



ANNUAL  
CONGRESS 2023

Rotterdam, Netherlands

MAY 3-6, 2023



## LIVER DISORDERS AND TRANSPLANTATION: INNOVATIONS AND EVOLVING INDICATIONS

### Donation after brain Death followed by circulatory death (DBCD) and a successful Deceased donor liver transplant *The first case reported in Sri Lanka*

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#### INTRODUCTION

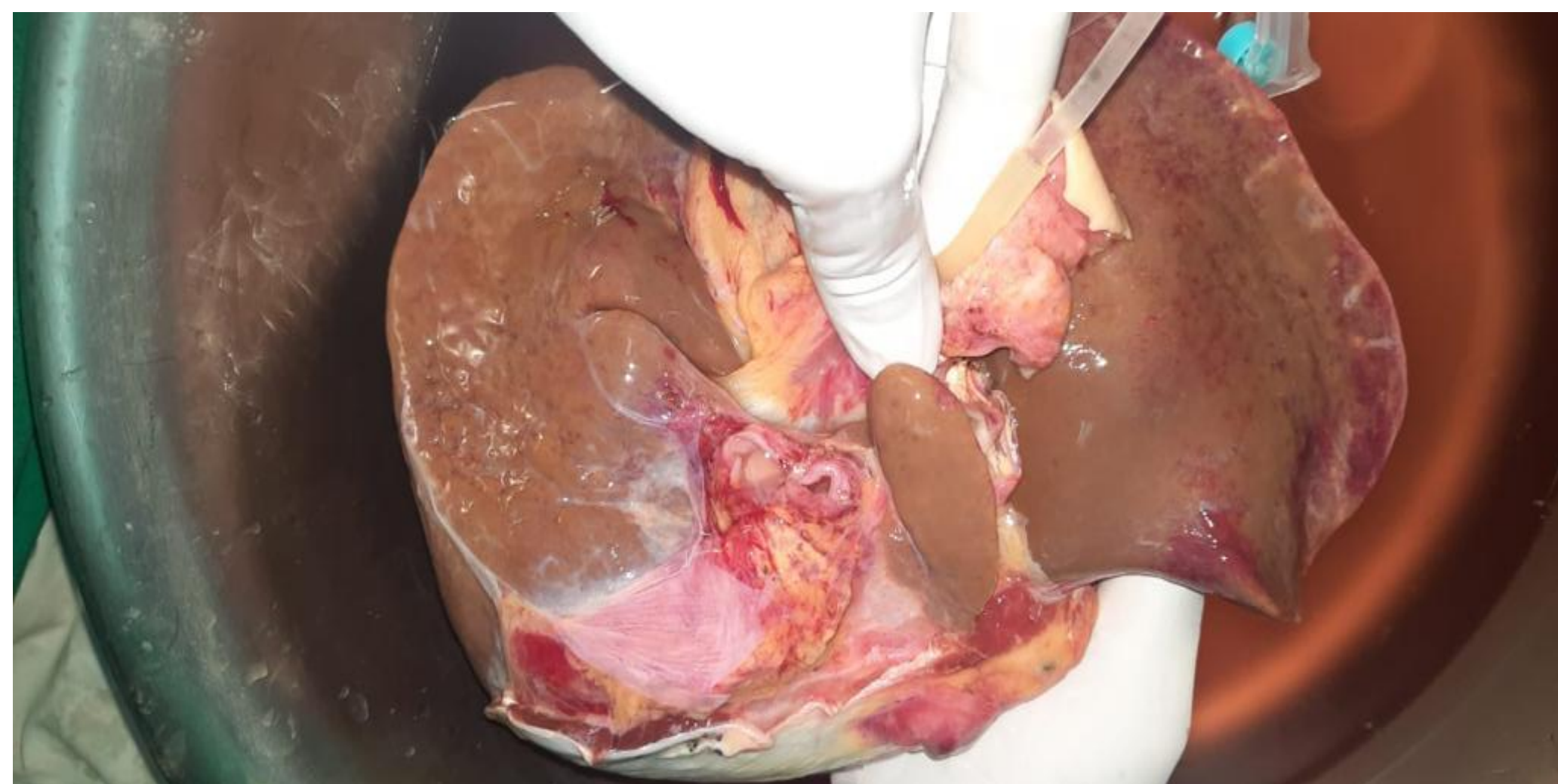
Despite being a low resource country, Sri Lanka was able reach 100 liver transplants . Deceased brain-dead donors are much preferred for liver transplants in Sri Lanka due to limited resources .

