

**ISCHEMIC MONOMELIC NEUROPATHY AFTER AV
FISTULA CREATION;
EARLY DIAGNOSIS IS ESSENTIAL TO PREVENT
IRREVERSIBLE NERVE DAMAGE**

Deepak Jasuja, Rohit Mehta and Nader Abdel Masseih, University of Pittsburgh, PA, USA.

Ischemic monomelic neuropathy (IMN) is a very rare condition that can present after arteriovenous fistula creation, due to the shunting of arterial blood flow, causing selective injury to the distal nerves without causing detrimental effects to other structures including the skin, muscle, bone and ligaments.

A 55 year-old male with diabetes mellitus and chronic renal insufficiency had an arteriovenous fistula created. Six weeks later the patient returned due to severe weakness of the right hand associated with increasing pains and numbness which developed shortly after the procedure. Examination revealed significant atrophy and weakness of the intrinsic hand muscles with decreased pin-prick perception over the distal aspect of all fingers. Deep tendon reflexes were normal and distal pulses were palpable.

EMG and nerve conduction studies revealed evidence of axonal loss involving the sensory and motor aspects of radial, median and ulnar nerves. Denervation potentials were noted on needle examination of intrinsic hand muscles, indicative of subacute axonal neuropathy. The other hand, however, showed mild changes consistent with peripheral neuropathy due to diabetes and uremia. Patient was diagnosed with IMN and the brachiocephalic fistula ligated.

Although IMN is a potentially correctable complication, it may be mistaken for diabetic neuropathy or post-surgical pain, resulting in delayed or mis-diagnosis and irreversible nerve damage. IMN must be considered early in the differential diagnosis of distal arm pains following recent fistula creation. Management includes immediate surgical ligation of the fistula, physical therapy to prevent weakness and contractures and medications to control neuropathic pains.