

EC EMERGENCY MEDICINE AND CRITICAL CARE Opinion

Importance of Damage Control Surgery (DCS) in Trauma Patients

Ethem Unal*

Department of Surgery, Health Sciences University of Istanbul, Istanbul

*Corresponding Author: Ethem Unal, Associate Professor of General Surgery and Surgical Oncology, HSU, Umraniye Education and Research Hospital, Istanbul.

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Damage control surgery (DCS) means a rapid explorative laparotomy consisting of bleeding-control, contamination-control, packing if necessary and abdominal closure. If bleeding is unmanageable or will take long time to control in a trauma patient with coagulopathy or hypotension, packing supplies a temporary tamponade till the optimal clinical situation is obtained. Contamination should also be controlled by simple sutures or ostomies to prevent wasting time with definitive surgical procedures in such a critical patient necessitating longer periods of resuscitation. The triad of acidosis, hypothermia and coagulopathy will result in death if one does not take all the necessary measures. Instead of a successful definitive operation, time-saving temporary surgery will help patient to survive. When all vitals signs come to normal in an intensive care unit (ICU), the definitive surgery can then be undertaken once hypothermia, acidosis and coagulopathy be corrected.

Another important component of DCS is fluid resuscitation in correcting hypotension. In the past, more fluid but less blood products were used to employed. However, this approach was changed with early replacement of blood products (red blood cell-RBC, fresh frozen plasma-FFP and thrombocyte in 1:1:1 ratios) following saline or volume expanders. Massive crystalloid solutions are not used as like in the past, and instead, blood products are used earlier now. In case of massive blood transfusions (4-6 U) are necessary, thrombocyte count should be kept above 100.000 and fibrinogen level should also be measured and kept above 200 mg/dL with cryoprecipitate replacements.

In conclusion, DCS has evolved over the last three decades and gained popularity in reference trauma centers all over the World. Since then, the survival of multitrauma patients has improved remarkably.