

MANAGEMENT AND OUTCOMES OF THE OPEN ABDOMEN IN ELDERLY NON-TRAUMA PATIENTS

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BACKGROUND: Damage control laparotomy, initially developed for trauma patients, has expanded into the general surgery arena. Little evidence exists regarding the utility of the open abdomen (OA) technique in elderly non-trauma patients. Our objective was to review the management and outcomes of this approach in elderly patients presenting with intra-abdominal catastrophes.

METHODS: Retrospective chart review of patients from 1998 to 2008 identified cases of emergency laparotomy with OA. Demographics, comorbidities, laboratories, surgical techniques, morbidity, long-term disposition, and mortality were analyzed. Two-tailed t-tests and Fisher's Exact Test were used for comparisons.

RESULTS: 84 patients with a mean age of 64 +/- 1.3 years and mean APACHE IV of 74 +/- 2 were treated, 70% of which had ≥ 2 comorbidities. Patients were managed with OA secondary to: (1) planned takeback (2) intra-abdominal hypertension (3) hemodynamic instability and/or (4) gross contamination. After a median of 1 takeback, fascial closure was achieved primarily in 33 (39%) and with biologic or absorbable mesh in 51 (61%) patients. Overall mortality was 32% with the highest mortality in the hemodynamically unstable group ($p < 0.033$). The most common complications were ventilator-associated pneumonia (VAP, 29%) and acute renal failure (21%). Mean ventilator time was 9.5 +/- 2 days, and mean ICU stay was 20 +/- 3 days. An increased likelihood for long-term care placement (LTCP) was found in patients with preoperative albumin $< 2.5\text{g/dl}$ (RR 2.2, 1.2 to 3.9), APACHE IV > 65 (RR 1.7, 1.1 to 2.6) and need for tracheostomy (RR 1.8, 1.3 to 2.6).

CONCLUSIONS: In elderly non-trauma patients with intra-abdominal catastrophes, our data demonstrates that the OA technique is feasible with acceptable morbidity and mortality. Attention to aggressive early resuscitation and VAP prevention measures may lead to improved outcomes. Patients with albumin $< 2.5\text{g/dl}$, APACHE IV > 65 and tracheostomy are at increased risk of requiring LTCP and would benefit from expedited discharge planning.