

Assessment of the effect of sevoflurane and dexmedetomidine on the BIS and qCON indices

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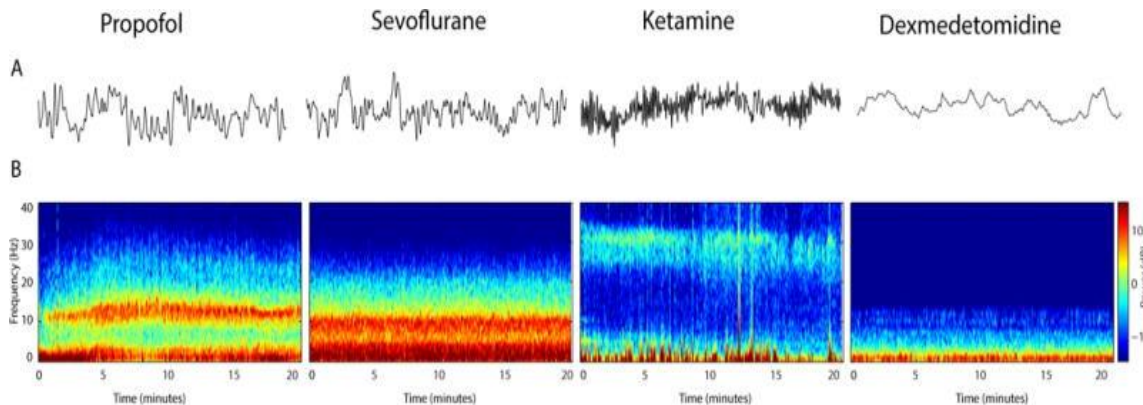


Introduction



- Monitoring of the hypnotic effect and nociceptive balance during general anaesthesia is ever-changing with the inclusion of new drugs in the operating theatre.
- Different drugs affect the brain in different ways.

Are the methods and monitors developed in the last decades precise for the new scenarios set by the newer general anaesthesia practices?

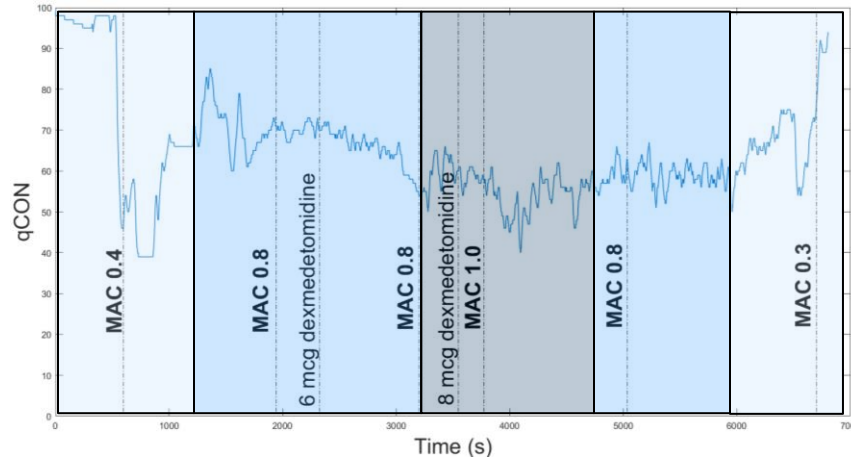


From P. L. Purdon, A. Sampson, K. J. Pavone, and E. N. Brown, "Clinical Electroencephalography for Anesthesiologists: Part I: Background and Basic Signatures," *Anesthesiology*, vol. 123, no. 4, pp. 937–960, Oct. 2015, doi: 10.1097/ALN.0000000000000841

Methods



- 42 patients scheduled for surgical procedures under sevoflurane General Anaesthesia (GA)
 - 10 patients were given dexmedetomidine as anxiolytic (4mcg to 10 mcg)



