Preparation and Administration of Drugs by Anaesthetists in Theatres - Full Clinical Guideline - Burton Sites Only

Reference no.: CG ANAES/2019/014

The incidence of anaesthetic drug error is in the region of 1 in 140 anaesthetics [1]. National reports have stressed the need for individual anaesthetists to adopt strategies to reduce the risk of preparation and administration error; however the impact of organisational factors is well recognised [1]. Scrupulous attention to the prevention of cross infection is central to good practice in this area.

The following applies to drug preparation and administration by anaesthetists in theatres. Please note that the Recovery policy addresses the delivery of medications in the recovery room.

Two-person checking

The position of the Royal College of Anaesthetists and of the Association of Anaesthetists of Great Britain and Ireland is that two person checking is not practical, and therefore not in routine use, nor widely recommended in anaesthetic practice [1 2.] This places a particular onus on anaesthetists to ensure necessary checks are ingrained in their own individual practice of preparing and administering drugs.

Exceptions are the following infusions, which require two-person checking and labelling with two signatures in accordance with Trust policy:-

- Noradrenaline & adrenaline infusion
- Insulin infusion
- Patient controlled opiates
- Epidural infusion
- Any other infusion to be continued outside of theatre

Preparation and organisation of workstations

1. Anaesthetists must recognise the potential for error during drug preparation, and hence the importance of ensuring this process is as free of distraction as possible. Haste and fatigue increase the risk of mistakes, as do situations involving more than one anaesthetist working together.

2. Individual drug ampoule labels must be read carefully (drug name, concentration and expiry date) at the time of preparation.

3. It should be recognised that changes in supplier may result in the presentation of different drugs in packaging and/ or ampoules of similar appearance. Hospital pharmacies have little control over such changes, and as such are not in a position to reliably highlight these risks.

4. Each drug syringe must be labelled (using internationally recognised colour coded labels) as soon as its preparation is complete. Syringes (including syringes containing only dilutant) must not be labelled before drug is added.

5. The presence of loose ampoules at anaesthetic work stations is strongly discouraged. This particularly applies to muscle relaxants, cardiovascular drugs and local anaesthetics.

6. Syringes must only be placed in designated trays which have been cleaned with an antibacterial wipe immediately before individual patient use.

7. The inadvertent administration of certain drugs may have particularly severe adverse consequences. The physical separation of these from other anaesthetic drugs is encouraged. This includes cardiovascular drugs and muscle relaxants not intended for immediate use (red trays are available for this purpose). Local anaesthetic agents should be placed in a designated block box.

8. The following practices are encouraged:-
   - The application of two labels to syringes containing muscle relaxants, cardiovascular drugs or local anaesthetics.
   - The physical separation of syringes of similar appearance (e.g. thiopental and antibiotics)
   - The retention of empty ampoules until the completion of a case may provide valuable information in the event of a suspected drug error.

9. Single ampoules must not be divided between patients.

10. Contaminated airway equipment should not be placed in the same tray as drug syringes. Separate designated airway trays are available.

11. There should be no mixing of used syringes between individual patient trays. When a syringe has been used and is returned to a tray, the use of all other syringes in that tray must subsequently be restricted to the same patient.

Administration

1. It is vital to carefully read the syringe label before every drug administration.

2. The increased risk of drug miss-selection associated with distraction, haste, fatigue or time pressures should be recognised and result in increased vigilance. When more than one anaesthetist work together there is an inherent risk of duplication or omission.

3. It is important to establish which medications may have been administered to patients outside of theatres to avoid dose duplication (paracetamol anti-emetics and gentamicin represent a particular risk). Equally, doses of important drugs (e.g. antibiotics) may be due when a patient is in theatre.

4. The administration of multiple medications prior to the induction of anaesthesia is discouraged because this increases the risk of drug error causing awake paralysis.

Delegation of drug administration to an Operating department Practitioner (ODP)

In certain circumstances, it may be necessary for an anaesthetist to delegate the administration of a drug to a patient by verbal instruction. Where a verbal instruction is given, the ODP must repeat the verbal order back to the doctor to confirm the correct medicine and dose.
Any ODP administering a medicine under this type of direction is responsible for ensuring that the medicine is administered in the correct manner. For IV medications the ODP must be IV therapy trained by this Trust. The anaesthetist must document the administration on the anaesthetic record as soon as this is feasible. The responsibility for the appropriateness of the medicine lies with the prescriber.

References

1. Report and findings of the 5th National Audit Project (NAP5) on Accidental Awareness during General Anaesthesia. Chapter 13 – Drug Errors and Awake Paralysis. September 2014.
2. Feasibility of confirming drugs administered during anaesthesia. A qualitative study in pilot NHS sites, England and Wales. A collaborative project of the National Patient Safety Agency (NPSA), Royal College of Anaesthetists (RCoA) and Association of Anaesthetists of Great Britain and Ireland (AAGBI). October 2010.

Documentation Controls

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