

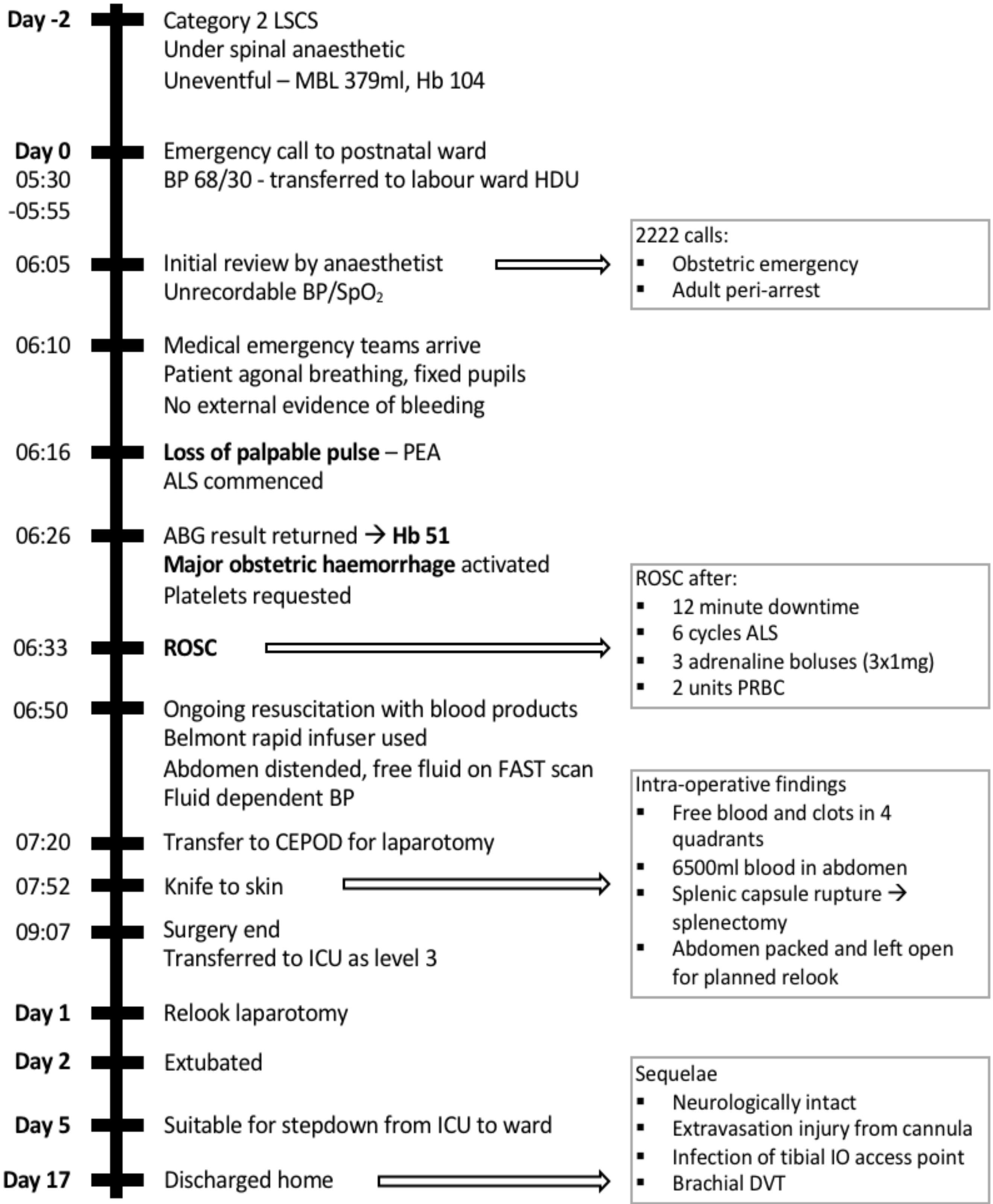
Post Caesarean Delivery Splenic Rupture Leading to Cardiac Arrest – Management and Lessons Learnt

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Case Description

Background	Background and antenatal plan 38 year old; G3P1. - PMH: Hairy cell leukaemia – under surveillance, no active treatment at present. - Known 15cm splenomegaly, mild pancytopenia - Consultant led care – joint obstetric and haematology and anaesthetics. - Monthly FBC antenatally	Hairy Cell Leukaemia¹ - Incidence 0.3/100,000 women (US). - Patients may present with incidental pancytopenia, fatigue or infection. - Patients may undergo period of ‘watchful waiting’ prior to treatment with chemotherapeutic agents. - Approximately 10% of asymptomatic patients do not require immediate treatment. - Prior to advent of chemotherapy, historically treatment was elective splenectomy.
Peripartum period	Peripartum period - Presented 39/40. - Febrile, foetal distress . - Emergency Category 2 LSCS under spinal – uneventful. - Post-LSCS bloods: Hb 104, platelets 72, normal coagulation screen.	
Cardiac arrest	Deterioration on ward - Sudden undifferentiated shock 2 days following LSCS. - Initial differential included pulmonary embolus and haemorrhage. - Witnessed PEA cardiac arrest followed and ALS commenced. - Point of care blood gas analysis and ROTEM revealed new anaemia and profound coagulopathy – major obstetric haemorrhage protocol activated. - ROSC was achieved with prompt ALS and RBC transfusion. - Once stabilised, patient transferred to CEPD theatre for emergency laparotomy – splenic capsule rupture	
Sequelae	Sequelae - Patient transferred to ICU intubated and ventilated following laparotomy and splenectomy - Abdomen left open and packed - Planned re-look at 24h – uneventful and abdomen closed. - Extubated 2 days following arrest – neurologically intact. - Discharged home day 17. - Sequelae of infection of tibial IO access point, a cannula extravasation injury to arm, brachial DVT.	

Figure 1: Timeline of Events





Total blood products received

- 16 units RBC
- 900ml cell salvage
- 12 units FFP
- 10g fibrinogen
- 2 units platelets



Learning Points

- Point of care tests including blood gas analysis and ROTEM were invaluable in diagnosis, to differentiate between thrombotic and haemorrhagic causes of shocked state.
- These were also used to guide blood product management in ongoing resuscitation.
- Use of medical emergency team in leading ALS allowed anaesthetic and obstetric team free for other roles.
- Use of designated team member to liaise with blood bank ensured prompt delivery of blood products and to track infusion volume/ ratios.
- Debriefs offered to staff at time of event and in the weeks following helped provide psychological support for the team involved.



Discussion 2,3,4

- Maternal cardiac arrest is rare, affecting 1/30,000 UK pregnancies.
- Hairy cell leukaemia can cause splenomegaly, of which splenic rupture is a complication.
- Splenic rupture following caesarean section is very rare, and is usually associated with an underlying pathology.
- This case demonstrates that prompt resuscitation with the use of ROTEM to guide blood product management can lead to a favourable outcome following a rare cause of cardiac arrest.

References

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