



# Infiniti Plus™ Needle Guide System Improves Needle Visualization During Placement of Spinal Anesthesia

## The Infiniti Plus ultrasound needle guidance system improves needle visualization during the placement of spinal anesthesia

Hesham Elsharkawy<sup>1</sup>, Rovnat Babazade<sup>2</sup>, Sree Kolli<sup>3</sup>, Hari Kalagara<sup>3</sup>, and Mounir L. Soliman<sup>3</sup>, <sup>1</sup>Departments of Anesthesia and Outcomes Research, CCLCM of Case Western Reserve University Cleveland Clinic, <sup>2</sup>Anesthesiology, Univeristy of Texas Medical Branch, Galveston, TX, and Outcomes Research Consortium, Cleveland, OH, <sup>3</sup>General Anesthesiology, Cleveland Clinic Cleveland, OH, USA.

*Korean Journal of Anesthesiology, 2016 August 69(4): 417-419*

## Summary and Methods

The authors describe the use of the Infiniti Plus (CIVCO Medical Solutions, Kalona, IA) needle guidance system in the facilitation of spinal anesthesia in patients with challenging anatomy such as scoliosis, obesity and advanced age. This publication presents two separate cases, using a S-Nerve (SonoSite, Bothell, WA) ultrasound system and a low frequency (2-5MHz) transducer (SonoSite, Bothell, WA) and the Infiniti Plus needle guide to successfully administer spinal anesthesia in patients with a history of difficult spinal anesthesia.

## Discussion and Results

The authors demonstrate the use of ultrasound guidance has been used successfully for peripheral nerve blocks and spinal anesthesia. In this paper, the addition of the Infiniti Plus needle guidance system was used to assist physicians gain improved needle tip visualization during procedures where patients were historically difficult to scan. Improved visualization of the needle at depths greater than 4cm was observed.

In the first described case three attempts were unsuccessful without ultrasound needle guidance, and was then successful on the first attempt using ultrasound with the Infiniti Plus needle guidance system in a patient with a BMI of 30.4kg/m<sup>2</sup>.

In the second described case spinal anesthesia had been attempted on prior occasions that were unsuccessful and the patient experienced complications. Patient history included kyphoscoliosis and difficulty palpating normal anatomy. Using ultrasound and the Infiniti Plus needle guidance system spinal anesthesia was successful on the first attempt.

## Conclusions

The authors conclude using CIVCO's Infinti Plus needle guidance system was instrumental in allowing:

- Efficient needle movement
- Improved needle shaft and tip visualization
- Obtaining first attempt success in patients with a history of difficult anatomy and prior complications.

## Author Commentary

*"This new application of technology also facilitates spinal anesthesia in patients with challenging anatomy, such as those with scoliosis or obesity, or elderly patients. Infiniti Plus is a needle guidance system that was recently developed to assist clinicians in performing ultrasound-guided nerve blocks. A needle guidance system allows efficient needle movement with improved needle shaft and tip visualization."*

