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FEASIBILITY AND SAFETY OF INTRAOPERATIVE HYPERTHERMIC PLEURAL PERFUSION IN PATIENTS CANDIDATE FOR MESOTHELIOMA LUNG-SPARING SURGERY: A SINGLE CENTRE EXPERIENCE
Sara Tenconi1, L. Luzzi2, C. Rapicetta1, M. Gallazzi2, G. Gotti2
1Cardiology, Thoracic and Vascular Surgery and Critical Care Medicine, Arcispedale Santa Maria Nuova IRCCS, Thoracic Surgery Unit, Reggio Emilia, Italy; 2Cardio-thoracic and Vascular Department, University Hospital of Siena, Thoracic Surgery Unit, Siena, Italy

Objectives: Surgery for mesothelioma is still under investigation due to the spread of different techniques and the recent results of the MARS trial; consensus in literature is about standardizing procedures and achieving macroscopic complete resection. Hyperthermic pleural perfusion (HPP) is a technique associated with better local control of disease in combination with extrapleural pneumonectomy. We investigate the feasibility of HPP with lung-sparing surgery.

Methods: From January 2006 to August 2012 at the University Hospital of Siena 27 patients with epithelioid or biphasic stage II or III malignant pleural mesothelioma (MPM) were operated on by the same surgical team. The treatment protocol included pleurectomy and decortication, HPP and subsequent adjuvant chemotherapy. The aim of the study was to analyse the feasibility and safety of the procedure and impact on the postoperative outcome (morbidity and mortality). Secondary outcome was survival.

Results: Mean age was 68 years old (range 50-81), 21 patients completed the protocol and follow-up. Average cisplatinum dose was 125 mg/m², 10 (37%) had macroscopic residual disease. Minor surgical complication occurred in 40% of patients (bleeding in 7 patients, persistent air leak in 6), we recorded 1 fatal respiratory failure and 1 re-intervention for diaphragm rupture; none showed toxicity due to chemotherapy absorption. Mean overall survival was 25 months; significant improvement in survival occurred in patients without macroscopic residual disease (32 vs 17 months, P = 0.044) and cisplatinum dose higher than 100 mg/m² (31 vs 18, P = 0.020); stage and histology were not significant prognostic factors.

Conclusions: In our population survival varies greatly despite homogeneous selection of patients and standardization of treatment, but the feasibility of a technique that preserves the lung with potential prolonged survival should be considered in selecting borderline patients for surgical treatments. The uncompleted MCR and 40% morbidity reported in our preliminary study confirm the need for selecting surgical centres with wider experience.

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