Opinion Towards use of Ultrasonography for Labour Epidurals in Obstetric Anesthesia

Abstract Type: Original Research
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Background: Ultrasonography has been shown to accurately predict the optimal insertion site, depth and needle angle for epidural catheter insertion[1,2]. The purpose of this study was to explore the opinion of obstetric anesthesiologists with respect to the emerging use of ultrasound for labour epidural placement and to identify barriers that prevent its widespread use.

Methods: SOAP members were invited to participate in an online survey. Respondents were questioned regarding demographics, practice particulars and use of ultrasonography for labour epidurals. They were also questioned concerning the utility of ultrasound in particularly challenging patients and whether it should become standard of care.

Results: The response rate was 27.5% (319/1161). The majority of respondents both trained and practice in the USA (265 [83%]), with the next highest response coming from Canada (28 [9%]). Approximately half (174 [57%]) of the respondents work in a university affiliated hospital. 99 (33%) respondents had previously used ultrasound for labour epidural placement. These responders were more likely to be younger, in practice fewer than 10 years, and Canadian. The most commonly perceived indication to use ultrasound was obesity, followed by failure for greater than 1 hour. 66 respondents (22%) would not use ultrasound under any circumstances. 182 (61%) respondents believe that ultrasound is unnecessary for labour epidural placement. 188 (63%) believe that it is too slow. 102 (34%) believe that it is too expensive. 42 (14%) think that ultrasound guided epidural placement will become standard of care at tertiary hospitals during their careers. However, only 18 (6%) think that it should become standard of care. The respondents who believe it will become standard of care were more likely to be Canadian than American (40.7% vs 9.2% [p<0.001]), be in practice for fewer than 10 years (p=0.005), have already used it (p=0.01) and have had specific training in neuraxial ultrasound (p=0.002). 85 (28%) respondents have had training in neuraxial ultrasound. Of these, only 9 (3%) have had more training than an in-service or workshop. 246 (82%) replied that their anesthesia department owned at least one ultrasound, and 94 (31%) had three or more. However, only 61 (20%) said that one was reserved for anesthesia use on the labour ward.

Conclusion: We found significant variation in the opinions of obstetric anesthesiologists concerning the emerging role of ultrasound for use in labour epidurals. Although few believe that ultrasound should become standard of care, many believe that there are specific indications for which it would be helpful. A lack of specific training in neuraxial ultrasound techniques as well as limited access to devoted ultrasound machines may be preventing more widespread use.