**Title:**

The Case of Sherlock Holmes and the Missing Epidural Bags

**Background**:

Epidurals are a highly effective method of analgesia for major surgery.

However it can be associated with serious complications including respiratory depression, hypotension, epidural haematomas and abscesses, and neurological complications1,2. In centres where the acute pain service (APS) supervise patients with epidurals, complication rates were in line with patient controlled analgesia2,3. Therefore supervision of these patients by pain teams is paramount for effective analgesia and safety.

Furthermore, guidance by the Royal College of Anaesthetist recommends that patients with epidurals should be reviewed at least once daily4.

In our hospital, a major colorectal unit, epidural analgesia is a common practice. Our patient population can include those on background opioids and therefore these patients often get a plain epidural and opioids in patient controlled analgesia (PCA). We have found that although the majority of mixed epidurals are picked up by the pain team and followed up, we were missing plain epidurals to follow up.

**Aim and Objectives:**

The aim of this abstract is to assess the rate of missed plain epidural follow ups in our hospital and to make recommendations for improvement.

**Method:**

Data was collected from the APS database over a 1 year period in 2018. Data included the number of epidurals that were picked up by pain team from controlled drugs (CD) book on intensive care unit (ITU), recovery and surgical intensive recovery units (SIRU), epidural records from nursing diary books and others that were initially missed from these two sources but were picked up by pain team on the wards.

**Main results:**

A total of 237 epidurals were followed up by the pain team. Of these, 75.5% were recorded in the CD books in recovery, ITU and SIRU, which was main source of information for the APS. Only 51% of the total epidurals were recorded in the nursing book, all of these were also recorded in the CD books. Additionally, 24.5% of epidurals were not recorded in the CD books or nursing books and were discovered by the APS during PCA follow ups on the wards.

The explanation for the missed epidural is that they are mostly plain and not recorded in the CD books, nor in the nurses diary for some reason, therefore getting missed by the pain team.

 **Conclusions:**

Missed APS epidural follow up can compromise patient safety and places patients at risk of severe morbidity and mortality. Safe and effective management of epidurals requires a multidisciplinary approach with a clear communication system to allow APS follow up of all epidurals.

We are making 3 recommendations to improve follow up of patients with plain and mixed epidurals:

1. Introduction of an epidural register for all epidurals including plain in the recovery room, ITU, PACU.
2. The anaesthetist must document their epidurals in the register or CD book.
3. Recovery nurses should not take handover from anaesthetists until epidurals are recorded.

**References:**

1. The 3rd national audit project of the Royal College of Anaesthetists. Major complications of central neuroaxial block in the United Kingdom. *RCoA*, London 2009 (www.rcoa.ac.uk/nap3).
2. Rigg JR, Jamrozik K, Myles PS, Silbert BS, Peyton PJ, Parsons RW, Collins KS, MASTER Anaesthesia Trial Study Group. Epidural anaesthesia and analgesia and outcome of major surgery: a randomised trial. Lancet 2002; 359(9314): 1276–8
3. McLeod GA, Davies HTO, Munnoch N, Bannister J, Macrae W. Postoperative pain relief using thoracic epidural analgesia: outstanding success anddisappointing failures. *Anaesthesia* 2001; 56: 75–81
4. Guidelines for the provision of anaesthetic services. RCoA, London 2009 (www.rcoa.ac.uk/gpas).