

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 Epidural infusions provide good-quality analgesia after thoracic, abdominal and lower limb surgery and are commonly encountered in the post-operative patient in the high dependency unit. Management of epidural catheters and infusions are core skills for anaesthetic trainees, however recently the number of non-anaesthetic trainees working in critical care has increased. Exposure to epidural anaesthesia amongst this group is variable. Out of hours, in the absence of the pain team, the responsibility for management of the malfunctioning epidural may fall to a non-anaesthetic trainee. The aim of this project was to assess and improve knowledge of epidural infusions amongst non-anaesthetic trainees rotating through critical care.

Methods A 10-question multiple-choice questionnaire (MCQ) on epidural infusions was distributed amongst non-anaesthetic trainees rotating through critical care in our institution. An educational session was provided for a subset of this group after which they re-completed the MCQ. Pre- and post-education session scores were compared.

Results 15 non-anaesthetic trainees completed the MCQ, achieving an average score of 57% (range 40-70%). Eight trainees attended the education session. The mean post-education MCQ score improved to 95% (range 90-100%). The question most commonly answered incorrectly was related to calculating the length of catheter in the epidural space from the depth to loss of resistance and depth at skin. Key safety-related questions related to infusion rates, management of motor block and anti-coagulation were answered correctly by all participants following the education session.

Conclusions Familiarity with epidural infusions is mixed amongst non-anaesthetic trainees. A short educational session improves knowledge and familiarity amongst this group.

#34490 TOTAL KNEE ARTHROPLASTY IN DOWN SYNDROME

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Application for ESRA Abstract Prizes: I apply as an Anesthesiologist (Aged 35 years old or less)

Background and Aims We present a rare case of total knee arthroplasty in 32 year old down syndrome male patient, ASA 2, hypothyroidism presented with right knee pain scheduled for total knee arthroplasty under regional anesthesia.

Methods Pre anesthesia evaluation was assessed for airway management and best anesthesia plan according to his medical co-morbidities, blood results were within normal range. Cervical spine x-ray was requested. Thyroid function test revealed controlled treatment. His cardiac echo showed: The left ventricle is normal in size. There is normal left ventricular wall thickness. Left ventricular systolic function is normal. Ejection Fraction >55%. Left ventricular diastolic function is normal. The right ventricle is normal in size and function. Mildly

thickened Aortic valve leaflet. Mild to moderate aortic regurgitation. His electrocardiogram showed normal sinus rhythm. Our plan for his total knee arthroplasty is under spinal anesthesia along with ultrasound guided adductor canal catheter and IPACK infiltration for postoperative pain control. The duration of surgery lasted for two hours without any complications and 300 ml estimated blood loss and adequate urine output.

Results He was receiving multimodal analgesia of adductor canal ropivacaine injection daily through the catheter, paracetamol IV, morphine 2 mg IV PRN, NSAIDS once daily. He was discharged home without any complications and he is doing back his daily activities without any chronic knee pain.

Conclusions As far as we know, this is the first case presentation of total knee arthroplasty in Down syndrome as it is common for hip arthroplasty than knee.

#36283 A RARE CASE OF PNEUMORRACHIS AFTER PLACEMENT OF AN EPIDURAL ELASTOMERIC DRUG INFUSION BALLOON (DIB)

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Background and Aims Pneumorrhachis is a rare complication of epidural analgesia and is most often asymptomatic. It can cause permanent deficit and differential diagnosis can be challenging, so clinicians should be aware of this entity.

Results A 74 year old woman was admitted to elective total knee replacement surgery. A L3/L4 spinal block using a paramedian approach was achieved after 2 attempts with a 25G quincke needle. An epidural catheter was placed with loss of resistance (LOR) to saline through L3/L4 intervertebral place, by single attempt. The procedure was uneventful and the sensitive and motor block reversed in the PACU. Before the transference to the ward, an epidural DIB was initiated with 0,1% ropivacaine, 5 mL/h. 4 hours later, the anesthesiologist was called for a bilateral sensitive and motor block up to T10 and urinary retention. After neurologist's assessment and DIB clamping, an MRI revealed intradural and extradural air collections, in locations compatible with the deficits presented. The patient was transferred to the hyperbaric medicine center with oxygen inhalation via a non-rebreather mask. Upon arrival, the deficits had completely reversed and it was decided to do 12 hours of normobaric oxygen therapy. Patient was discharged by 6th post-operative day and no other complications was observed.

Conclusions Pneumorrhachis after an epidural technique with LOR to saline is rare. Our most plausible hypothesis was that air could have been entrapped in the DIB. It usually gets reabsorbed spontaneously¹. Nonoperative treatment includes hyperbaric oxygen therapy, which can lead to reabsorption of trapped air.