

## Trial: Patient-Controlled Analgesia in the ED is Effective for Non-Traumatic Abdominal Pain



Two randomised controlled trials of patient-administered patient relief in the emergency department have found that they are effective in reducing pain.

Currently, patients arriving in emergency departments may be administered morphine intravenously by a nurse. Whilst this is safe and works, it takes up nursing time.

Two randomised controlled trials carried out by the Plymouth Hospitals NHS Trust and Plymouth University Peninsula Schools of Medicine and Dentistry, and managed by the Peninsula Clinical Trials Unit at Plymouth University in the UK, set out to assess the effectiveness of patient-controlled analgesia (PCA) devices.

The trials assessed patient controlled analgesia in the ED following admission in two groups - patients with pain from traumatic injury and patients with non-traumatic abdominal pain. The results, published online in The BMJ, show that patient-controlled analgesia is statistically and clinically superior for patients with non-traumatic abdominal pain when compared with standard methods of pain relief delivery. In patients with pain from traumatic injury, the results were more uncertain.

Both trials had a patient sample of 200, all of whom presented with moderate to severe pain and were expected to be admitted to hospital for at least 12 hours.

In the trial relating to patients presenting with abdominal pain, PCA users reported an average total pain score of 35.3 compared with 47.3 for those receiving usual pain relief.

The other trial, which included patients with pain from traumatic injuries, showed that total pain reported by those using PCA and those treated via usual pain relief methods were similar. Those using PCA reported an average total pain score of 44, compared to 47.2 for those who did not.

Another interesting finding was that patients in the trauma PCA group were almost twice as likely to be very or perfectly satisfied with their treatment compared with patients receiving routine care.

Professor Jason Smith, Consultant in Emergency Medicine at Plymouth Hospitals NHS Trust and Professor of Emergency Medicine at Plymouth University Peninsula Schools of Medicine and Dentistry, led the studies.

He said: "We were surprised that these two studies produced quite different results, but there are several possible reasons that have subsequently been suggested. Other factors may be important in patients with traumatic injuries, such as the effect of splinting on limb injuries."

He added: "Notwithstanding, my take on this is that in emergency patients who are in pain (either abdominal pain or pain from traumatic injuries), PCA should be considered as a possible treatment option, particularly in patients whose pain is difficult to manage. We have, on the back of the results of these studies, set up a clinical protocol for the use of PCA in emergency patients at Plymouth Hospitals NHS Trust."

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