Study shows patients require less painkilling medication after breast-cancer surgery if they have opiate-free anesthesia

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New research presented at Euroanaesthesia 2016 (London 27-30 May) shows that patients undergoing breast cancer surgery need less painkilling medication post-surgery if they have anaesthesia that is free of opioid drugs. The study is by Dr Sarah Saxena, Jules Bordet Institute, Brussels, Belgium, and colleagues,

While opioid drugs provide an excellent painkilling (analgesia) effect throughout operations, they also have side-effects. Post-operative complications, such as respiratory depression, post-operative nausea and vomiting, itching, difficulty going to the toilet and bowel obstruction are well known examples of such side effects.

In this study, painkiller requirements were examined after patients received opiate anaesthesia and non-opiate anaesthesia. A randomised controlled trial was conducted, containing two groups each containing 33 breast cancer patients undergoing a mastectomy or lumpectomy. The study took place between September 2014 and July 2015 at the Jules Bordet Institute, Brussels.

Perioperative non-opiate analgesia was obtained by combining clonidine (0.2 mcg/kg), ketamine (0.3 mg/kg) and lidocaine (1.5 mg/kg). An extra bolus of ketamine (0.2mg/kg) was given if necessary. Opiate analgesia was obtained via a combination of remifentanil infusion, ketamine (0.3 mg/kg) and lidocaine (1.5 mg/kg). Both groups received intravenous

paracetamol (1000mg/6h) and intravenous diclofenac (75 mg/12h). Patients received a PCA (patient-controlled analgesia) pump for breakthrough pain during the first 24 hours post-operatively.

Clinical characteristics and post-operative piritramide painkiller consumption (through the patient controlled pump) were assessed during the first 24 hours post-operatively. Data were not complete for two patients in the non-opiate group, and thus a total of 64 patients were included in the study. The total mean piritramide usage 24 hours post-operatively was 8.1 mg (range 2.0-14.5) in the non-opiate group and 13.1 mg (range 6.0-16.0) in the opioid group. The difference observed was statistically significant.

Dr Saxena concludes: "Our results show that patients in the non-opiate group require less painkillers, but receive adequate pain relief. Patients require less analgesics 24 hours after a non-opiate anaesthesia than after an opiate anaesthesia."

She adds: "This study shows a possible interesting benefit of this type of approach, which needs to be confirmed in further studies. Non-opiate anaesthesia in breast cancer surgery might avoid several opiate-related side effects such as post-operative nausea and vomiting. It might also reduce cancer recurrence. However, it is too early to recommend non-opiate anaesthesia to all breast cancer patients. We will be doing further research to confirm and extend our findings."

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