A Novel Skin Closure Device for Minimally Invasive Surgery: Patient and Provider Assessments [2J]

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Abstract

INTRODUCTION:
Patient and surgeon experience with a novel skin closure device combining microstaples with adhesive film for multiport laparoscopic surgery (general, urologic or gynecologic) evaluated.

METHODS:
Case cohort prospective observation study, 18 patients served as their own controls. Each surgeon closed at least one incision with their standard suture and at least one with the device. Day 0, surgeons rated ease of use and speed of application of the device and sutures. POD 10 and 30, patients rated comfort of the incisions, comfort of device removal, wound appearance, surgeons rated wound appearance.

RESULTS:
Surgeons rated the device as much (28%) or somewhat better (56%) than suture for ease of use, much (44%) or somewhat (34%) better for wound closure speed. On day 30, surgeons rated appearance of device-closed wounds as much (36%) or somewhat (57%) better than suture, none rated appearance as worse than sutured wounds. On day 30, patients rated device-closed incision comfort as much (19%) or somewhat (38%) better, comfort of removal of the device as much (18%) or somewhat (29%) better, and overall appearance as much (58%) or somewhat (33%) better than the sutured incisions. Nine percent of patients rated the appearance of the wounds as the same, and none rated the device-closed incisions as worse than sutured on any measure.

CONCLUSION:
Laparoscopic skin incision closure speed and ease and patient comfort and wound appearance can still be improved. This novel device incorporates the strength of staples with adhesive film and was highly acceptable to both surgeons and patients.