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IMAGING IN INTENSIVE CARE MEDICINE

$ECCO_2R$ patients: look out for coloured urine

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Extracorporeal CO_2 removal ($ECCO_2R$) was started in a patient with very severe acute exacerbation of chronic obstructive pulmonary disease (COPD). The iLA Activve (ILA) kit medical device (Xenios AG, Heilbronn, Germany) was used with a 22-Fr right jugular catheter. Pump rotation speed was maintained at 3500 RPM with a blood flow at 1000 ml/min, and anticoagulation within

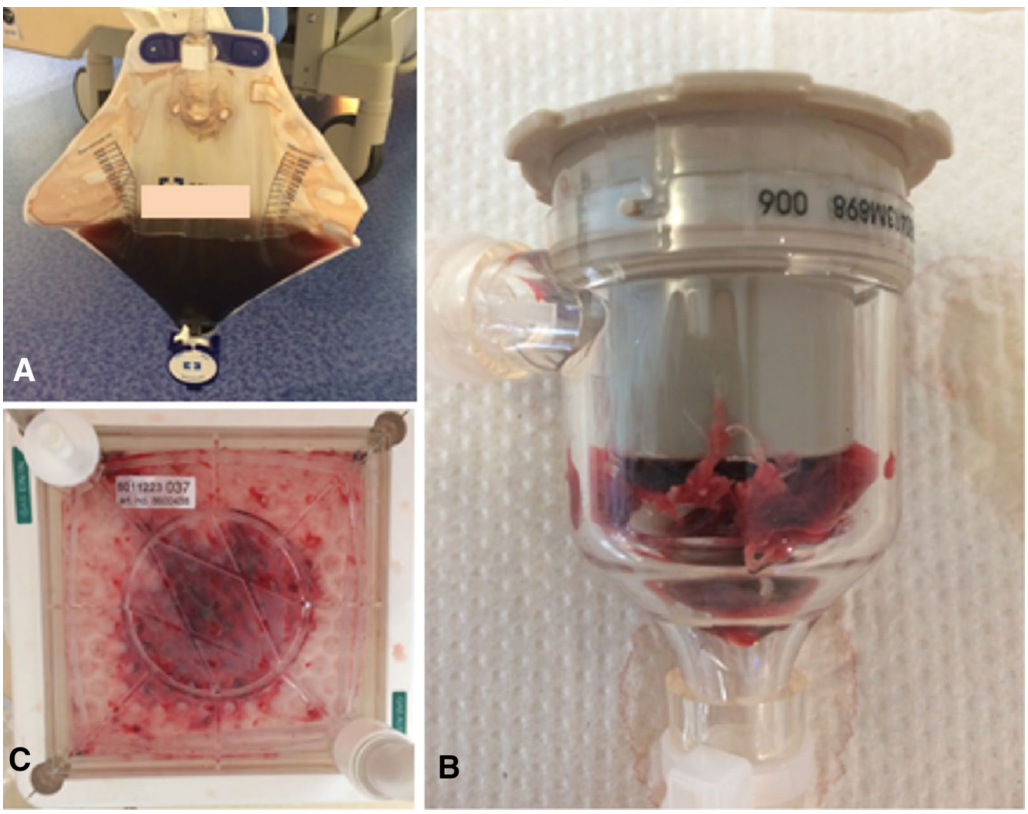

Fig. 1 **a** Rust-coloured urine. **b** Partial head pump thrombosis evidenced after flushing. **c** Central thrombosis of the rectangular stacked and glued membrane after flushing

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the therapeutic range was achieved with intravenous infusion of heparin (anti-Xa 0.3–0.6 UI/ml).

The hemodynamic and respiratory conditions were improving, yet a rust-coloured urine appeared on day 13 (Fig. 1a) in association with an increase in plasma free hemoglobin, from 35 to 1785 mg/l, while the anti-factor Xa level was at 0.16 UI/ml. No disturbance was noticed in the controller's pressures and flow parameters. The pre-pump, post-pump and post-oxygenator circuit pressures were − 16 mmHg, 38 mmHg and 30 mmHg, respectively.

In view of the high suspicion of pump thrombosis, $ECCO_2R$ was immediately stopped with prompt normalization in the urine's aspect and plasma free hemoglobin. Inspection of the head-pump after flushing revealed a partial thrombosis (Fig. 1b). An unusual central thrombotic pattern was also noted after flushing on the rectangular stacked and glued membrane (Fig. 1c).

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Compliance with ethical standards

Conflicts of interest
Dr. N. Aissaoui: Astra-Zeneca, Abiomed and Thoratec. Dr. JL. Diehl reported receiving research support and personal fees from Alung and Novalung/Xenios.

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