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EVALUATION OF THE EFFECTS OF CONTINUOUS PREPERITONEAL WOUND INFILTRATION ON POSTOPERATIVE RESPIRATORY PERFORMANCE IN PATIENTS WHO UNDERWENT MAJOR ABDOMINAL SURGERY

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Aim. According to the recent literature, continuous pre-peritoneal wound infiltration with local anaesthetics (CPWI) is an effective analgesic therapy in patients who undergo major abdominal surgery [1]. Although it is not inferior to other commonly used techniques in postoperative analgesia, many studies report conflictive results about its efficacy compared to them [2]. The aim of our study was to evaluate the effects of CPWI on the postoperative respiratory performance in patients after major abdominal surgery.

Materials and methods. From June 2011 to July 2012, a total of 14 patients have been evaluated. All patients were treated using the protocol generally used in our Department for the postoperative pain management after major abdominal sur-

gery; moreover, a rescue dose was used to manage breakthrough pain. In 6 patients, ropivacaine 0,4% (4mg/ml) was administered through a pre-peritoneal wound catheter (PAINfusor®, Baxter) for 48h after surgery (total dose 960 mg; 5 ml/h). In the 14 patients, we collected anthropometric and anamnestic information in order to calculate the prognostic scores ARISCAT, SAPS II and CCI. Arterial blood gas analyses were performed immediately before and 6 hours after the operation, and once-a-day for three postoperative days; at the same time, we evaluated blood arterial pressure, heart rate, pain assessment by Visual Analogic Scale (VAS at rest and dynamic) and number of rescue doses.

Results. The data we collected allowed to compare the effects of CPWI on the functional respiratory reserve between the 6 patients treated through CPWI and the 8 patients without the device, as controls. The two groups didn't show any statistically significant difference concerning age, sex and prognostic scores; all patients were considered at an intermediate-high risk for postoperative respiratory complications (ARISCAT risk score >26). VAS and rescue doses did not differ significantly between groups; on the contrary, there were statistical significant differences concerning blood pressure ($p<0,05$), O_2 arterial saturation (% 97,3±1,5 vs.94,5±2,2; $p<0,005$), and blood lactate levels (mmol/L 5,5±1 vs.8,2±1; $p<0,001$).

Conclusions. Although it has several limits, our analysis let us infer that the usefulness of CPWI is not related to gain a better pain relief, but to the possibility offered by this technique to probably ensure a better respiratory performance in patients at an intermediate-high risk for postoperative respiratory complications. Further studies on larger populations are required to provide additional data.

References

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