AIC02

TRANSVERSITONEAL-LAPAROSCOPIC ADRENALECTOMY FOR PHEOCHROMOCYTOMA
Department of Anesthesiology and General Intensive Care, *Department of Surgery, University of Vienna, Austria.

Background and goal of the study. A reduced hospital stay and a more rapid return to normal activity associated with laparoscopic makes this method preferred to the conventional open surgery for resection of pheochromocytoma (PHEO). We investigated hemodynamic changes and catecholamine release induced by carbon dioxide pneumoperitoneum (PP) during transperitoneal-laparoscopic adrenalectomy for PHEO.

Materials and methods. Ten consecutive patients with PHEO were scheduled for elective transperitoneal-laparoscopic adrenalectomy. Total intravenous anesthesia with propofol, remifentanil, and a mixture of O2/Air was given to all the patients. Patients received an α-blocker and a β-blocker. Intraoperative hypertension was prevented and treated with continuous sodium-nitroprusside and esmolol infusion. This protocol (induction and maintenance of anesthesia, antihypertensive therapy, and fluid balance) was used for all patients. Serial measurements of hemodynamics and plasma concentrations of catecholamines were done before induction, during PP, during tumor manipulation, and after tumor resection.

Results and discussion. Peritoneal insufflation resulted in significant increase in mean arterial pressure (114 ± 18 vs. 121 ± 18 mmHg), an increase in systemic vascular resistance index (1526 ± 190 vs. 2027 ± 251 dyn.s.cm⁻²m⁻²) and a reduction of cardiac index (3.6 ± 0.4 vs. 2.3 ± 0.3 l/min/m²) before PP and during PP, respectively. Epinephrine and norepinephrine plasma concentrations significantly increased immediately after beginning of PP compared to baseline levels (426 ± 102 vs. 4114 ± 417 ng/l for norepinephrine). The profile of norepinephrine release paralleled the time course of changes in systemic vascular resistance.

Conclusion. Transperitoneal-laparoscopic adrenalectomy for PHEO seems to be a safe procedure under specific anaesthesiological consideration. Catecholamines probably mediate the increase in systemic vascular resistance observed during PP.

AIC03

POSTOPERATIVE PAIN THERAPY AFTER TOTAL HIP REPLACEMENT: PCEA VERSUS PCA
Blasr J., Sigl R., Osl, J.*, and G. Mitterschiffthaler*
Dept. of Anaesthesiology and Intensive Care, *Dept. of Orthopaedics, St. Vincent’s Hospital, Linz and * University of Innsbruck, Austria.

Introduction. After orthopaedic surgery good pain relief and patient satisfaction can be obtained with i.v. patient controlled analgesia (i.v. PCA) or patient controlled continuous epidural analgesia (PCEA). Aim of the study was the evaluation of analgesic efficacy, side effects and patient satisfaction of continuous epidural analgesia and i.v. PCA.

Methods. After informed consent 200 patients scheduled for elective total hip replacement were randomized to the Pharmacia CADD pump and a visual analogue scale (0-10 cm). The epidural catheter was placed at the L2/L3 interspace. PCEA patients received 0.2% Ropivacain and 2μg Fentanyl/ml (6-10ml/hr, bolus 5ml; lockout time 20min) The iv group received Piritramid: bolus 2mg; lockout time: 10min.

Results. There were no differences in age, sex, weight and height between the two groups. The i.v group received 68 mg Piritramid during the first 4 days.

Discussion. In these relatively old patients continuous epidural analgesia, as measured with VAS, provided slightly better pain control. Significant differences could be found only in the side effects of both methods. There was no difference in the satisfaction of the patients between the groups.

AIC04

THE COST-EFFECTIVENESS OF PREOPTIMISATION OF HIGH RISK SURGICAL PATIENTS
Chamberlain AN¹, Harper N¹, Morris S²
¹The Whittington Hospital NHS Trust, Highgate Hill, London, United Kingdom, N19 5NF. ²Department of Economics, City University, London, United Kingdom, EC1V OHB

Background and Goal of the Study. Pre and peroperative optimisation of high risk surgical patients with intravenous fluids, oxygen, and inotropes is known to be effective in reducing postoperative complications. However, the use of an intensive care bed and the necessary equipment is costly. This study aimed to determine the cost-effectiveness of a London National Health Service Hospital Trust providing this intervention.

Materials and Method. A cost-effectiveness study was conducted using 40 high risk surgical patients who had undergone usual care. The cost of usual care was calculated by using the standard Health Resource Group costs provided by the NHS Executive. Group average costs were calculated for those who suffered postoperative complications (n=27, £7751) and those that did not (n=13, £2983). The cost of preoptimisation was estimated (total cost per patient =£1,328). The predicted reduction in morbidity was taken from a published randomised controlled trial. Sensitivity analysis was performed on a range of costs and effects.

Results and Discussion. Results showed that preoptimisation is cost-effective as it dominates in comparison to usual care. Sensitivity analysis also showed that the treatment remained cost-effective even if the intervention gives a reduced effect. However, although this costly intervention is worthwhile, there is a lack of critical care beds in the United Kingdom, which can prevent this intervention becoming routine.

Conclusion. Preoptimisation would be cost-effective for the London National Health Service Trust.

Reference