Anesthetic management of a parturient with Transverse Myelitis

Presenting Author: Steve P Thomas MBChB FRCA
Presenting Author's Institution: BC Women's Hospital - Vancouver, British Columbia
Co-Authors: Simon Massey MBChB FRCA MD - Bc Women's Hospital - Vancouver, BC
Arry Kathirgamanathan MBChB FRCA - BC Women's Hospital - Vancouver, BC
Joanne Douglas MD FRCPC - BC Women's Hospital - Vancouver, BC

Introduction: Transverse myelitis (TM) is a demyelinating disease of unclear etiology which may occur as a single episode or behave similarly to multiple sclerosis (MS) as a relapsing disease with variable recovery. As a rare condition, in a five year registry of high risk obstetric anesthetic patients with neurological disease, only a single case of TM was reported (1).

Case Report: A 27 year old parturient with TM presented to our Obstetric Anesthesia Clinic at 13 weeks gestation prior to an elective cerclage for cervical incompetence.

The parturient's pregnancy had been uneventful and the consulting anesthesiologist recommended avoiding a neuraxial technique. Subsequently, the patient had a cervical cerclage under general anesthesia with endotracheal intubation. Succinylcholine was used uneventfully to provide muscle relaxation.

The cerclage was removed under epidural anesthesia using bupivacaine and the cervix immediately dilated to 4 cm. Labour was induced with oxytocin and patient controlled epidural analgesia was initiated. Later, the patient delivered a healthy baby. Her postpartum period was complicated by underlying muscle weakness which gradually improved resulting in discharge six days postpartum.

Discussion: It is not known whether TM has relapses after pregnancy but there are several reported cases of TM following a neuraxial technique (2) and general anesthesia (3).

Use of neuraxial techniques in these patients remains controversial. Local anesthetic drugs are neurotoxic, lidocaine more than bupivacaine (4) and demyelinated fibers may be more susceptible to neurotoxicity. It has also been shown that spinal anesthesia has more potential for neurotoxicity than epidural anesthesia (5).

Using succinylcholine is also controversial in patients with evidence of denervated muscle due to increased expression of nicotinic neuromuscular acetylcholine receptors in skeletal muscle. This may lead to significant hyperkalaemia. The literature suggests it is wise not to use succinylcholine between 24 hours and 1-2 years after the insult (6).

References