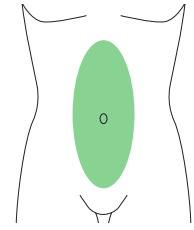


ICU PLAN A BLOCKS **Rectus Sheath**



INDICATIONS: Midline abdominal incisions

TARGET: Plane between rectus abdominis muscle and posterior rectus sheath, bilaterally, to anaesthetise the anterior cutaneous branches of the intercostal nerves (T7-T11)

LOCAL: 20-30ml each side

EQUIPMENT

- ICU-appropriate PPE
- Use a high-frequency (10 to 15 MHz) linear array transducer
- Probe cover and gel
- Chlorhexidine 0.5%
- Local anaesthesia for the skin
- 80-100mm NRFit block needle for a single shot
- If using a continuous technique: 80-100mm 18-19G NRFit or epidural catheter kit

ICU PROCEDURE CHECKLIST

A: Airway secure and safe **B:** Ventilation and oxygenation adjusted **C:** Cardiovascular stability, vasopressors if increased sedation **D:** Sedation and analgesia, skin infiltration for block **E:** Everyone on board. Unit quiet. No other priorities. Adequate personnel. Free of emergency call duties.

Patient focus:

- Recheck and mark the side of the block
- Check coagulation profile, platelet count and drug chart (anticoagulation)
- Consider weight-based maximum local anaesthetic dose, dose reduction in organ failure, low protein states, especially for continuous infusion, large or repeated boluses
- Valid consent or incapacity documentation. NOK informed?

PRE-PROCEDURE

- Complete the ICU procedure checklist.
- Ensure the patient is in a supine or semi-recumbent position.
- Position the US machine on the side opposite to the clinician.
- Bilateral blocks can be performed from one side.
- Ensure appropriate monitoring

PREP

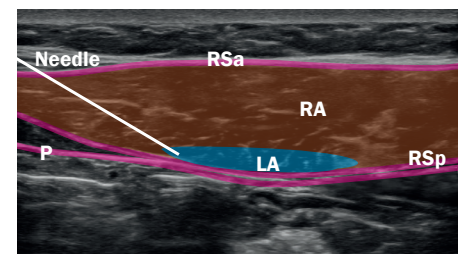
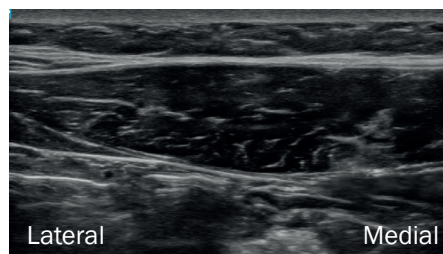
- US transducer transverse below the costal margin on the lateral edge of the rectus abdominis (RA), midway between level of umbilicus & xiphisternum (avascular transpyloric plane)
- Visualise RA, the anterior and posterior rectus sheaths (RSa & RSp), and peritoneum (P)
- Apply colour Doppler to identify arterial flow of the superior epigastric artery and branches
- Ensure asepsis (if catheter use gown, drape and probe sleeve)

STOP

- Confirm skin mark and consent before you block

BLOCK

- Local anaesthesia to skin
- Insert needle in-plane to the transducer in a lateral-to-medial direction through the muscle, entering the muscle at its very lateral border
- Direct needle to plane between RA and RSp
- Confirm negative aspiration
- Injectate should separate RA from RSp
- If inserting a catheter, use full aseptic technique with transducer in parasagittal orientation, needle from cephalad to caudad, allow 4 cm in space, and secure



CAUTION

Risk of peritoneal violation/visceral injury

REFERENCES

Bowness et al (2021) International consensus on anatomical structures to identify on ultrasound for the performance of basic blocks in ultrasound-guided regional anaesthesia <http://dx.doi.org/10.1136/rapm-2021-103004>
Haslam et al (2021) Prep, stop, block': refreshing 'stop before you block' with new national guidance. <https://www.ra-uk.org/index.php/prep-stop-block>



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