TRANSIENT NEUROLOGIC SYNDROME (TNS)

Chris Kory, MD (2003-2004)

**Intro:** First described in 1993 after intrathecal injection of hyperbaric 5% lidocaine. This phenomenon is associated with pain or sensory abnormalities in the lower back, buttock, or lower extremities. The symptoms of burning pain and dysesthesia in the L5 and S1 dermatomes usually start after the effects of spinal anesthesia have concluded and may last up to hours to four days. Some reports suggest that TNS may remain for years. Not associated with sensory or motor deficits.

**Incidence:** More common after lithotomy position, obesity, and outpatient surgeries. Incidence is greater with use of 5% lidocaine than other local anesthetics. The incidence of TNS ranges from 0% to 37%. The following factors do not increase the risk of TNS: gender, age, history of back pain or neurologic disorder, lidocaine dose or concentration, spinal needle size, aperture, direction, or addition of epinephrine.

**Pathophysiology:** Unknown.

**Treatment:** First-line = reassurance. Neurophysiologic evaluation in volunteers during TNS does not reveal any abnormalities in somatosensory evoked potential, electromyography, or nerve conduction studies. No treatment is required if the pain is mild. If the pain is severe, the recommended therapy for TNS is NSAIDS or oral opioid analgesic agents.

**Important:** TNS has become a known risk factor for spinal anesthesia. Although uncommon it should be included in discussions of the risk of spinal anesthesia to the patient along with reassurance that it is not caused by neurologic deficits and is most often mild and lasts less than four days.

**Alternative:** May be useful to proceed without spinal in patients in lithotomy position who are obese and going for outpatient surgery, but otherwise TNS is not a reason to change an anesthetic plan where patient safety and satisfaction involve spinal anesthesia.

Reference: