

ABRA Surgical Skin Closure Clinical and Economic Highlights

Highlights

- 1. Fasciotomies were closed primarily in an average of 2.6 days using ABRA Surgical Skin Closure, several times faster than standard techniques and instead of covering with grafts.**
- 2. ABRA Surgical Skin Closure eliminates the need for skin grafting and provides excellent cosmetic result. Adjustment at bedside minimizes the need for multiple operations.**
- 3. Early results with ABRA Surgical Skin Closure demonstrated cosmetically acceptable, delayed primary closure of difficult fasciotomy wounds.**
- 4. In a chart review at The Ottawa Hospital (TOH), fasciotomy wounds were closed in an average of 5.6 days saving an average of \$8,062 per patient over other methods.**
- 5. From TOH review, the US analysis shows an estimated cost savings of up to \$28,000 per patient (\$5,000 - \$28,000 for various age groups), when ABRA is used for fasciotomies.**

Many of the published articles and posters make reference to the challenges of primarily closing fasciotomies and the traditional approaches to managing them. Traditional methods include the use of skin grafts, NPWT and vessel loops & staples, which do not consistently achieve a primary closure.

ABRA Surgical Skin Closure is an advancement that achieves a low-tension primary closure of full thickness skin, eliminating skin grafts and their associated complications, and directly resulting in significant patient benefits and cost savings.

References and Details

1. *Dynamic Wound Closure for Decompressive Leg Fasciotomy Wounds.* Singh N, Bluman E, Starnes B, Andersen C. *The American Surgeon.* 2008 Mar;74:217- 220.

This publication about ABRA Surgical Skin Closure is an 11 patient case series of young, healthy patients treated in Iraq at a US Combat Support Hospital for lower leg decompressive fasciotomy wounds. Ten of the 11 patients (91%) were closed in a delayed primary fashion after application of the device. Primary closure was achieved in an average of 2.6 days. The one patient not closed had bilateral above the knee amputations. “In addition to primary closure, we avoided the need for creating additional wounds in patients subject to multiple injuries.”

2. *Delayed Dynamic Abdominal Wall closure Using Abdominal Re-approximation Anchor (ABRA Device After An Initial Damage Control Laparotomy.* Win TS, Huget EL, Praseedom R, Jah A. Department of Surgery, Addenbrooke’s Hospital, University of Cambridge, United Kingdom. Poster Presentation: 4th World Conference Abdominal Compartment Syndrome, Dublin, Ireland, June 25-27, 2009.

This poster is an ABRA Surgical Skin Closure case summary of a delayed abdominal closure following an initial damage control laparotomy. “Delayed abdominal closure using dynamic continuous traction results in gradual approximation of the tissues. It eliminates the need of prosthetic mesh, skin grafting and

provides excellent cosmetic result. Adjustment of tissue traction at bedside minimizes the need for multiple operations.”

3. Early Results Using a Dynamic Method for Delayed Primary Closure of Fasciotomy Wounds. Taylor RC, Reitsma BJ, Sarazin S, Bell MSG. Journal of the American College of Surgeons. 2003 Nov;197:872 – 878.

The first published study summarizing the early results of using dynamic wound closure was a five case (six incision) series at The Ottawa Hospital (TOH), Ontario, Canada. This study outlined how dynamic wound closure uses the biomechanical properties of human skin including biological and mechanical creep to close the skin. “...early results with the dynamic wound closure method have demonstrated cosmetically acceptable, delayed primary closure of difficult fasciotomy wounds in a timely matter.”

4. Canica Datasheet #1

The study referenced in #3 was followed by an economic study, also done at The Ottawa Hospital (TOH) where the hospital and homecare costs of primarily closing an extremity fasciotomy with ABRA Surgical Skin Closure were compared against closing with a skin graft or a secondary closure with skin graft. From TOH chart review, fasciotomy wounds were closed in an average of 5.6 days and ABRA Surgical Skin Closure saved an average of \$8,062 per patient over the standard treatment methods for fasciotomy closures.

5. Canica Datasheet #2

Using data from TOH review, the US analysis shows an estimated cost savings of up to \$28,000 per patient (\$5,000 - \$28,000) in the US for the various age groups, when ABRA Surgical Skin Closure is used for fasciotomies.

Copies of these and other supporting references are available from Canica Design on request.