

PULMONARY ENDARTERECTOMY: 18 YEARS FOLLOW UP

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Introduction

The treatment of choice for chronic thromboembolic pulmonary hypertension is pulmonary endarterectomy (PEA). Its survival outcomes are better than those of medical treatment or bipulmonary and cardiopulmonary transplantations.

Objective

To report our 18-years follow-up (F/U) of patients (p) with PEA.

Material and Methods

Retrospective analysis of 41 consecutive PEAs between 11/1992 and 08/2010; p were in New York Heart Association functional classes (FC) II (n=4), III (n=19), and IV (n=18). Selection criteria: mean pulmonary arterial pressure (MPAP) >30mmHg, pulmonary vascular resistance (PVR)>300 dinas/seg/cm⁻⁵ and surgical accessible disease. Right heart catheterization was performed to confirm pulmonary hypertension, pulmonary angiography to assess PEA feasibility and coronary angiography in p older than 40 years old. Greenfield filter was implanted before surgery. F/U is 98% complete. Median F/U is 5.7 years (0.2-18).

Kaplan-Meier survival curves were calculated and compared using log-rank test and $p \leq 0.05$ was significant.

Results

P in FC IV had more right heart failure (RHF), required diurectics and/or inotropes previous to PEA, and thus more days of hospitalization. After PEA, pulmonary hemodynamics (PH) changes were significant: $p < 0.001$ (95% CI), MPAP 53 ± 2 vs. 29 ± 2 mmHg; PVR 857 ± 65 vs. 245 ± 25 dinas/seg/cm⁻⁵ and CI $2,3 \pm 0,1$ vs. $3 \pm 0,1$ l/m². Twelve p (29%) developed lung reperfusion injury and one p required ECMO. Early mortality (EM), in-hospital and 30-day mortality, was 17% (7/14), 4% (1/23) FC II-III and 33% (6/18) in FC IV ($p = 0.01$). Unvaried analysis shows that ascitis, pre-op MPAP >50 mmHg and FC IV are predictors ($p = 0.05$) of EM. No predictors were found in multivariate analysis, but there was a tendency towards FC IV. Late mortality (m) was 12% (4/34) with no predictors. During F/U 93% of p were in FC I-II. Survival at 1, 2, 5, 8 and 10 years: 85%, 82%, 75% and 71% respectively. FC survival analysis at 1 and 5 years showed significant differences ($p = 0.02$) between FC II-III 95% and 95%, IV 72% and 54%.

Conclusion

In our experience, the first reported in Argentina, PH and FC improved significantly. Survival decreased in p with FC IV due to an increase EM because of a tendency

towards increase m in CF IV. The number of PEA for a 40-million population is low, and p are frequently referred with advanced RHF.