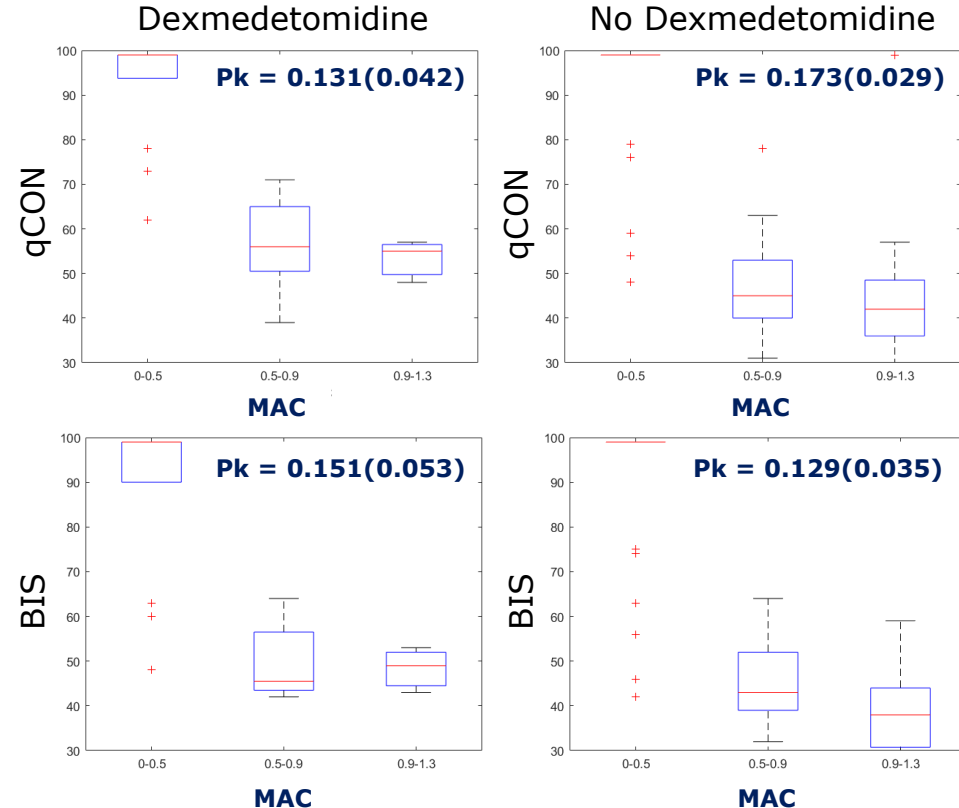
- Prediction probability ($Pk \pm SE$) of qCON and BIS vs MAC mg with and without dexmedetomidine
- Prediction probability ($Pk \pm SE$) between qCON and BIS was assessed for patients with dexmedetomidine



Results



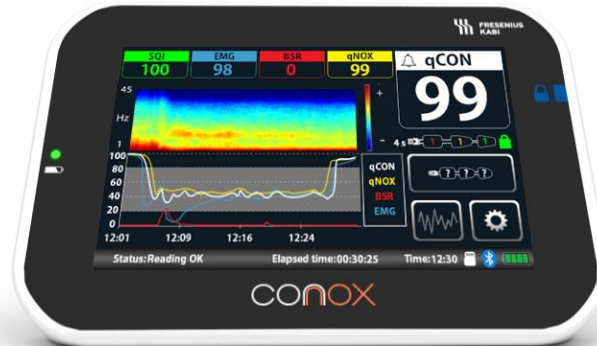
- qCON and BIS decreased when the MAC of sevoflurane increased for all patients, with or without dexmedetomidine.
- qCON vs BIS:
 $Pk(SE) = 0.884 (0.035)$



Conclusions



- qCON and BIS predicted hypnotic effect of sevoflurane with or without dexmedetomidine when administered as an anxiolytic.
- More studies should be performed to establish the effect on qCON of:
 - Dexmedetomidine as the only sedative
 - Dexmedetomidine combined with other anesthetic drugs





Q&A