#### AIM

We report the first case of successful DBCD performed in Sri Lanka.

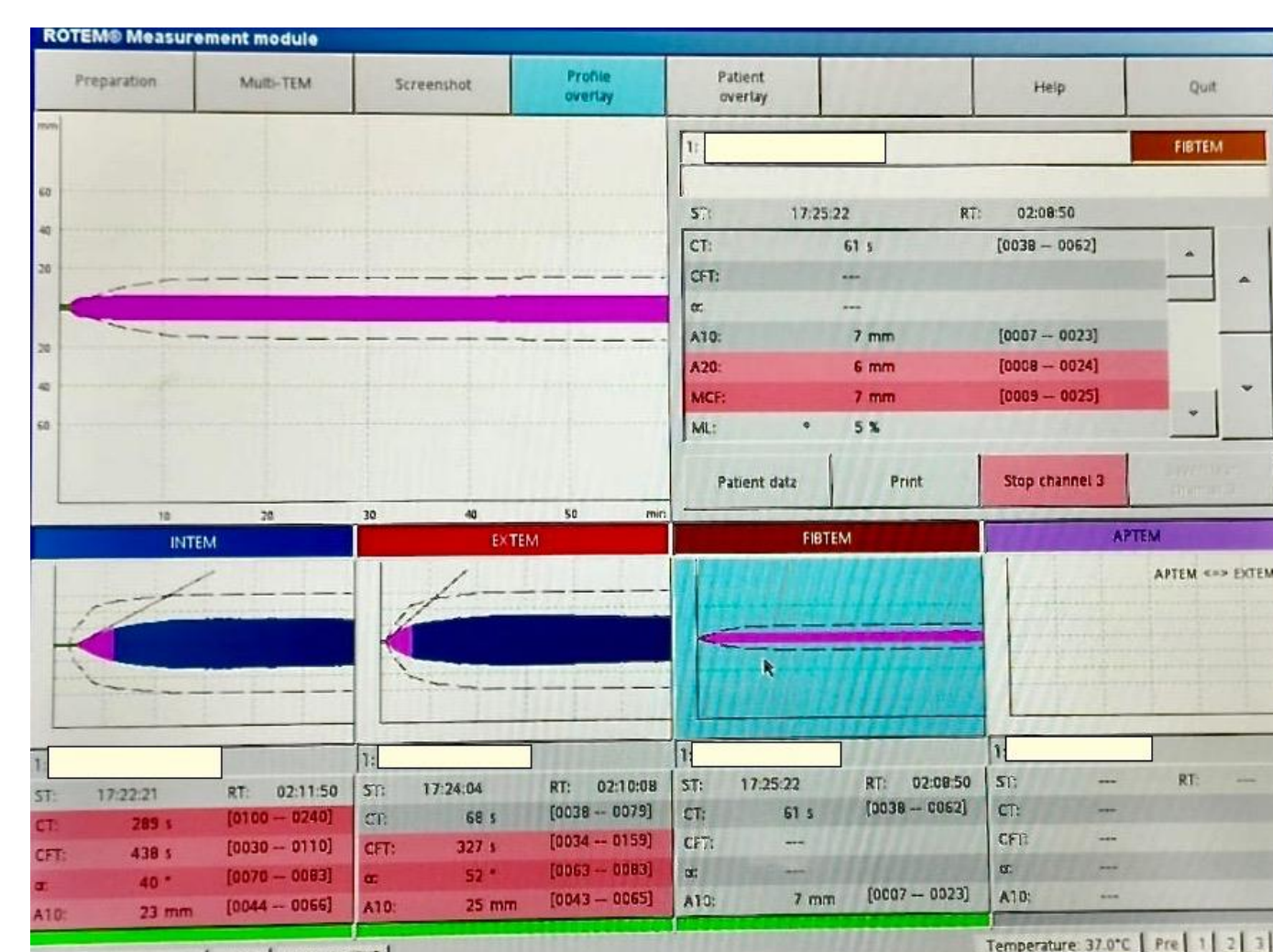
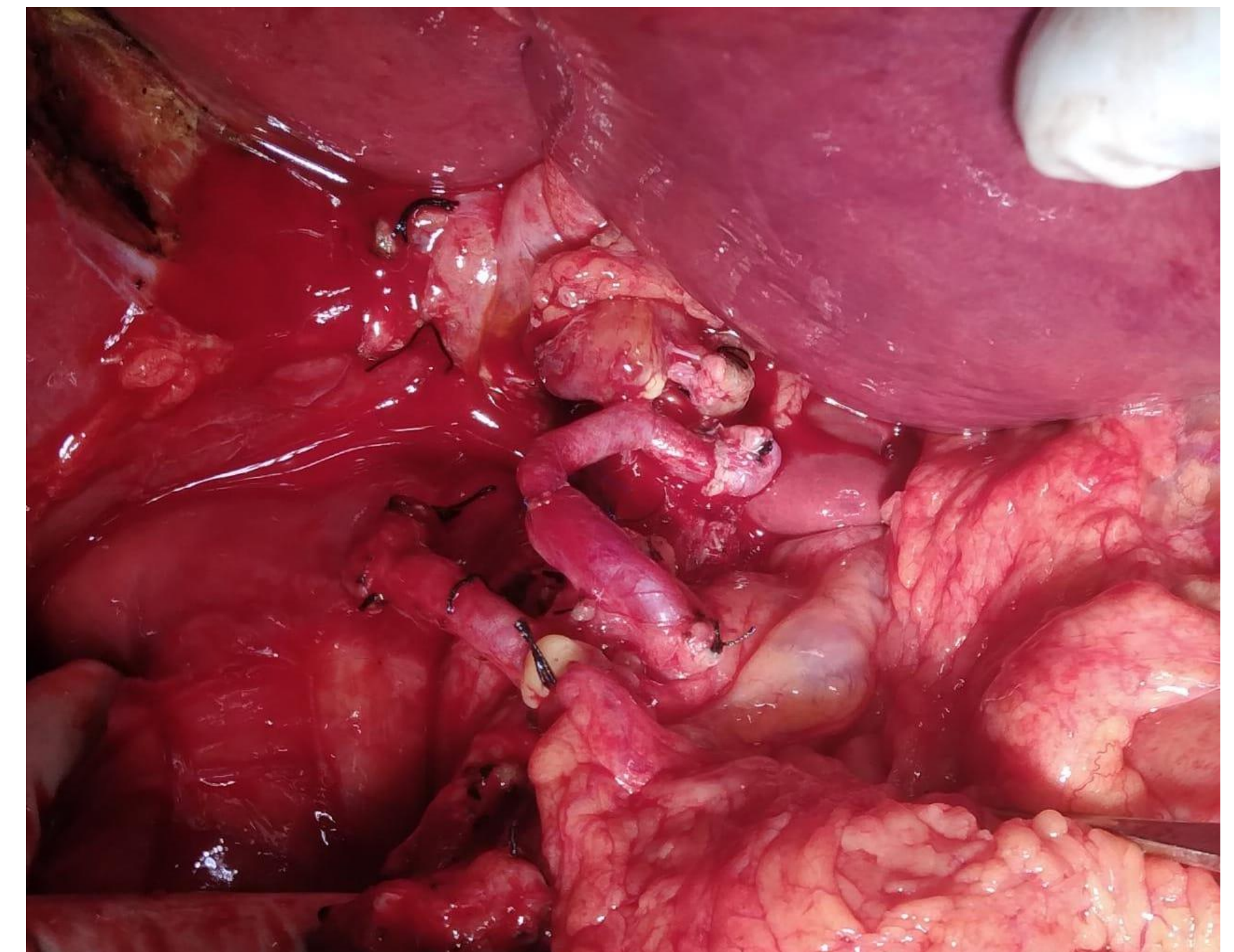
