

BEST VIEWS: EVALUATION OF DIFFERENT NEEDLES AND ULTRASOUND MODES FOR REGIONAL ANAESTHESIA

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Background and Aims

- Our aim was to evaluate the image quality of the various needles and ultrasound modes available for ultrasound guided regional anaesthesia at our hospital.

Methods

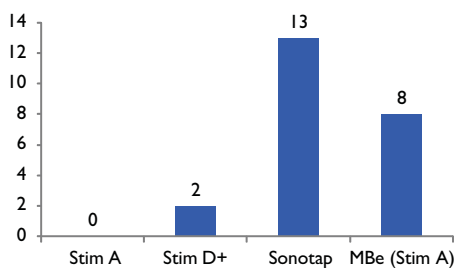
- 23 anaesthetists took part in the study.
- We used a Blue Phantom and Sonosite S-Cath to compare 4 options: the B Braun Stimuplex A, B Braun hyperechogenic Stimuplex D+, Pajunk hyperechogenic Sonotap and Sonosite's multibeam enhancement (MBe) mode with the Stimuplex A.
- The image with each needle was rated as good, adequate or poor and ranked best to worst.

Results

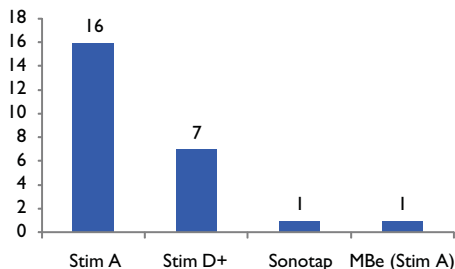
- The Pajunk Sonotap was the overall highest rated although the MBe mode with the Stimuplex A had similar image quality.
- These were followed by the Stimuplex D+ and finally the Stimuplex A unenhanced.

Comparison rating of view

Rated best view

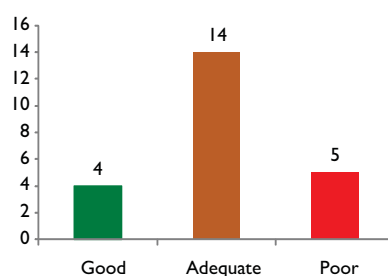


Rated worst view

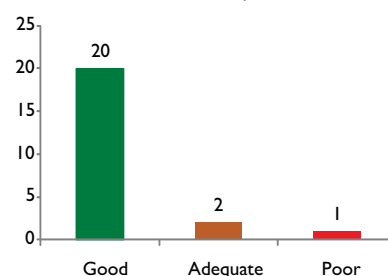


Individual rating of view

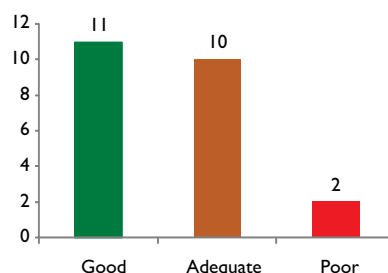
Stim A



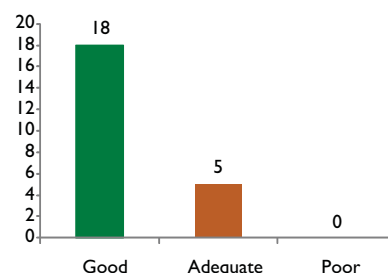
Sonotap



Stim D+



MBe (Stim A)



Conclusions

- Our study demonstrated the superiority of the Pajunk Sonotap needle over the other hyperechogenic needle used by the department, the Stimuplex D+.
- Although ranked lower, the MBe mode (present on newer Sonosite machines) enhanced visualisation of the Stimuplex A giving a similar image quality to the Sonotap.
- Therefore we recommend Pajunk hyperechogenic needles or MBe mode with a non-hyperechogenic needle.
- However given the price difference between the needles, the cost savings of using non-hyperechogenic needles should be considered.