, as well as hypesthesia in the neck area. The patient visited our hospital to evaluate her pain, so we conducted an electrodiagnostic study. The results showed normal findings in the facial and limb muscles one year after the procedure.

## Discussion

Spinal cord infarction in the posterior spinal artery territory is rare and less common than infarction in the anterior spinal artery territory. Patients with anterior cord infarction present with paraplegia or tetraplegia, bladder dysfunction and bilateral loss of temperature and pain. Patients with posterior cord infarction present with loss of vibration and proprioception, deep tendon areflexia and motor weakness.

This case highlights the infrequent occurrence and sudden onset of symptoms in spinal cord infarction as a complication following cervical nerve root blocks. It is important to note that the patient's normal electromyography results emphasize the significance of considering spinal cord infarction even in the absence of peripheral nerve involvement. Trauma-induced vascular compromise is a possible mechanism, which requires increased awareness among clinicians. Timely recognition and appropriate management are essential for optimising patient outcomes. Spinal cord MRI should be obtained as soon as possible for accurate diagnosis.

The immediate onset of symptoms after surgery and the subtle presentation make early recognition difficult and require a high index of suspicion. Clinicians should consider spinal cord infarction as a possible cause of immediate unexplained neurological deficits following cervical nerve root blocks.



Figure.1 T2-hyperintensity was observed in the posterior-central aspect of the right-sided cord, C0-C2 levels, suggesting spinal cord infarction.