North Bristol
NHS Trust

Obstetric Anaesthesia

Mini Handbook

Labour Analgesia
Regional anaesthesia
General Anaesthesia
Antibiotic prophylaxis
PPH & TEG
Drugs and doses

Written 03-2023 by H Swinburne & B Ballisat
Review due 03-2026

Useful numbers

Emergency: 2222
Obstetric anaesthetist: 9035
3rd on Anaesthetist: 9033
Consultant on call: via switch/CLW
ITU referral: 41499

CDS ODP: 9667
CDS Midwife coordinator: 9135
Brunel Theatre co-ordinator: 1535

CDS Theatre 46920
CDS Theatre
CDS Recovery 46919
CDS Midwives station: 46917

Transfusion 48350/ bleep 9433
Haematology 48350/ bleep 9433
Pathology Helpdesk: 48383

Labour analgesia

Epidural:

Pump setting: McKinley Bodyguard 545 pump: option E PCEA – 8ml bolus, 20 min lockout, no background infusion.
Test dose: 10ml 'bag mix' 0.1%/0.125% Bupivacaine with 2mcg/ml Fentanyl
Loading dose: Administered via the pump, ask the woman to press the button or use physician override to deliver an 8-10ml bolus

CSE

Indication: Useful for patients unable to sit still/lower back pain 2ry to foetal OP position/advanced labour
Dose: 3mls 'bag mix' (0.1%/0.125% Bupivacaine with 2mcg/ml Fentanyl)
Method: Always site an epidural immediately after (same space or adjacent space).
Wait 20 mins/for contraction pain to return prior to epidural test dose

Remifentanil PCA

A potential alternative-please read trust guideline on intranet for key safety points.
Bolus dose=20mcg (1ml). Lockout=3min

Managing complications of labour analgesia

Managing poor block

Block below T10: Bolus bag mix 5-10ml
Inadequate analgesia despite block to T10: 0.25% Levobupivacaine 5-10ml
Unilateral block: Withdraw catheter 1-2cm
Lower back/buttock pain: Fentanyl 25-50mcg with 5mls 0.25% Levobupivacaine
If pain relief remains inadequate, re-site the epidural

Accidental Dural Puncture with Touhy needle

2 options

1. Re-site epidural catheter at another level
2. Thread catheter into CSF 2-4cm and
   Anaesthetist only top-up with:
   - 1ml 0.25% bupivacaine + 25 mcg fentanyl

   OR
   - 'Bag mix' 0.1% bupivacaine + 2 mcg/ml fentanyl 2-4 ml (max hourly)

- Catheter dead space approx. 1 ml, consider flushing with saline
- Ensure appropriate follow up in place

Regional anaesthesia

Spinal doses:

LSCS: 2.5ml 0.5% heavy bupivacaine + 15mcg fentanyl & 100mcg morphine (preservative free)
MROP: 2ml 0.5% heavy bupivacaine +15mcg fentanyl
3rd degree tear/EUA: 2ml 0.5% heavy bupivacaine

Spinal with pre-existing epidural for LSCS

Be prepared for potential high block

- 1.5ml 0.5% heavy bupivacaine if patchy block of adequate height
- 2.5 ml will be required if PCEA running without recent boluses/minimal block

Epidural Top up for LSCS

Preferred option: Ropivicaine 0.75%-max 20mls. 15mls usually sufficient for block to T4.
Second option: 'Fizzy lidocaine'– mix 18ml 2% Lidocaine, 2ml 8.4% sodium bicarbonate + 0.1ml 1:1000 adrenaline. Max 20 mls.
Fentanyl: 50-100mcg can be given to enhance block
Morphine: 2mg preservative free can be given at end of case for analgesia

Managing pain during Caesarean

If mild pain:

1) Ask Obstetrician to pause if safe to do so
2) Analgesic options:
    1) Alfentanil 100-200mcg boluses IV
    2) Nitrous oxide via anaesthetic machine
    3) IV Paracetamol
    4) If epidural in situ: 100mcg Fentanyl via epidural + LA top-up
    5) Surgical TAP blocks/ LA infiltration (not if epidural top-up given)
    6) Obstetricians can perform pudendal block if TOF/EUA etc
3) **ALWAYS OFFER GA EARLY AND DOCUMENT**

If severe pain: conversion to GA preferred option

Antibiotic Prophylaxis

<u>LSCS</u>

Cefuroxime 1.5g IV & Metronidazole 500mg PO/IV
Pen allergic: Clindamycin 600mg IV

<u>EUA/MROP/TOF</u>

Co-Amoxiclav 1.2g IV (give post-delivery if TOF)
Pen allergic: Clindamycin 600mg IV

Anticoagulation and neuraxial procedures

Neuraxial procedure = siting spinal/epidural (and epidural catheter removal)

Aspirin only – perform as usual

Unfractionated Heparin (S/C or infusion)

- Wait 4 hours + check APTT

Prophylactic LMWH

- Wait 12 hours

Prophylactic LMWH and Aspirin

- Wait 24 hours

Prophylactic Fondaparinux

- Wait 36-42 hours and check anti-Xa level

Therapeutic LMWH

- Wait 24 hours
- Wait 4 hours after spinal or epidural removal before giving next dose

Therapeutic Fondaparinux

- Avoid neuraxial procedures

Warfarin – INR <1.4

Regional in PET

Platelet count > 100 = normal risk

Platelets 75-100 + normal clotting= Increased risk

Platelets <75 or INR >1.5=High risk

Discuss all patients with platelets <75/abnormal INR with consultant

GA in obstetrics

Induction

****PREPARE FOR DIFFICULT AIRWAY****

1) Remember **Sodium Citrate** for all patients
2) Consider using **CMAC** as 1st line device
3) RSI, propofol, suxamethonium +/- alfentanil
4) As per DAS guidelines
    1) Team discussion and plan
    2) Consider **facemask ventilation** during apnoeic periods
    3) Max 2+1 intubation attempts

