

Authors: Valerio Cozza, Valentina Biachi, Antonio La Greca, Gabriele Sganga, Filippo Mario Topa

Component separation after vacuum-assisted wound closure with mesh-mediated fascial traction in open abdomen: single center experience

Background: Vacuum-assisted wound closure and mesh-mediated fascial traction have recently become the management of choice in post-traumatic and septic open abdomen. Multiple techniques are available once the final abdomen closure can be achieved.

Aim: we decided to compare the outcomes of the open abdomen closure techniques in our Institution.

Methods: Retrospective analysis of patients treated with the open abdomen technique followed by abdominal wall closure. The study included 53 patients. Patients were divided in two groups. Group 1: patients who underwent abdominal wall reconstruction using component separation technique (n=20). Group 2: patients who underwent abdominal wall closure using other reconstruction techniques (direct closure vs permanent mesh placement vs partial fascial incision) (n=33)

Results: the group that underwent component separation after open abdomen was associated with better outcomes in terms of early and delayed incisional hernia development. Overall length of stay was shorter in patients with early direct closure; no significant difference was identified between the component separation group and the other reconstruction techniques group. Time to closure was shorter in component separation group (mean 6.1 vs 7.1 days). Morbidity and mortality were similar in the two groups.

Discussion: component separation after open abdomen is associated in our study with better outcomes in terms of incisional hernia and time to abdominal closure. Postoperative length of stay, morbidity and mortality are still high. This study encourages us in defining an algorithm to identify the closure technique of choice in each patient.