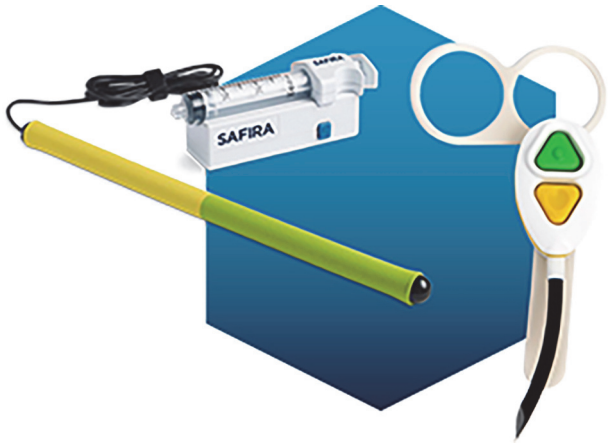
**Background and Aims** Mechanisms of nerve injury related to a peripheral nerve block (PNB) include mechanical trauma, ischaemia and local anaesthetic toxicity. The SAFIRA device aims to reduce risk of mechanical nerve injury. It comprises a motor unit allowing user to aspirate and inject local anaesthetic (LA) on demand preventing LA infiltration pressure over 20 PSI. This study is an international, multicentre, observational, prospective, non- controlled post- market clinical follow up investigation.
**Methods** Peripheral nerve blocks by anaesthetists trained on SAFIRA were recruited across two sites. Inclusion criteria included patients 18 plus years undergoing elective orthopaedic surgery suitable for PNB. Data yielded included demographic data, PNB type and time to perform & assessment of safety and usefulness of the device and 30 day post PNB follow up. Ethics approval was granted from HRA & HCRW.
**Results** 128 PNB were conducted with the SAFIRA device (64 from each site). All blocks were successful with no permanent complications reported. 9 patients experienced transient symptoms on initial injection. 3 device malfunctions were reported and due to user error. 82% of the anaesthetists expressed preference for using SAFIRA device.




**Abstract #35899 Figure 1** SAFIRA DEVICE

**Conclusions** This study indicates SAFIRA device is safe & effective. We recommend local standard operating procedures are developed to minimise human error. Anecdotally some of the anaesthetists in the study reported using less volume of local anaesthetic compared to their usual practice. This could represent an unintended, but very useful, benefit of the device and warrants further study.
**Attachment** 293036_Letter_of_HRA_Approval_22032021.pdf

## #36366 AN ENDLESS BLOCK – A CASE SERIES ABOUT A NEW SINGLE SHOT APPROACH TO BRACHIAL PLEXUS BLOCK

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10.1136/rapm-2023-ESRA.522

**Please confirm that an ethics committee approval has been applied for or granted:** Not relevant (see information at the bottom of this page)

**Background and Aims** In replantation surgery maintenance of limb perfusion and adequate analgesia are critical. Since regional anesthesia can offer pain control and vasodilation it plays an important part in this patient managing.1 These are long-lasting surgeries, there is sometimes a fear of using a single shot as anesthetic technique. The median duration of ropicacaíne induced anesthesic block varies between 4-8h.2 We report 4 cases of finger reimplantation surgeries performed under brachial plexus (BP) block without using any adjuvant.
**Methods** We describe 4 cases in which an alternative approach to axillary BP block was performed, under ultrasound-guidance, as anesthetic technique. After visualization of the median, the ulnar and the radial nerves, 10 mL of ropivacaine 0.5% was distributed around them. Then, a distal scan was performed and another 10 ml were administered when the 3 nerves were no longer surrounded by local anesthetic. A propofol perfusion was used to light sedation.
**Results** Surgeries lasted on average 8.6 hours and proceeded uneventful.
**Conclusions** Balance between anesthesia, analgesia and peripheral vasodilatation is not always easy since systemic agents used in general anesthesia and systemic analgesics may decrease median blood pressure and impair limb perfusion. The same happens when adrenaline is used as adjuvant to prolong peripheral blocks. With this case series we were able to show that with a single shot BP block it is possible to safely perform a 9 hour surgery without use of any adjuvant, taking advantage of all the benefits of the sympathetic block and analgesia associated with this technique.
**Attachment** Sem Título.jpg

## #36463 CONTINUOUS PERIPHERAL NERVE BLOCK: A RETROSPECTIVE AUDIT OF PRIMARY AND SECONDARY FAILURE AT A UK TEACHING HOSPITAL

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10.1136/rapm-2023-ESRA.523

**Please confirm that an ethics committee approval has been applied for or granted:** Not relevant (see information at the bottom of this page)
**Background and Aims** Continuous peripheral nerve block (CPNB) is an effective technique for acute pain control with a low incidence of serious adverse events. However, failure is a recognised complication and not uncommon. This audit aims to establish the incidence of primary (inadequate insertion) and secondary failure (catheter displacement, disconnection, occlusion, leakage) at our institution.
**Methods** All patients receiving CPNB over a 3-month period (August to October 2022) at St George's Hospital, UK, were identified. Information on their management was collected retrospectively from their electronic hospital records.
**Results** 120 episodes of CPNB in 103 patients were analysed. 65% (n=77) were chest wall catheters: 32% (n=38) paravertebral (PV); 21% (n=25) erector spinae plane (ESP) and 12% (n=14) serratus anterior plane (SAP). 27% (n=32) were sciatic. The remaining 10% (n=11) included intrapleural, femoral, rectus sheath and transversus abdominal plane (TAP) catheters. Mean catheter duration was 3.9 ± 2.3 days. Overall, 67% (n=80) remained until no longer clinically needed. However, 30% (n=36) were removed for other reasons. The majority of these, 75% (n=27), suffered problems of