

Rapid Response Report

NPSA/2008/RRR009

From reporting to learning

12 November 2008

Avoiding wrong side burr holes / craniotomy

Issue

In neurosurgery, the first stage of access to the brain and meninges is to drill holes, known as burr holes, before creating a larger opening (craniotomy). Burr holes are also used to relieve intracranial pressure in emergencies. These are risky procedures and yet some preventable errors are still happening.

Patient safety incidents

The National Patient Safety Agency (NPSA) is aware of 15 incidents of patients receiving surgery on the wrong side of the head (through wrong side burr holes or craniotomies) between January 2005 and September 2008. In addition, a national audit of neurosurgical units in January 2008, carried out by members of the Neuroanaesthesia Society of Great Britain and Ireland with the NPSA, confirmed incidents of wrong side cranial surgery and wrong site spinal surgery in this period and also a lack of consistency in policies in pre operative marking.

An alert was issued in March 2005 by the NPSA and the Royal College of Surgeons of England to promote correct site surgery, including standardisation of pre-operative marking. Neurosurgeons identified particular challenges in implementing this, including the need for midline incisions; reliance on imaging to identify the precise site of incision; difficulty of marking behind the hairline; inability of patients to confirm the site of their pathology e.g. site of an aneurysm; transposition of symptoms and the side of surgery (confusing to patients).

Learning from incidents

Incidents reported to the NPSA indicate that best practice is not always being followed. Common themes include failure to state side of surgery on operating list and consent form; failure to mark side of surgery; lack of robust checking procedures pre-operatively; and lack of challenge by theatre staff when they notice surgery starting on wrong side. Two national audits of neurosurgical units confirmed inconsistent policy and practice (2005 & 2008).

For IMMEDIATE ACTION by clinical directors for surgery in NHS and independent sector acute organisations. The deadline date for ACTION COMPLETE is 12 May 2009.

Local organisations should review current policy and practice for neurosurgery in both adults and children. Key actions to reduce risks of wrong site surgery include:

009/1. Marking the side of intended surgery:

- **Where** - usually on the side of the forehead or the back of the neck (below the hairline) for posterior approaches.
- **When** - marking should take place on the ward with imaging, notes and patient consent available. Wherever possible, the patient/carer should be involved in discussion to confirm the operative side. In an emergency situation these principles should be adhered to wherever possible.
- **Who** - the surgeon who is to carry out the procedure.

009/2. Time out must take place in theatre before final positioning, head pins inserted or incision made.

Confirmation of correct patient, proposed procedure and the correct side with reference to imaging, clinical records, consent form and operating list. These checks should be signed by the operating surgeon, who takes ultimate responsibility for ensuring surgery on the correct side, or designated member of team.

009/3. Local practice should be audited and staff encouraged to report further incidents.

These actions follow the general principles of sign in – time out – sign out identified in the WHO safer surgery checklist in June 2008. The NPSA will shortly be updating guidance on correct site surgery (including spinal surgery) in the light of findings from independent evaluation and recent incident data.

The NPSA has informed:

All NHS organisations, the independent sector, commissioners, regulators and relevant professional bodies.

Further information

Support information including details of previous guidance is available at www.npsa.nhs.uk/nrls/alerts-and-directives/rapidrrr/ or from Michael Surkitt-Parr, Clinical Reviewer c/o rrr@npsa.nhs.uk, telephone 020 7927 9890.