

## **Almost ECMO: Case Report of a High-Risk Patient Proposed for VATS Surgery with Multiple Bullectomy**

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### **Introduction**

Extracorporeal membrane oxygenation (ECMO) is a short- term mechanical circulatory and/or respiratory assistance. In between the multiple and growing treatment indications, one is as a bridge to treatment (both veno-arterial or veno-venous). Hereby we present a case where it was planned to use V-V ECMO therapy depending on the surgical pulmonary resection.

### **Case Report**

Male 56 year diagnosed with squamous cell lung cancer type IIIA, already treated in 2016 with chemotherapy and superior right lobectomy plus lymphadenectomy; considered disease- free. Nowadays suffering from emphysematous COPD that restricts his normal life and produces multiple infections and pneumothorax, even been treated with corticosteroid therapy and ipratropium bromide. It is proposed by thoracic surgery for bilateral bullectomy (one side each time). In the preanesthetic assessment, as a high-risk patient, a full study is conducted whose respiratory function results are: FVC 97%, FEV1 62%, IT 511, DLCO 37%. Due to the high risk of complications, the medical team explains the main intra- and postoperative risks to the patient, who understands them but want to go under intervention.

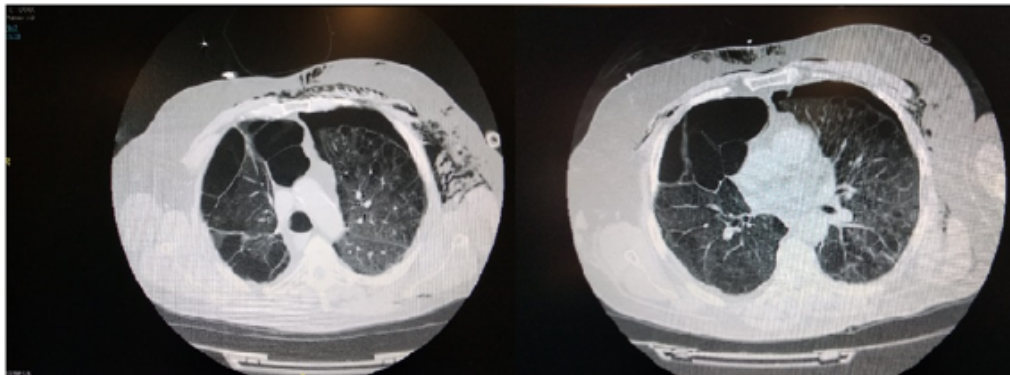
### **Results**

After wide study of the case, the main intraoperative problem can be the difficulty to properly oxygenate and ventilate the patient in the single lung ventilation, with the increased risk of damage this lung also. For that, it is decided to prepare the patient for the use of ECMO during the resection if necessary.

### **Intra-operative data:**

- Use of double lumen tube size 39F,
- Monitoring: BIS and NIRS, ProAQT, SatO<sub>2</sub>, RR and ventilatory parameters, ECG and HR.
- TIVA.
- VATS surgery.
- During the one lung ventilation, NIRS fell until 60 accompanied by desaturation and etCO<sub>2</sub> decrease.

Extubation without incidence, 24h monitoring in the ICU. Treated with CPAP 5 cmH<sub>2</sub>O, TOPAZ drainage with air leak 160 ml/min.



### Conclusion

We must not forget the use of ECMO as a bridge therapy in high-risk patients with suspected perioperative ventilation and oxygenation problems.

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