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REDUCTION AND SUSTAINABILITY OF CESAREAN SECTION SURGICAL SITE INFECTION: AN EVIDENCE-BASED, INNOVATIVE, AND MULTIDISCIPLINARY QUALITY IMPROVEMENT INVENTION BUNDLE PROGRAM

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Background: We found Cesarean section (C-section) surgical site infection (SSI) at our institution was significantly higher than the national benchmark.

Methods: A retrospective cohort study was conducted under four phases from 1/2008 to 12/2014. The hospital infection control (IC) policies and a pre-surgical checklist were bundled and implemented. The study was conducted with 3,334 Cesarean deliveries: Phase A (1/1/2008-1/31/2010):1250 patients without intervention (baseline SSI rate), Phase B (2/1/2010-7/31/2011): 682 patients were intervened with IC policies, Phase C (8/1/2011-12/31/2012):591 patients with a SSI reduction bundle and Phase D (1/1/2013-12/31/2014):811 patients were monitored C-section SSI sustainability. Patients not following strict protocols due to emergency Cesarean deliveries were excluded. Chi square, Fisher's Exact test and standard Z test were used for statistical analyses.

Results: C-section SSI rates were 6.2% (77/1250; Phase A), 3.7% (25/682; Phase B), 1.7% (10/591; Phase C), and 0.1% (1/811; Phase D) respectively. By implementing the IC policies and bundle, C-section SSI rate was reduced 40.3% (Phase B vs. Phase A), 72.6% (Phase C vs. Phase A), and 98.4% (Phase D vs. Phase A). All statistics were significantly different.

Conclusions: We conclude that implementing a C-section SSI reduction bundle was associated with reduced C-section SSI rate down towards zero. A future prospectively randomized clinical trial is warranted.

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MANAGEMENT AND OUTCOMES OF TRAUMA PATIENTS TREATED WITH OPEN ABDOMEN IN A TERTIARY HOSPITAL IN BRAZIL

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Severely injured patients often require damage control surgery and open abdomen. The Lethal Triad is a frequent and is associated with worse prognosis. Therefore, morbidity and mortality are high. We analyze data in a one-year period, and discuss factors associated with poor outcome and fascial closure. Patients admitted who underwent damage control surgery and open abdomen were enrolled. Patients (27) underwent damage control with open abdomen during one year. Most of them were male (85%) and the mean age was 31 years. Seventeen (63%) were involved in a blunt trauma and motor vehicle accidents were the most common mechanism (53%). Of the penetrating trauma cases, gunshot wound (60%) was more frequent than knife injuries. Mean ISS was 27. Mean lactate and base excess at admission were 66 and -9.7, respectively. Mean fibrinogen and INR were 149 and 1.9, respectively. Average of ICU days and in-hospital length of stay were 17 and 29 days, respectively. Sixteen patients (60%) successfully underwent primary fascial closure, eight of them in the first reoperation. Two patients had skin closure only. Twenty-four (89%) patients sustained 56 different complications, the most common being renal insufficiency, followed by intestinal fistulae, wound infection and intrabdominal abscess. Thirteen patients (48%) died, four of them (30%) during the first 48h.

Damage control surgery is mostly employed in severe physically stressed patients. They are often acidotic, coagulopathic and hypothermic on admission, and demonstrate a high ISS. Mortality and morbidity are both high. Primary fascial closure is difficult, but feasible.

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