Anaesthetic rooms: luxury or necessity?

Induction of anaesthesia in an anaesthetic room has been a feature of UK practice since 1860. In 2002 only 4% of UK anaesthetic departments routinely anaesthetized all patients in theatre (Broomhead and Jones, 2002). In most other countries, induction takes place on the operating table in theatre without any apparent disadvantage to the patient. £30 million has been spent equipping anaesthetic rooms in the UK since 1994 in order to comply with minimum standards of monitoring (Association of Anaesthetists of Great Britain and Ireland (AAGBI), 1994). There has been considerable debate over the past 15 years about the use of anaesthetic rooms particularly given the increasing costs of monitoring equipment. This article explores the use of anaesthetic rooms in modern clinical practice.

A necessity

Arguments in favour of anaesthetic rooms include the reduction of fear by separation of the patient from the sights and sounds of the operating theatre, a reduction in the delay between operations, the provision of a convenient place for equipment storage and a better teaching environment. Anaesthetic rooms allow theatres to be cleaned and prepared for the next case while the patient is being anaesthetized, potentially improving the efficiency of theatre lists especially when a regional technique is performed.

A separate induction room theoretically saves the patient the psychological stress of being awake in the operating theatre. A study 50 years ago found that paintings on ceilings of anaesthetic rooms were noticed by most patients and distracted the mind from worry before induction. Subsequently, the site of induction has been shown not to affect patient anxiety (Soni and Thomas, 1989). Studies have shown that many factors contribute to patient anxiety, starting from the moment that the patient is informed about the need for surgery.

At light planes of anaesthesia, patients are at increased risk of laryngospasm secondary to external stimuli including noise. The anaesthetic room is a quieter environment for induction of anaesthesia than the operating room. Inhalation induction of anaesthesia in children thus commonly occurs in the anaesthetic room. Separation from parents can cause children major psychological upset (Robertson, 1958). It has become common for parents to accompany children into the anaesthetic room. This would be more difficult if induction were to occur in theatre.

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A burden

There is no published evidence that anaesthetic rooms reduce morbidity or mortality, but there are many anecdotal cases reported of critical incidents occurring during the transfer of patients between anaesthetic room and theatre, including anaphylaxis, profound unrecognized hypotension, cardiac arrest, awareness and equipment problems. A quarter of anaesthetic critical incidents occur during induction of anaesthesia (Short et al, 1993). One third of these are detected initially by anaesthetic monitoring equipment. The lack of continuity of monitoring during the transfer of an unconscious patient and the distraction of the anaesthetist during this time can lead to small but significant delays in recognizing the onset of a major anaesthetic complication. Broom et al (2006) found decreased arterial oxygen saturation in anaesthetized patients during transfer from induction room to operating theatre. In 1990 Brahams, a lawyer commenting on an anaesthetic death, described the process of anaesthetizing patients in one room and then moving them to another as 'clumsy and ill-conceived'.

The majority of obstetric anaesthetists no longer use anaesthetic induction rooms, for reasons of patient safety. In addition to this there is a staff safety issue of transferring obese patients from trolley to table. Husain et al (2005) found that for elective caesarean section, 70% of clinicians never used an anaesthetic room. Only 1% of departments had a policy to induce all anaesthetics in the anaesthetic room.

Most anaesthetists induce in theatre when dealing with high risk, unstable patients or if extra movement should be kept to a minimum. Transferring the unconscious patient can lead to damage to limbs and nerves, there may be inadequate support for the head, infusions and catheters may become disconnected, tracheal tube may become displaced, hypoxia and lightened anaesthesia may result from delayed reconnection of the breathing circuit. The AAGBI (2000) recommends uninterrupted monitoring throughout anaesthesia which lends itself to operating theatre inductions. The duplicate equipment also requires servicing and checking, with the costs this incurs.

Conclusions

The anaesthetic room is the domain of the anaesthetist. Since this is the most common site of induction, trainees and senior anaesthetists become familiar and confident with anaesthetizing patients here, thus many are reluctant to change the practice which is safest in their hands. However, increasing financial constraints in hospitals and greater accountability is making UK practice increasingly difficult to justify. **BJHM**

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