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IS "LUNG REPAIR CENTRE" A POSSIBLE ANSWER TO ORGAN SHORTAGE? TRANSPLANTATION OF LEFT AND RIGHT LUNG AT TWO DIFFERENT CENTRES AFTER EVLP EVALUATION AND REPAIR: CASE REPORT

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Lung

P205

Introduction

Ex vivo lung perfusion (EVLP) has become a reality as a technique to evaluate and recondition lungs from marginal donors (1), opening the door to clinical and organizational progresses. In this scenario, the Toronto group has firstly shown the feasibility of the 'EVLP Centre' approach in a case of emergent transplantation (2).

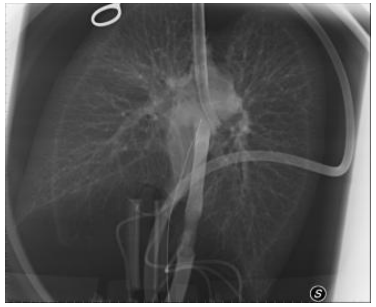
Objectives

We report a successful case on the use of EVLP followed by separate transplantation in two different centres.

Methods

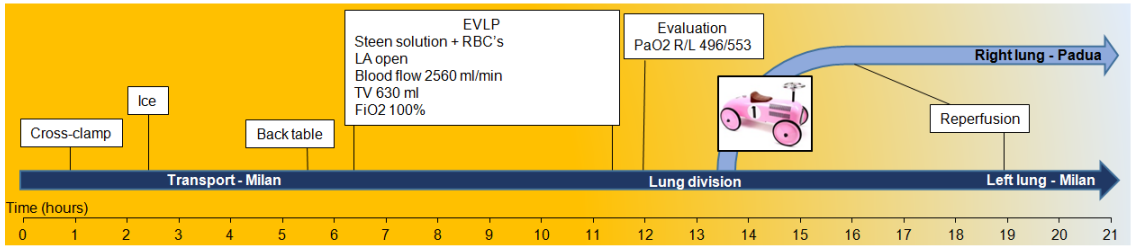
The local organ procurement organization proposed the lungs of a 53 years old male non-smoker donor who died from cerebral haemorrhage. The chest X-ray showed hilar reinforcement and basal dysventilation; secretions of moderate quantity were present; P/F ratio was 294 after lung recruitment maneuvers. Oto score was 10. Two centres accepted the grafts for two single transplantations under the condition of EVLP evaluation.

After usual retrieval, the bi-pulmonary block was transferred to Milan transplantation centre and EVLP was run as previously described (3). At the end of the procedure the two lungs were evaluated separately and both judged suitable for transplantation.



After cooling and storage on ice, the block was separated on the back table. The left lung was transplanted in a patient with pulmonary fibrosis (LAS 35); surgery was complicated by cardiac arrhythmias that required several defibrillations. The right lung was transferred on ice to Padua transplantation centre, 250 Km away from Milan, and transplanted in a patient with idiopathic pulmonary fibrosis (LAS 50).

Results



The ischemic times from cross-clamping to revascularization were 18 hours for the patient in Milan and 15 hours for the patient in Padua. None of the recipients suffered from PGD. The former patient, despite KPC infection, is alive after 14 months, in good condition (FEV1 75%). The other patient had an uneventful post-operative period, and was discharged after 27 days. At the 14th months follow-up he is alive, in good condition (FEV1 51%).

Conclusions

This is the first report of the separate use of lungs after EVLP for non urgent recipients in two different centres with good results. This experience opens the door to a new allocation model with great potentials on organ shortage. The limitations are transportation times, costs, complex logistics and the prolonged cold ischemia. We demonstrated that the perspective of a 'lung repair centre' is feasible and effective. We expect the results of the Perfusix protocol in order to confirm of this new scenario (4).

References

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