Maintenance

1) **Sevoflurane**, 50:50 O_2:N_2O mix pre-delivery, 30:70 post-delivery
2) **Anticipate PPH** (volatiles reduce uterine tone)
3) Ask obstetrician to perform **TAP blocks** if feasible

Extubation

1)Ensure completely reversed, sat up, and awake prior to extubation

Obtunding pressor response in PET:

Consider in all PET cases even if BP controlled
Magnesium 2g+ Alfentanil 10mcg/kg
(Inform Neonatologist if opiate given)
If BP is not adequately controlled: Esmolol IV bolus 1-2 mg/kg (repeat prior to extubation if necessary)

Post Partum Haemorrhage

*Call **code red** if >1500ml or blood loss with clinical concern*

Always consider use of **cell salvage** if at increased risk of bleeding/contraindications to transfusion

Actions:

1) Follow stepwise **PPH proforma**
2) Seek **senior support** early – bleep 9033 or phone consultant via switch
3) Obtain 2 large bore **IV access**
4) Give rapid **IV fluid** bolus
5) **Monitor** BP/HR/Sats/Temp frequently
6) **Send bloods** including FBC/Clotting/Fibrinogen/VBG and TEG)
7) **Give uterotonics and TXA** - see over for doses
8) O-neg blood is available on CDS if required
9) **Use TEG** to guide use of blood products and Fibrinogen (see flowcharts on last page)
10) Ensure fluid/blood resuscitation commenced prior to spinal/GA. Ketamine is available for induction if severely shocked.

Common drugs and doses

Uterotonics

Carbetocin 100 mcg **IV** (routine in all LSCS)
Sytometrine Oxytocin 5 units + Ergometrine 0.5mg (1 vial) **IM**. *Contraindicated in high BP* Max 2 doses. Consider anti-emetics.
Carboprost (Haemabate) 250mcg **IM** every 15 mins-max 8 doses
Misoprostol 800mcg PR/SL
Oxytocin infusion: 40 units in 500ml 0.9% saline. Infuse at 125ml/hr.

Other drugs in MOH:

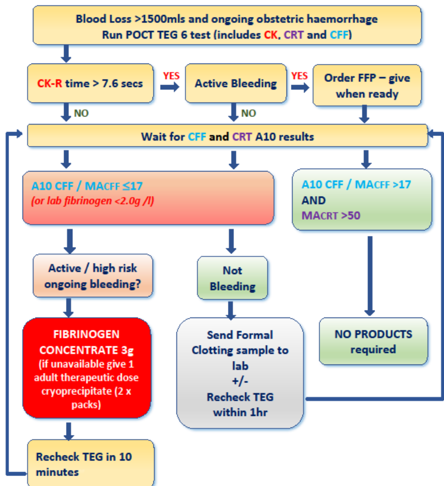
Tranexamic acid 1g IV over 10 mins if EBL >1000ml
Repeat dose after 30 mins if still bleeding
Calcium gluconate 10% 10 ml IV

Tocoyltics

ONLY GIVE AT REQUEST OF OBSTETRICIAN
GTN 1 spray S/L
GTN 50-100mcg IV
Terbutaline 250mcg S/C

Other

Magnesium for (pre)eclampsia
Loading: 4g over 10 mins
Maintenance: 1g per hour



PLATELETS *NB: FBC is a better assessment for platelet use and should ideally guide replacement*

If MACRT <50 but A10 CFF / MACFF > 17 ➡ CONSIDER PLATELETS

If ≥ 2l cell salvage blood reinfused or ≥10u RBC transfuse ➡ CONSIDER PLATELETS

If Platelets ≤75 on FBC ➡ GIVE PLATELETS

NB: TEG does not reliably detect deficiency of von Willebrand factor. A specific Platelet mapping plate (and blood into a green topped bottle) is required to assess platelet inhibitors e.g. aspirin / clopidogrel.

July 2022

TEG Algorithm: Obstetrics

NHS North Bristol NHS Trust

If measured or suspected blood loss ≥ 1500mls AND ONGOING bleeding, perform TEG and review results at 10 minutes

Fibrinogen: REVIEW CFF	If **A10 CFF or MACFF ≤ 17 or Lab fibrinogen <2g/l,** GIVE **1-2 units CRYOPRECIPITATE, or if actively bleeding give 3g Fibrinogen concentrate**
Thrombin generation: REVIEW CK	If **R >7.6 secs or Lab APTT / PT abnormal,** GIVE FFP 4 units (3 units if Booking Wt ≤ 50kg)
Platelets: REVIEW CRT and CFF	Check Lab FBC for platelets. If <75 Give PLATELETS Or if **MACRT <50** and **MACFF >17mm** CONSIDER PLATELETS**
Fibrinolysis	If **CK Lyo30 >8% and MACRT <70*****, GIVE 2nd dose TXA 1g iv if not already administered

Repeat TEG after 15-30 minutes to guide ongoing therapy if: further 500ml blood loss / ongoing bleeding, clinical concern, blood product use

Optimise patient: Temp > 36, Hb > 70g/l, Ionised Ca >1 mmol/l, pH > 7.2

** FBC is a better assessment for platelets so **ideally FBC should guide platelet use.**

*** **If Lyo >8% but MACRT > 75**: Secondary fibrinolysis – **do NOT give TXA**