O-034
B-TYPE NATRIURETIC PEPTIDE-GUIDED RISK ASSESSMENT FOR POSTOPERATIVE COMPLICATIONS IN LUNG CANCER SURGERY
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Objectives: It is important to detect high-risk patients efficiently for postoperative complications in lung cancer surgery. We previously reported that the patients with elevated preoperative B-type natriuretic peptide (BNP) levels (>30 pg/ml) have an increased risk for postoperative atrial fibrillation, and cardiopulmonary complications in elderly patients (>75 years) following lung cancer surgery. The objective of this study was to evaluate the clinical utility of BNP-guided risk classification for postoperative complications after lung cancer surgery.

Methods: Six hundred and seventy-five consecutive patients who underwent a curative surgery for lung cancer in two specialized thoracic centres between 2007 and 2011 were included in this retrospective study. All patients were classified as preoperative BNP levels; normal group (<30 pg/ml), mildly elevated group (30-100 pg/ml), and severely elevated group (>100 pg/ml). The primary endpoint was the incidence of postoperative complications, and results were compared between the three groups.

Results: The incidence of postoperative complications was significantly higher in severely and mildly elevated groups than in the control group (85% and 47% vs 11%, \( P < 0.0001 \)). Furthermore, in the severely elevated group, there were more severe complications and a higher mortality rate.

Conclusions: Risk assessment using preoperative BNP levels was clinically useful for the selection of high-risk patients for postoperative complications.

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