

Suture Superior to Staples for Skin Closure After Cesarean Section

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Use of suture to close the skin after a cesarean section is associated with superior overall satisfaction, as well as superior cosmetic satisfaction and outcomes, compared with the use of staples. This is the conclusion of a study by A. Dhanya Mackeen, MD, MPH, Geisinger Health System, Danville, Pennsylvania, USA, and presented by coauthor Jonah Fleisher, MD, Pennsylvania Hospital, Philadelphia, Pennsylvania, USA, to compare patient satisfaction and cosmetic outcomes between 2 of the most common methods of skin closure after cesarean section.

Patient Satisfaction and Cosmetic Outcome in a Randomized Study of Cesarean Skin Closure [Mackeen AD et al. *Obstet Gynecol* 2014] was a prospective, multicenter, controlled trial in which 746 women undergoing cesarean delivery via low transverse skin incisions were randomized to skin closure with suture or metal staples between 2010 and 2012.

The primary outcome of the study was wound complications. Secondary outcomes were overall and cosmetic satisfaction assessed by the use of a Likert-type scale, and cosmetic outcomes assessed using subjective and objective components of the Patient and Observer Scar Assessment Scale (POSAS).

Of the 746 women in the study, satisfaction data were available for 606 (81%) women. The study found that women who received suture closure had significantly higher overall satisfaction scores compared with women who received staples. Similar results were seen for cosmetic satisfaction (Table 1).

Table 1. Patient Satisfaction

	Suture		Staples		p Value
	n	Median (IQR)	n	Median (IQR)	
Overall satisfaction	299	10 (9, 10)	307	9 (6, 10)	<0.01
Cosmetic satisfaction	301	10 (8, 10)	304	9 (7, 10)	<0.01

IQR=interquartile range.
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Results of cosmetic outcome are shown in Table 2. Analysis of this outcome was limited to patients from the primary trial site to minimize interobserver variability among multiple sites. As shown in Table 2, suture was favored based on both objective and subjective components of POSAS.

Table 2. Cosmetic Outcome

	Suture		Staples		p Value
	n	Median (IQR)	n	Median (IQR)	
PSAS	129	15 (9, 25)	128	20(13, 26)	0.01
OSAS	137	12 (9, 15)	138	13 (9, 16)	0.01

IQR=interquartile range; OSAS=Observer Scar Assessment Scale; PSAS=Patient Scar Assessment Scale.
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According to Dr. Fleisher, these results highlight that suture should be used for all patients. The results of the primary analysis on wound complications will be published in the June 2014 issue of *Obstetrics and Gynecology*.

Dr. Mackeen states that “as suture closure of the horizontal skin incision as compared to staple closure at cesarean is associated with a 57% decrease in wound complications, increased patient satisfaction and better scores with regards to provider and patient evaluation of scar cosmesis, suture should be the preferred method to close the skin at cesarean birth.”

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