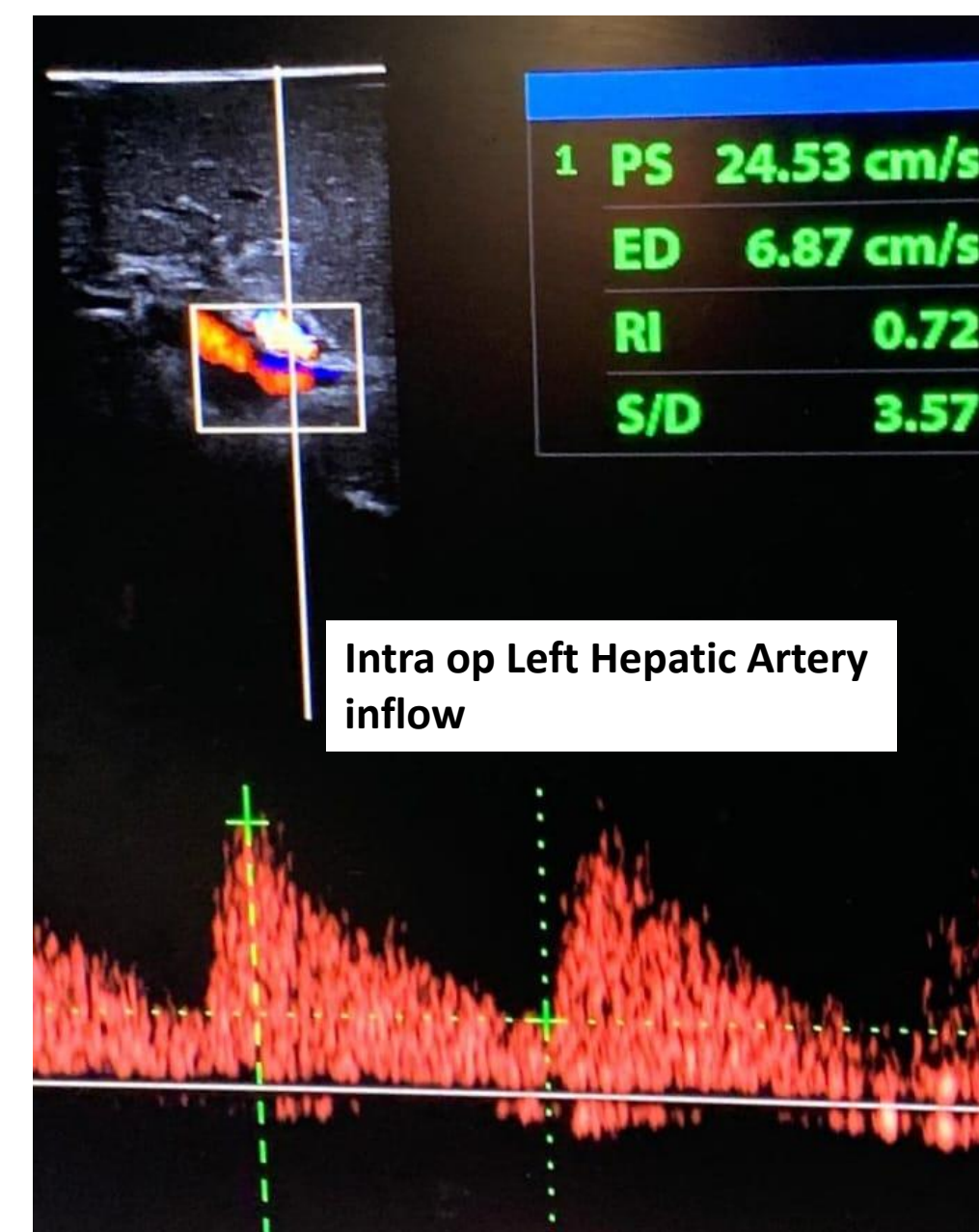
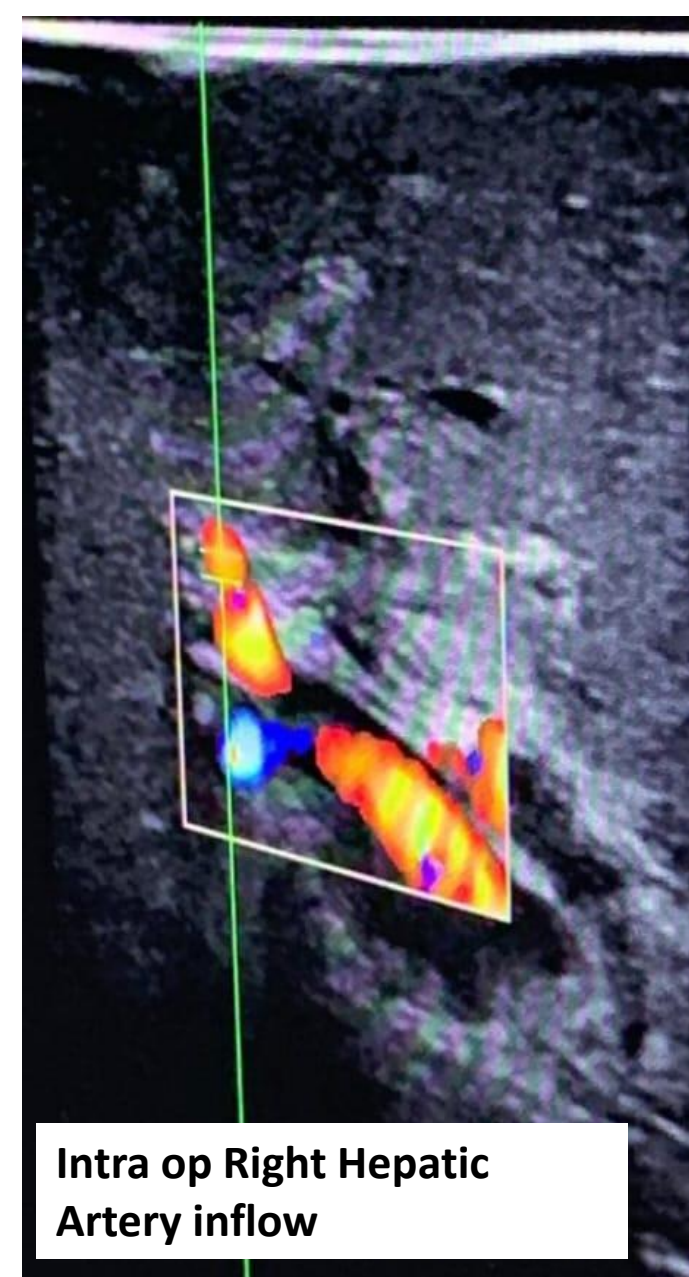
#### METHOD

