474827 - ULTRASOUND GUIDED AXILLARY BLOCK IN A PATIENT WITH AN ICD

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Introduction: Patients at risk of sudden cardiac death secondary to poor ventricular function are frequently managed with implantable cardioverter defibrillators (ICD). (1) Clinicians performing peripheral nerve blocks (PNB) frequently use peripheral nerve stimulators (PNS) to assist with nerve localization. (2) The case of an individual with an ICD presenting for upper limb surgery under PNB is presented. The potential risks, and management of such patients in the perioperative period are reviewed.

Methods: A 53 year old male presented for left ulnar nerve transposition. An ICD had been placed due to ischemic cardiomyopathy. His left ventricular ejection fraction was previously documented to be 19%. An axillary block was performed using local anesthetic spread by ultrasound alone (40 mls plain 1.5% lidocaine). His surgery was completed with intravenous sedation (1.5mg of midazolam), and 8 mls of 1% lidocaine to the upper end of the incision. Bipolar cautery was used and a magnet was readily available. The ICD was not disabled

Results: The electrosurgical cautery can potentially trigger an ICD to deliver a shock in error. (1,3) It has also been reported with Transcutaneous Electrical Nerve Stimulation. (4) The use of a PNS when performing PNB may put patients at similar risk. Many anesthesiologists would conduct this surgical procedure under an infraclavicular block. The location of his ICD precluded this approach. We decided to use ultrasound spread as our sole endpoint for deposition of local anesthetic in close proximity to the peripheral nerves.

Discussion: The axillary technique (avoidance of the ICD generator) and the use of US (spread of local anesthetic) gives clinicians options in the management of similar patients. Disabling the ICD before performing the PNB is another solution.

References: 1) Allen M. Anaesthesia 2006;61:883-890 2) Assmann N, McCartney CJ et al. Regional and Pain Medicine 2007;32:93 3) Atlee JL, Bernstein AD. Anesthesiology 2001;95:1492-1506 4) Siu CW, Tse HF, Lau CP. Journal Interv Card Electrophysiol. 2005;13:73-75