Efficacy of prophylactic CPAP on the immediate postoperative incidence of atelectasis/pneumonia after lung resection surgery

ORAL COMMUNICATION

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RATIONALE

Our group has shown that CPAP improve gas-exchange in the immediate postoperative of lung resection surgery (LRS). Br J Anaesth. 2014;112:929. The clinical relevance of such effect is yet to be demonstrated. This study is aimed to assess the efficacy of prophylactic CPAP on the development of atelectasis/pneumonias in the immediate postoperative period.

METHODS

We present the intermediate intention-to-treat analysis of a multicenter phase III, randomized, controlled clinical trial (ClinicalTrials.gov identifier: NCT01471189). Inclusion criteria are: being submitted to LRS lasting > 2h, weaning performed within the 4 hours following the intervention and not known OAHS, immunosuppression or significant bullous emphysema. So far 189 patients have been included at four university hospitals of Madrid. All participants signed an informed consent prior to their participation. The study was approved by the Madrid Regional Review Board. On the admission to the PACU, patients were randomized to CPAP 7cmH2O (n=95)+customary care or customary care alone (n= 94). Apart from atelectasis/pneumonias other postoperative complications as well as persistent air leaks occurring within 30 d from the intervention were recorded.

RESULTS

There were no differences between the two groups at enrollment (Age=64±10; FEV1:p=90±22%. mean ASA=2.4±0.6). Atelectasis/pneumonias occurred in 13(13.7%) of the CPAP group and in 21(22.3%) of the control group p=0.078. The incidence of persistent air leaks was 19 (20%) in the CPAP group and 14 (15%) in the control group p=0.232.

CONCLUSIONS

Prophylactic postoperative CPAP reduces the incidence of atelectasis/pneumonia while it does not significantly increase prolonged air leak.