Do Lumbar Spine Tattoos Impact upon Women's Access to Spinal and Epidural Anesthesia for Childbirth? Key Findings from a Large Ontario Survey

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Introduction: Central neuraxial blockade is controversial in the presence of a spine tattoo and may impact on women's access to services during childbirth. This survey examined physicians' beliefs and stated practices related to use of regional anesthesia in parturients with spine tattoos. A logistic regression model was constructed to predict the likelihood of general anesthesia (GA) for C-section.

Methods: Following IRB approval, anesthesia departments in maternity hospitals were identified across Ontario. Community hospitals were randomly sampled within strata based on level of neonatal care; all university-based OB anesthesia teaching programs were invited to participate. Eligible departments offered labor epidural and/or regional anesthesia services for C-section. Department chiefs completed a survey detailing department characteristics/practices. The staff survey collected information related to practitioner beliefs and practices surrounding use of regional anesthesia in women with spine tattoos. Analyses accounted for clustering of data (ICC 0.07). Approximately ¾ of Ontario maternity hospitals were sampled.

Results: 94% (64/68) of departments sampled participated. Within department response rates were: Level 1) 72% (25); level 2) 56% (23); level 3) 47% (31). Fears related to medicolegal and neurologic complications most commonly. 8-10% and 10-13% of physicians reported that they would refuse labor epidural and spinal anesthesia for elective C-section respectively in the presence of an old (provider's definition) uncomplicated tattoo. Approximately 1/5 community providers and 1/6 university providers reported they would use general anesthesia (GA) for elective C-section due to an old uncomplicated complete lumbar spine tattoo. GA rates did not vary by anesthesia training.

Discussion: Findings suggest that presence of a complete uncomplicated spine tattoo may lead to refusal to provide epidural analgesia by 1/10 Ontario anesthesia providers and use of GA for elective C-section by one in five. Results have significant implications for health services delivery, patient safety and research and education related to regional anesthesia and spine tattoos.