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Hip fractures: Enhanced recovery and reduction in mortality with local anaesthetics

Using local anaesthetic infiltration has already been shown to reduce pain, morbidity and mortality after elective knee replacement operations. A new study from the UK, presented at the EFORT Congress in Istanbul, shows that this kind of enhanced recovery protocol has many benefits in postoperative care of patients undergoing hip operations.

Istanbul, 8 June 2013 - Patients undergoing hip operations have many benefits from an "enhanced recovery protocol" with local anaesthetic infiltrations, a new study shows. These include a reduced level of pain medication and reduced mortality. Patients treated under the protocol also had shorter stays in acute care and were less likely to need referral to rehabilitation facilities. The study undertaken by a team at the Northumbria Healthcare Trust (Newcastle-upon-Tyne, UK) sought to establish whether methods known to reduce pain and improve survival rates after knee operations were also applicable after surgery for hip fractures. The team, Doctors W. Harrison, D. Lees, T. Ankers, J. A'Court, and M. R. Reed presenting their results at the 14th Congress of the European Federation of National Associations of Orthopaedics and Traumatology (EFORT) in Istanbul, show that these methods, involving direct delivery of pain relief via catheter to the wound and joint, and referred to as an enhanced recovery protocol (ER), can be of significant benefit in postoperative care of hip surgeries. "The results of this study were striking," said Dr William Harrison. "We feel this deserves further study. We are continuing to use ER with our patients, but multi-centre randomised trials should be completed before it can be recommended as standard practice in all centres."

Drastic reduction in pain relief requirements and mortality

Patients undergoing surgery for hip fracture are dealing not only with pain from the initial trauma, but also postoperative pain. Many of these patients are elderly and pain medications carry significant risks of toxicity. For the study, which took place over a period of two years, data was analysed from around 400 patients, with a mean age of 80 years. Around 20% of those included served as a control group, while the rest received the ER protocol, i.e. controlled infiltration and infusion of local anaesthetics, to varying degrees during postoperative care.

One of the most striking aspects of the Northumbria Healthcare Trust team's results is the reduction in mortality during the acute hospital stay. "The ER protocol, by delivering pain relief directly to the wound and joint, allowed an approximately 40% reduction in opiate use. However Dr Harrison cautions that other factors may have played a role in the reduction in mortality. "The reduction may have been directly related to the ER protocol, but other improvements were made during that period such as a targeted fourth meal every day for patients with hip fracture."

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The study also showed a marked decrease in the number of days patients recovering from hip fracture surgery spent on the orthopaedic ward, with a drop in mean stay from 12 days for those patients receiving traditional postoperative care to a mean 9.3 days for those receiving the enhanced recovery protocol. Furthermore, the ER protocol appears to have significant benefits in reducing pressure on rehabilitation facilities with approximately three times as many patients in the ER group discharged home directly from the acute ward.

Significant cost benefits

Aside from the incalculable benefit of possibly reducing mortality among patients undergoing surgery for hip fracture, the enhanced recovery protocol may deliver significant savings for health systems. "In terms of injections, catheters and infusion pumps we spend an additional £62 per patient," said Dr Harrison. "We haven't quantified the benefits to patients but in our study each patient had a reduced acute stay of 2.7 days. Our unit costs a day in hospital at around £400 per day. Rehab stay was also shorter and potentially brings a further saving." The study also concluded that there were no significant adverse events with the controlled infiltration and infusion of local anaesthetic.

About EFORT

The European Federation of National Associations of Orthopaedics and Traumatology (EFORT) is the umbrella organisation linking Europe's national orthopaedic societies. EFORT was founded in 1991 in the Italian Marentino. Today it has 42 national member societies from 43 member countries and six associate scientific members.

EFORT is a non-profit organisation. The participating societies aim at promoting the exchange of scientific knowledge and experience in the prevention and treatment of diseases and injuries of the musculoskeletal system. EFORT organises European congresses, seminars, courses, forums and conferences. It also initiates and supports basic and clinical research.

Source: EFORT Abstract 3732: Postoperative local anaesthetic infiltration and infusion by indwelling catheter for patients with a hip fracture: an enhanced recovery initiative.