

Innovations in the Operating Room: Revolutionary Advance in Skin Closure



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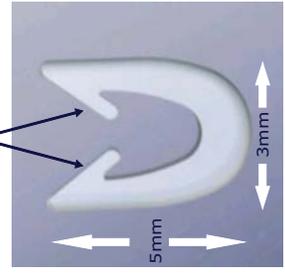


Background

Naval Medical Center Portsmouth (NMCP) recently trialed and adopted the INSORB absorbable subcuticular stapler, a new device marketed as providing the cosmesis of hand suturing with the speed of metal staples. The primary purposes of the trial were to assess: 1) the effectiveness of incision closure in terms of cosmesis, staff and patient satisfaction, and surgical productivity, and 2) the longer-term outcomes of incision healing.



Cleats
 (to secure tissue)



Methods

Fifty (50) patients were selected for skin closure which included midline, Pfannenstiel, and other abdominal. Procedures included C-sections, hysterectomies, open hernia repairs, abdominoplasty, and orthopaedic and vascular cases involving abdominal incisions. Stapler users included attending physicians, second through fourth year residents, and surgical assistants. Patients with contraindications for the stapler were closed by hand or using a metal stapler. Contraindications include patients with BMI > 40 and/or wounds under high tension.

At surgery, evaluations included skin closure appearance, device ease of use and speed of use by surgical team, wound bleeding, and wound tension. Post-surgical wound assessments were done at first dressing change, discharge from the hospital, and follow-up visits. In addition, patient input was solicited regarding satisfaction with wound appearance, and comfort.



Day of surgery



One week post surgery



Three weeks post surgery

Results

Surgeons found the INSORB stapler easy to learn and use, achieved excellent results including significant productivity increases vs. hand suturing. Patients were very satisfied with the cosmesis and comfort, especially patients with previous experience with metal staples, and were particularly happy not to have to return for staple removal. Physicians and nurses were pleased with the post-surgical wound healing and were more productive due to dropping of clinic visits for staple removal and wound follow-up. No infections, seromas, or hematomas were observed.



Seven weeks post surgery



Six months post surgery



Fifteen months post surgery

Conclusions

The INSORB absorbable stapler is a true innovation for skin closure, providing the cosmesis of hand suturing with the speed of metal staples. As measured by survey questionnaire, our surgical staffs and patients are pleased with the device and the results. We have adopted use of the stapler as part of our ongoing commitment to patient safety and satisfaction, as well as our commitment to achieving the highest possible productivity in our operating rooms and clinics. We expect to sustain and increase our improvements as our teams get more experience with the stapler.

We believe the small increase in procurement cost of the INSORB stapler over metal staplers is more than recovered in staff productivity. There is a dramatic productivity increase when comparing the INSORB stapler to hand suturing, and the cosmesis results are so good that our plastic surgeons are using the stapler.

The INSORB stapler is an "out of the box" technology that can be easily integrated into a surgical facility. We believe that our results are easily replicated by other MTFs.

Remarks

"The absorbable stapler has significantly reduced our closure times while providing the same clinical and cosmetic outcomes we attained when hand suturing."
 - Dr. Mark Honig, Department Head Plastic and Reconstructive Surgery

"Our patients love the cosmesis and comfort of the C-Section wounds closed with the absorbable stapler. We save O.R. time vs. hand suturing and clinic time vs. metal staples."
 - Dr. Michael Girtelschmid, Obstetrics and Gynecology

"The absorbable stapler has reduced our major procedure times by as much as 40 minutes, enhancing our productivity and saving money."
 - Dr. Robert Hersh, Plastic and Reconstructive Surgery, Medical Director, Ambulatory Surgery Center

"Physicians and assistants can easily and rapidly learn to use the absorbable stapler. We were more productive by the second case!"
 - Debbie Hancock, CST, CFA

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