

034 IT'S NO LAUGHING MATTER

Madhu Ramamoorthi, Rose Bosnell. *Frenchay Hospital*

10.1136/jnnp-2014-309236.34

Background Nitrous oxide abuse is on the increase and can cause neurological dysfunction by inactivation of Vitamin B12

resulting in manifestations such as Sub-acute combined degeneration of spinal cord and Peripheral neuropathy.

Case report We report two young patients who presented to emergency neurology clinic with progressive dysaesthesia. Both had history of smoking, alcohol and had inhaled nitrous oxide from whipped cream canisters. Examination of both patients revealed unremarkable cranial nerves but case 1 had sluggish reflexes in the lower limbs with thoracic sensory level while case 2 had mild weakness distally in the upper limbs, global areflexia and cervical sensory level. MRI spine in both cases showed posterior cervico-thoracic cord high signal change. Case 1 had low Vitamin B12 and high Methylmalonic acid levels. Case 2 declined blood tests but had a demyelinating sensorimotor neuropathy on nerve conduction studies. Both patients were advised on abstinence from nitrous oxide and treated with Vitamin B12 supplementation.

Conclusion Neurological sequelae of Nitrous oxide toxicity are under-recognised. It is a common recreational drug and its use should be specifically sought in young patients presenting with signs of a myelo-neuropathy.