

**Lidocaine/epinephrine/lithium interaction****X****Prolonged peripheral nerve blockade: 2 case reports**

A 42-year-old woman and a 45-year-old man experienced prolonged peripheral nerve blockade due to an interaction between lidocaine/epinephrine [adrenaline; Lox] and lithium.

The woman was scheduled for surgical removal of an impacted third molar. She had a history of bipolar disorder, and she had received oral lithium 750 mg/day for 7 years; discontinued for 2 days prior to the surgery. A nerve block was performed with a 2mL injection of lidocaine 21.3 mg/mL/adrenaline 0.005 mg/mL. The surgery was uneventful and she was discharged. Twelve hours after the block was administered, she reported the lower left half of her lip and tongue were still numb. Sensory blockade was confirmed with pin prick. The sensory blockade persisted for a further 6 hours, before wearing off. Follow-up revealed no sensory deficits or signs of nerve damage.

The man was scheduled for surgical removal of an impacted third molar. He had a history of refractory unipolar depression, and he had received oral lithium 500 mg/day for 4 years; discontinued for 2 days prior to the surgery. A nerve block was performed with a 1.8mL injection of lidocaine 21.3 mg/mL/adrenaline 0.005 mg/mL. The surgery was uneventful and he was discharged. Ten hours after administration of the block, he reported that his palate was still numb. Sensory blockade was confirmed by pin prick. The sensory blockade wore off slowly over the next 6 hours. Follow-up revealed no sensory deficits or signs of nerve damage.

**Author comment:** *"This paper describes two cases in patients treated with oral lithium carbonate in which the duration of sensory paralysis was extremely prolonged following nerve block anaesthesia. . . Gold and Thut, 2001 showed that if the concentration of extracellular lithium ions increases, the potency of local anaesthetic conduction block increases concomitantly. . . We hypothesize that lithium could have caused the prolonged duration of the peripheral nerve block."*

Patil PM. Prolonged peripheral nerve blockade in patients using lithium carbonate. Journal of Cranio-Maxillo-Facial Surgery 42: e33-e35, No. 3, Apr 2014. Available from: URL: <http://doi.org/10.1016/j.jcms.2013.05.025> - India 803101270