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Royal Cornwall Hospitals NHS
NHS Trust

# RESULTS FROM A POST AMPUTATION PAIN AUDIT 2015

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## Background

One of the risk factors for developing Chronic pain is poorly managed postoperative pain (Kehlet et al. 2006), which is common following surgical procedures such as amputations.

Post amputation pain is challenging to manage as patients often have multiple comorbidities and the pain itself is multifactorial in nature which can be resistant to traditional balanced analgesia, resulting in the ad-hoc use of adjunct analgesics with unpredictable levels of success (Weeks 2010; Hackworth et al. 2008).

There is currently no local or national guidelines or consensus regarding pain management post amputation. Although the Cochrane collection has reviewed evidence for the treatment of both acute and chronic phantom limb pain, it does not provide any clear guidance for treatment regimes (Alviar et al. 2012). Therefore the ideal strategy would be to reduce the risk of developing chronic pain by addressing the acute post surgical pain.

The quality improvement framework for major amputation surgery identifies that in addition to access to an acute pain team, a formal pain management plan is required for post amputation pain management (Vascular Society 2012). Currently the Royal Cornwall Hospitals Trust has no standardised pain management protocol for amputations.

## Aims and Objectives

- Identify current pain management strategies following major amputation
- Identify anaesthetic techniques used for amputations
- Identify post operative analgesia prescribed
- Identify the pain intensity experienced.

## Data

Patients undergoing either vascular or orthopaedic lower limb amputations were included. Although any major limb amputation was eligible.

Data was collected from 20 patients over 6 months.

Patients were identified from theatre lists, pain audit forms, ward and recovery staff.

Observational data was gathered from reviewing the NEWS chart and electronic prescription chart.

Pain scoring on the NEWS chart is based on the verbal rating scale:

**0 = no pain, 1 = mild pain, 2 = moderate pain and 3 = severe pain**

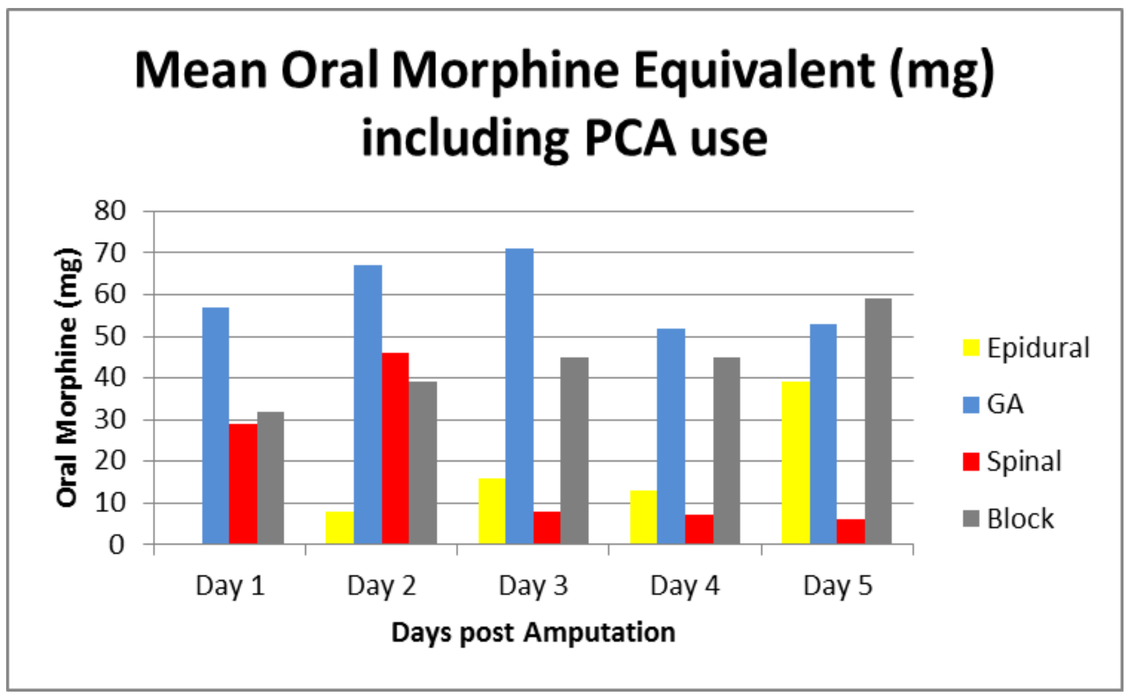
Data was analysed via Excel: all opioids (except within epidural infusions) were converted to oral opioid equivalents.

