NOVEL APPROACH FOR PULMONARY ENDARTERECTOMY FACILITATES ACCESS TO THE LEFT LOWER LOBE BRANCHES

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Objectives: Optimal visualisation of distal branches during pulmonary endarterectomy (PEA) is essential for complete removal of organised thromboembolic material. Herewith, we describe a modification of the standard approach that improves surgical exposure during PEA procedure.

Methods: From January 2013 to March 2014, 25 patients with chronic thromboembolic pulmonary hypertension (CTEPH) (NYHA class III and IV) underwent PEA at Hannover Medical School using our modified technique (dislocation group). We compared this group retrospectively with 25 consecutive patients operated before using the standard approach (standard group). All patients were operated using total cardiopulmonary bypass (CPB), moderate hypothermia (24-26 °C) and intermittent circulatory arrest (CA). CPB, cross-clamp (CC) and CA times were compared in both groups. Four patients (2 per group) underwent combined procedures (PEA + CABG and/or valve surgery) and were excluded from the study.

Results: In the dislocation group we rotated the heart towards the right pleural cavity. This manoeuvre changed the axis of the left pulmonary artery and improved visualisation of left lower lobe branches. Compared to the standard group, in the dislocation group we observed a reduction of CA for the left side (14.0 ± 8.8 vs 12.7 ± 6.5 min); CC time (111.3 ± 29.3 vs 101.7 ± 21.8 min); and CPB time (224.3 ± 72.5 vs 184.52 ± 45.4 min). One patient died in the standard group. There was no 30-day mortality in the dislocation group.

Conclusion: The method of heart dislocation improves visualisation of left lower lobe branches during PEA. This manoeuvre can be easily performed and reduces the length of the procedure.