Evaluation of Vacuum-assisted Fascial Closure in Patients Managed With an Open Abdomen

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Purpose: The 'open abdomen' technique is used for damage control surgery and to prevent abdominal compartment syndrome (ACS). The aim of this study was to extract useful conclusions using the vacuum-assisted fascial closure (VAC) in patients with an open abdomen.

Methods: This study includes 8 patients, in a two-year period, who were temporarily treated with VAC for severe abdominal sepsis or abdominal compartment syndrome, or both. Patients with abdominal trauma were excluded from the study. End points were fascial closure, mortality, VAC-related morbidity, duration of open abdomen, length of intensive care unit (ICU) stay, and hospitalization time.

Results: Primary fascial closure was feasible in 3 patients, partial closure in 3 patients, and no closure in 3 patients. Abdomens were left open for 27 days (range 7 to 76 days) with 7.8 dressing changes (range 3 to 32) per patient. Three patients died during treatment with the vacuum-assisted device because of multiple organ failure in acute sepsis. VAC-related morbidity was as follows: one fistula and one fascial edge necrosis.

Conclusions: VAC is a simple and quick technique that maintains a sterile environment with a controlled egress of fluid that is easily quantifiable. When carefully applied, the VAC technique allows a delayed fascial closure reducing the complication of the open abdomen and the abdominal compartment syndrome in critically ill patients.

Disclosures
There is no conflict of interest