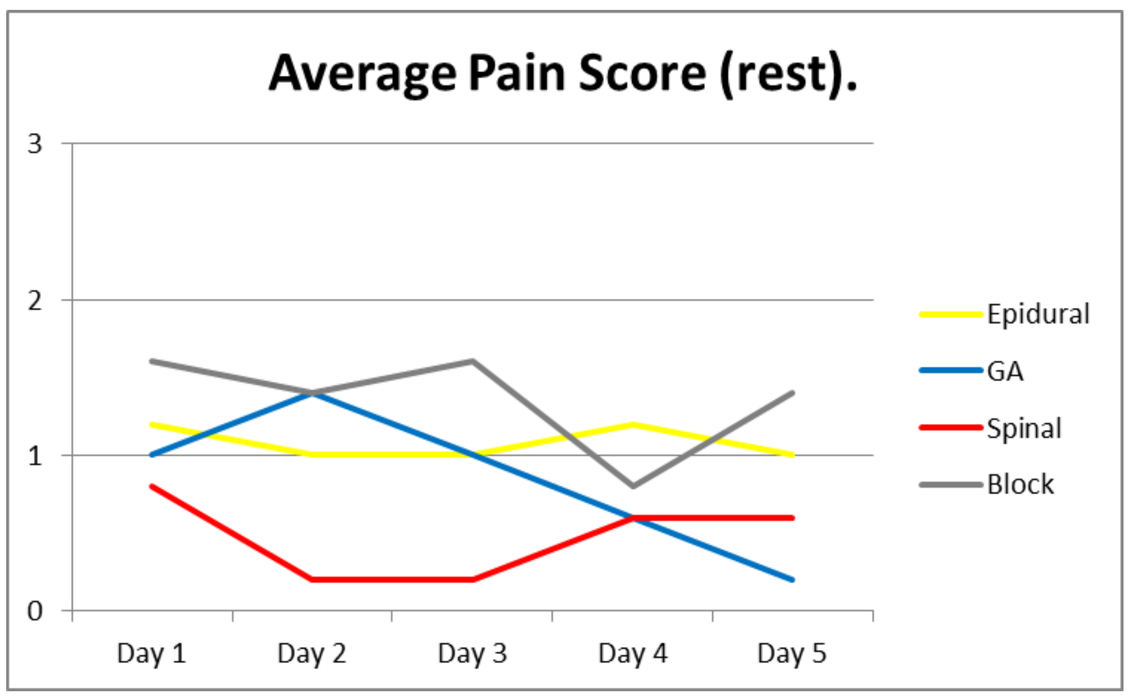
## Results

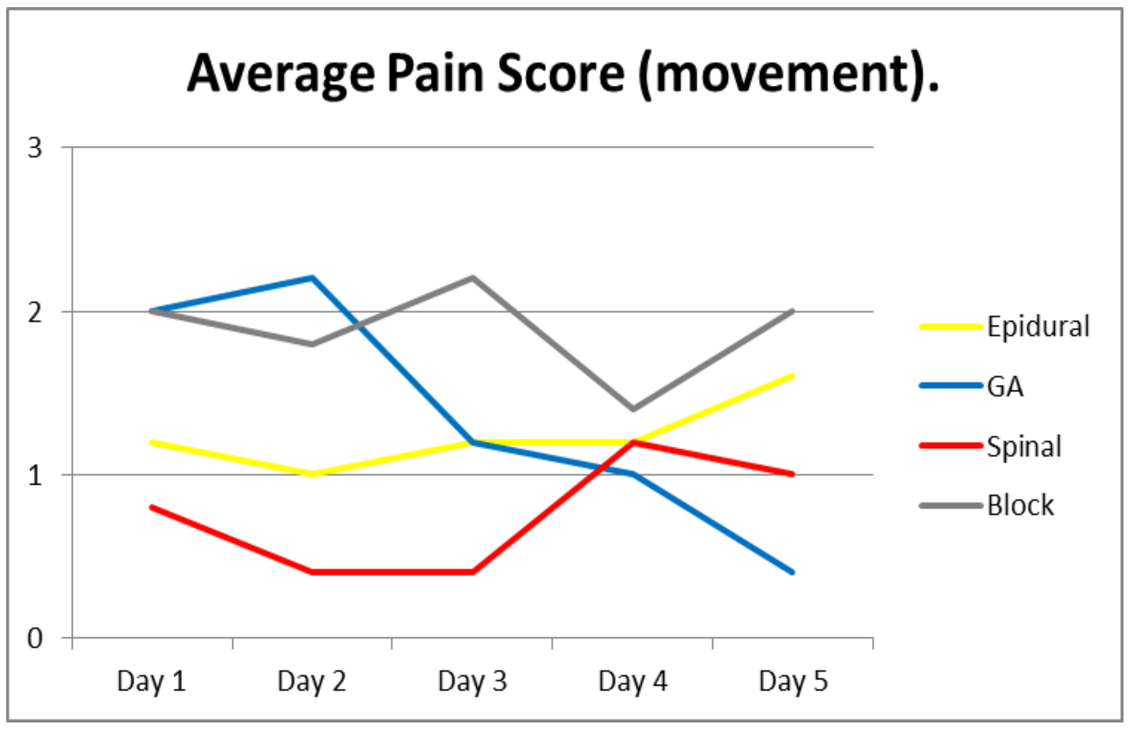
- Currently a wide variety of anaesthetic techniques are used: for analysis they were grouped together into larger groups based on the primary anaesthetic.
- A spinal block appears to be the most effective: associated with low pain scores and the least amount of additional opioids.
- Epidurals severely interfered with rehabilitation due to motor block. Once removed patients required higher doses of PRN opioids than spinals.
- Nerve blocks alone were associated with higher pain scores, although they did not interfere with rehabilitation.
- General Anaesthetics required the most additional opioids despite decreasing pain scores. They were also associated with the highest opioid requirements whilst in the recovery area prior to being discharged to the ward.
- Prescription of regular postoperative analgesia was inadequate leading to an over-reliance on strong opioids: Paracetamol was usually the only regular analgesia prescribed.
- Anti-neuropathic analgesia was rarely considered.

## Recommendations

- The overall aim is to develop an amputation protocol with reference to anaesthesia and postoperative pain management, as required by the quality improvement framework:
  - Standardise anaesthesia: Spinal ± nerve block if appropriate.
  - Prescribe regular strong analgesia for 3 days then change it to PRN.
  - Assess the risk factors for developing neuropathic pain and prescribe/escalate anti-neuropathic analgesia as appropriate.
  - Assess for acute neuropathic pain using appropriate tool such as painDETECT.

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**Weeks, S. et al**. (2010). Phantom limb pain: theories and therapies. *The Neurologist*. Vol. 16(5). Pp. 277-286