- The donor was a 48-year-old, healthy male confirmed brain death following traumatic brain injury. Since the criteria for heart lung donation was not met, Liver and the kidneys were retrieved with consent.
- The patient developed refractory hyperkalemia during retrieval , thus decided to proceed with the organ retrieval without starting peri operative CRRT due to limited resources . Soon after, patient developed a pulseless VT cardiac arrest , thus team decided to proceed with the retrieval as a circulatory dead donor.
- With the declaration of cardiac arrest, aortic cannulation was done and cold perfusion was commenced . Cold phase dissection and liver retrieval completed in 15 minutes. Cold ischaemia was 8 hours and 29 minutes while the warm ischaemia lasted 36 minutes.



#### RESULTS

- Routine caval and portal vein anastomoses were performed.
- Two separate arterial anastomoses were done:
  - donor replaced right to recipient right hepatic artery, and
  - donor main hepatic artery to recipient left hepatic artery.
- Intra operative satisfactory arterial Doppler Colour flows were demonstrated



- ROTEM guided coagulopathy corrections and stable hemodynamics were maintained during the reperfusion.
- The maximum rise in lactate was 5.6mmol/l.
- A drop in lactate level and a rise in temperature were evident .
- Following 10 hours surgery, patient was admitted to the ICU , inotropes rapidly weaned , lactate reduced to 2.5 mmol/l from 5.6 mmol/l.
- At 14 hours post- operative, the patient was successfully extubated and mobilized the next day.
- He was discharged from ICU on post-operative day 5 and from hospital day on 22.



#### CONCLUSIONS

Brain death followed by circulatory death donation (DCBD) for solid organ transplantation is already an established practice in some countries.<sup>1,2</sup> The described unanticipated DBCD, will be a landmark to expand donor selection criteria in Sri Lanka.

#### ACKNOWLEDGEMENT

Our gratitude goes to the dedicated Hospital staff of Teaching Hospital Peradeniya ,National Hospital of Sri Lanka and the liver transplant recipient who expressed their consent to include photographs in this poster.

#### REFERENCES

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- Sun Q et al. Donation after brain death followed by circulatory death, a novel donation pattern, confers comparable renal allograft outcomes with donation after brain death . *BMC Nephrology* 2018; 19:164 -172

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