

Skin Closure With Subcuticular Absorbable Staples After Cesarean Section Is Associated With Decreased Analgesic Use

J. Nitsche¹, C. Howell² & T. Howell²

¹ Department of Maternal Fetal Medicine, Department of OB/GYN, Mayo Clinic College of Medicine, e-mail: jnitsche@wfumbc.edu

² Department of OB/GYN, District One Hospital

Abstract

Purpose: To determine if skin closure with subcuticular absorbable staples at the time of cesarean section is associated with decreased in-hospital analgesic use compared to skin closure with surgical steel staples.

Methods: A retrospective cohort study was performed between 1 January 2005 and 31 December 2008 comparing in-hospital analgesic use after cesarean section between patients who underwent skin closure with surgical steel staples and subcuticular absorbable polyglycolic acid staples.

Results: Eighty-nine subjects were included in the absorbable staple cohort and 95 were included in the steel staple group. There was a 1.5-fold decrease in ketorolac use ($p < 0.0001$) and a trend toward decreased ibuprofen use in the absorbable staple cohort ($p = 0.06$). There was no difference in hydrocodone/acetaminophen use between groups ($p = 0.89$).

Conclusions: Our results suggest that the use of subcuticular absorbable staples for skin closure at the time of cesarean section may lead to less in-hospital analgesic use, and thereby positively impact a patient's post-operative course. In addition, while reduced analgesic use may represent a small cost savings for each individual patient, there is the potential for significant savings when one considers the large number of cesarean sections performed in the US annually. Prospective studies will be required to assess the full impact of the use of this new skin closure technology.

Selected Findings

“...the decreased use of [IV administered] ketorolac associated with absorbable staples would result in a cost savings of approximately \$200 (US dollars) per patient even after considering the higher cost of the absorbable staple device.”

“...this would suggest that absorbable staples are associated with less pain immediately post-operatively when pain can be the most difficult to control. In addition, there was a trend toward a decrease in ibuprofen use, suggesting that the benefits of absorbable staple use may persist further into the post-operative period.”