

### **Exploring the transversus abdominis plane block in cesarean sections and the subsequent toxicity risk to neonates via breast milk**

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The transversus abdominis plane (TAP) block with its wide application has shown to be an analgesic effective for use in abdominal surgeries, including for cesarean section. However, the bupivacaine delivered in the TAP block comes with the risk of toxicity, both central nerve system (CNS) and cardiovascular system, and has been shown in some instances to reach maximum serum concentrations in excess of the 2 µg/mL associated with the lower end of CNS toxicity. There is a specific concern with cesarean section TAP blocks of the anesthetic passage to the neonate via maternal breast milk and whether this poses a toxicity risk. Bupivacaine has been shown to pass into maternal milk at concentrations 0.34 times the maternal serum concentration. Preliminary statistical analyses suggest that the bupivacaine delivered in breast milk is not in concentrations high enough to cause neonatal toxicity, but further studies would be useful in identifying what the toxicity risk is, if any, to the neonates' breastfeeding after the delivery and TAP block.

#### **Biography**

Jeff L. Xu, MD, chief of Regional Anesthesia & Acute Pain Management, Program Director of Regional Anesthesiology & Acute Pain Medicine Fellowship. As the founder of the Regional Anesthesia & Acute Pain Services at Westchester Medical Center/New York Medical College (WMC/NYMC), New York, USA, he developed and standardized the regional anesthesia program for the anesthesia residents. He also is the founder of the fellowship program for Regional Anesthesiology & Acute Pain Medicine at WMC/NYMC, and served as fellowship program director. He served as principal investigator on multiple clinical studies, editor and reviewer for peer review journals, faculty for regional anesthesia workshops, speaker for national and international conferences.

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