SUCCESSFUL DOUBLE LUNG TRANSPLANTATION WITHOUT BLOOD TRANSFUSION: DEMONSTRATING THE CLINICAL EFFICACY OF BLOODLESS MEDICINE AND SURGERY

Andre W. Bourgoyne[1], MD, **Pablo Sanchez[2],** MD

[1]Department of Transplant Services, University of Chicago Medicine, Chicago, IL, USA

[2]Section of Thoracic Surgery, University of Chicago Medicine, Chicago, IL, USA

Introduction: Blood transfusion is often utilized during thoracic transplantation in an attempt to maintain oxygen delivery; however, transfusion-free ("bloodless") management can provide superior outcomes. This case highlights a double lung transplant performed at the University of Chicago Medicine (UCM) in February 2025 without donor blood, demonstrating the success of comprehensive blood conservation strategies.

Methods: A female patient admitted with a hemoglobin (Hgb) of 13.4g/dL was preoperatively optimized through a multi-phase regimen including erythropoietin (EPO), vitamin B12 injections, intravenous iron, folic acid, and nutritional therapy to increase iron stores, hemoglobin levels, and body weight before surgery. Preoperative Hgb of 15g/dL was attained. Intraoperatively, extracorporeal membrane oxygenation (ECMO) and a cell saver were employed to maintain oxygenation and minimize blood loss. Postoperatively, the patient continued receiving intravenous iron, folic acid, B12, EPO for hemodynamic stability and hematologic recovery. Patient was discharged on the 27th postoperative day with Hgb 9.3g/dL.

Results: The procedure was completed successfully without any transfusion. The patient's postoperative hemoglobin remained stable, pulmonary recovery was progressive, and she was discharged in stable condition following an uncomplicated recovery period.

Conclusions: This complex double lung transplant, achieved without the use of donor blood, demonstrates the safety and clinical superiority of Bloodless Medicine and Surgery. Careful preoperative optimization, intraoperative ECMO support, and postoperative management collectively contributed to an excellent patient outcome.

Corresponding author: Andre W. Bourgoyne, Department of Transplant Services, University of Chicago Medicine, Chicago, IL, USA.8421 Greenwood Ave, Munster IN 46321

Email: andre@bourgoyneconsultantsllc.com

Abstract track: Outcomes of Bloodless Care