

Blood on the Clock: Orchestrating Miracles with Level 1 Rapid Infuser

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Introduction

Level 1 Rapid Infuser is a specialised device designed to warm and rapidly deliver larger volumes of blood components such as packed red blood cells, plasma, and platelets typically in patients experiencing severe blood loss. We present our experience using this device to safely deliver large amounts of blood component in a timely manner in a rapidly exsanguinating trauma patient.

Case Description

A 45-year-old male motorcycle rider brought to emergency department with abdominal pain following high-speed motor vehicle collision with a divider. He was hypotensive (64/48 mmHg), Extended Focused Assessment with Sonography for Trauma (e-FAST) scan revealed free fluid in Morrison pouch. Patient was intubated to protect the airway. Safe 'O' blood was started immediately using Level 1 rapid infuser in view of haemodynamic instability. Massive Transfusion Protocol (MTP) was activated. A total of 22 units of packed red blood cells, 15 units of Fresh Frozen Plasma, 7 units of Platelets & 12 units of Cryoprecipitate were given. Double inotropes started concurrently to achieve Mean Arterial Pressure (MAP) target. Patient was pushed for Exploratory Laparotomy which revealed multiple tears at Transverse Mesentery Colon estimating 11 Liters of blood loss. The level 1 rapid infuser was also sent to OT with the trainee ED personnel to facilitate its use there as well. The Level 1 rapid infuser enabled stabilization of blood pressure leading to successful suturing of multiple tear bleedings and achieving haemostasis.

Discussion

In the case of trauma with massive haemorrhage, rapid blood transfusion can save lives. Having an MTP protocol is good but a rapid infusion of the blood products is essential for survival. Relying on manual transfusion method may not be sufficient and patient can deteriorate. Level 1 rapid infuser can facilitate rapid delivery of large volumes of blood products to patients experiencing significant blood loss during surgery; achieving hemodynamic stabilization and laying the foundation for definitive surgical intervention.

Conclusion

By following an established MTP and utilizing equipment like Level 1 rapid infuser during major trauma with massive bleeding can improve patient outcomes thus increase the likelihood of survival. Our experience shows the need of the machine in such situation.

Keywords : Level 1 Rapid transfuser, Massive Blood Transfusion