Bier's Block Guideline

February 2019. For detailed 'How to' guide, see intranet

Pre-procedure checks

1. Anaesthetic assessment: Exclude contraindications, check fasting status and obtain verbal consent.
2. Check anaesthetic machine and tourniquet: Inflate both cuffs to 300mmHg and ensure no leaks.
3. Minimum monitoring: NIBP, SpO_2, continuous ECG.
4. Calculate local anaesthetic dose and constitute (see below).

Local anaesthetic dosing

PRILOCAINE 0.5% at 3mg/kg. If only 1% prilocaine available then dilute this with an equal volume of 0.9% saline.

	Volume of 0.5% prilocaine (ml)
Weight (kg)	Initial dose (3mg/kg)
80	48ml
70	42ml
60	36ml
50	30ml
40	24ml

If prilocaine is unavailable then LIDOCAINE 0.5% can be used at 3mg/kg with maximum dose 200mg (40ml).

Procedure

1. Insert 22G (Blue) cannula in both arms. Aim as distal as possible in fractured limb.
2. Wrap upper arm in Softban and apply both proximal and distal tourniquets.
3. Elevate limb to exsanguinate while compressing brachial artery for at least 30 seconds.
4. Inflate both cuffs to 100mmHg above systolic (max. 300mmHg), then release brachial pressure and lower arm. **Ensure absent radial pulse.**
5. Inject local anaesthetic while applying circumferential pressure in proximal forearm.
6. Remove cannula from fracture arm. Block usually develops within 5 – 10 minutes.
7. ED Doctor will manipulate wrist and obtain radiograph.
8. Once minimum 20 minutes has elapsed from local anaesthetic injection, deflate cuffs.
9. Monitor patient for further 5 minutes. Peripheral excitatory signs can occur (tinnitus or perioral paraesthesia). IV fluid, oxygen and observation is often all that is needed.

Emergencies

Call for help if any concern: Anaes Cons 2200; SpR 6793; Switchboard 2222.

LA toxicity: AAGBI protocol on cupboard door. **Intralipid** is in the **top cupboard.**

Methaemoglobinaemia (very rare): signs and symptoms of hypoxia. Check ABG, high flow oxygen, methylene blue (in AMU Bay 6 or ED supply).

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