Review

Damage Control Surgery and Open Abdominal Management: Recent Advances and Our Approach
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抄録

The concept of damage control and improved understanding of the pathophysiology of abdominal compartment syndrome (ACS) have been proven to be great advances in the management of both traumatic and nontraumatic surgical conditions. The practice of damage control surgery includes 3 components: 1) abbreviated resuscitative surgery for rapid control of hemorrhage and abdominal contamination by gastrointestinal contents, followed by temporary abdominal wall closure for planned reoperation and prevention of ACS; 2) restoration of physiologic function, including rewarming and correction of coagulopathy and hemodynamic stabilization in the intensive care unit; and 3) re-exploration for the definitive management of injuries and abdominal wall closure. Although this new approach can decrease the mortality rate of patients with severe physiological derangement, the establishment of clearly defined indications is necessary. For patients who require damage control surgery, interventional radiology should be integrated into the strategy for achieving hemostasis. Angiographic evaluation and embolization should be considered immediately after initial operation, especially for patients with combined intraperitoneal and retroperitoneal hemorrhage, severe hepatic injury, or ongoing hemorrhage after damage control surgery.

In many patients who require conventional open abdominal management following damage control surgery or decompressive laparotomy for ACS, the granulating abdominal contents are covered with only a skin graft, which is associated with a risk of enterocutaneous fistula. These patients will ultimately require complex abdominal wall reconstruction at a later stage. We have performed early fascial closure using an anterior rectus abdominis sheath turnover flap method. This technique may reduce the need for skin grafting and subsequent reconstruction and can be considered as an
alternative method for the early management of patients with open abdomen.