Using technology tools

S008: Dermatologic Surgery Pearls: Optimizing Safety, Satisfaction, Efficiency

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Disclosure

I have no relevant relationship with industry.
Outline

• Efficient undermining
• Adhesive strip skin closure
• Negative pressure device
• Phone based apps
Undermining techniques

• Cold steel
  – Sharp
  – Blunt

• Electrosurgery
Electrosurgical Undermining

- **Advantages**
  - Decreased operative time
  - Decreased bleeding

- **Disadvantages**
  - Collateral tissue damage
  - Wound edge necrosis
  - Vascular compromise

Undermining with bi-terminal electrosurgical unit
Surgical smoke

• Health risk
• Particulate matter
• Toxic chemicals
• Infectious agents

Patient dissatisfaction


Surgical smoke

- Ablation of 1 gram of tissue produces a smoke plume with an equivalent mutagenicity to 6 unfiltered cigarettes

- On average the smoke produced daily in plastics OR was equivalent to 27 to 30 cigarettes

1,000 Mohs cases/year = 50 hours of continuous smoke exposure

## Chemicals identified in surgical smoke

- Acetonitrile Furfural (aldehyde)
- Acetylene Hexadecanoic acid
- Acroloin Hydrogen cyanide
- Acrylonitrile Indole (amine)
- Alkyl benzene Isobutene
- Benzaldehyde Methane
- Benzene 3-Methyl butenal (aldehyde)
- Benzonitrile 6-Methyl indole (amine)
- Butadiene 4-Methyl phenol
- Butene 2-Methyl propanol (aldehyde)
- Formaldehyde

- 3-Butenenitrile Methyl pyrazine
- Carbon monoxide Phenol
- Creosol Propene
- 1-Decene (hydrocarbon) 2-Propylene nitrile
- 2,3-Dihydro indene Pyridine
- Ethane Pyrrole (amine)
- Ethene Styrene
- Ethylene Toluene (hydrocarbon)
- Ethyl benzene 1-Undecene (hydrocarbon)
- Ethynyl benzene Xylene

• The distribution of pulmonary function test results was identical among deployed and non-deployed veterans.
• Findings did not confirm the hypothesis that deployment to the Gulf War in 1990-1991 resulted in an increased prevalence of clinically significant pulmonary abnormalities 10 years later.
• 63 Gulf War veterans approximately 20 years post-deployment
• Significantly higher rates of small airway obstruction (5x) and restrictive lung physiology (2x) at 20-years post-deployment compared to at 10-years post-deployment
Adhesive strips

- Quicker than sutures for closing surgical wounds
- Reduces wound care burden
- Barrier function
- No risk of sharps injury
Comparison of Traditional Superficial Cutaneous Sutures Versus Adhesive Strips in Layered Dermatologic Closures on the Back—A Prospective, Randomized, Split-Scar Study

Sherry Yang, MD,* and David Ozog, MD†


Adhesive Strips for the Closure of Surgical Incisional Sites: A Systematic Review and Meta-Analysis

Ioannis D. Gkegkes, MD1, Michael N. Mavros, MD1, Vangelis G. Alexiou, MD1,2, George Peppas, MD1,3, Stavros Athanasiou, MD1,4, and Matthew E. Falagas, MD, MSc, DSc1,3,5


Adhesive Strips Versus Subcuticular Suture for Mediansternotomy Wound Closure

Harold L. Lazar, M.D., James McCann, P.A., Carmel A. Fitzgerald, N.P., and Howard J. Cabral, Ph.D.

Department of Cardiothoracic Surgery, Boston Medical Center and the Boston University School of Medicine, Boston, Massachusetts

Comparing Cyanoacrylate Tissue Adhesive and Conventional Subcuticular Skin Sutures for Maxillofacial Incisions—A Prospective Randomized Trial Considering Closure Time, Wound Morbidity, and Cosmetic Outcome


Randomized Prospective Study Comparing Conventional Subcuticular Skin Closure With Dermabond Skin Glue After Saphenous Vein Harvesting


Cosmetic outcome of skin adhesives versus transcutaneous sutures in laparoscopic port-site wounds: a prospective randomized controlled trial

Tissue adhesives for closure of surgical skin incisions

Tissue adhesives or glues are increasingly used in place of stitches (sutures) or staples to close wounds. It has been suggested that tissue adhesives may be quicker and easier to use than sutures for closing surgical wounds. Tissue adhesives carry no risk of sharps injury - unlike needles that are used for sutures - and are thought to provide a barrier to infection. This may mean that they also promote healing, and the need for removal of sutures is avoided.

The researchers searched the medical literature up to March 2014, and identified 33 medical studies that investigated the use of tissue adhesives for closure of wounds. They compared tissue adhesive with another method of closure such as sutures, staples, tape, or another type of tissue adhesive. The main outcomes of interest were whether wounds stayed closed - and did not break down - and whether they became infected. The results of the review showed clearly that fewer wounds broke down when sutures were used. Studies also reported that some types of tissue adhesives might be slightly quicker to use than other types. There was no clear difference between tissue adhesives and the alternative closure methods for cosmetic results or costs. Results regarding surgeons’ and patients’ preferred skin closure method were mixed.
Tissue adhesives for closure of surgical skin incisions

Tissue adhesives or glues are increasingly used in place of sutures (stitches) or staples to close wounds and it has been suggested that they may be quicker and easier to use than sutures for closing surgical wounds. Adhesives carry no risk of sharps injury and are thought to provide a barrier to infection that also promotes healing as well as do away with the need for suture removal.

Fourteen studies were included and for most outcomes assessed there was no difference between tissue adhesives and the alternatives. However, fewer wounds broke down when stitches were used and tissue adhesives were more time consuming to use than other methods. Some surgeons and patients preferred the alternatives to tissue adhesives.
“Combination closure with adhesive strips and buried interrupted subcuticular suturing was not significantly associated with improved overall scar assessment compared with buried interrupted subcuticular suturing alone when evaluated by blinded observers or the patients themselves. Our results do not support the use of adhesive strips as a means to improve cosmetic outcomes or reduce scar width.”
PICO NPWT Dressing

• Pocket device for negative pressure wound therapy (NPWT)

Top film layer
has a high moisture vapour transmission rate to transpire as much as 80% of the exudate.

Pioneering airlock layer
cleverly enables distribution of NPWT across the wound while enabling movement of exudate through the dressing.

Super absorbent core
locking exudate away from wound.

Silicone adhesive layer
protects the wound environment and reduces pain on removal.
Wound dressings
Indications

- Chronic wounds
- Acute wounds
- Traumatic wounds
- Subacute and dehisced wounds
- Partial-thickness burns
- Ulcers (such as diabetic or pressure)
- Flaps and grafts
- Closed surgical incisions

Benefits of Negative Pressure

- Accelerates wound healing
- Promotes moist wound healing milieu
- Decreases complications, such as surgical site infection, dehiscence, seroma/hematoma, and wound edge necrosis


Mechanism of NPWT

• Decreases interstitial edema
• Removal toxic inflammatory mediators
• Increases cutaneous blood flow
• Promotes angiogenesis
• Splints against tensile forces across wound


Relative Contraindications

- Adhesive tape reaction
- Ischemia
- Excessive exudative wounds
- Inadequate hemostasis
- Cellulitis
- Open/dehiscent surgical wounds
- [Profuse perspiration]
High complication risks

- Surgery-related
  - Location
  - Surgical site contamination
  - Technique
  - Operative time
- Patient-related
  - Morbid obesity
  - Comorbidities
  - Nicotine abuse
  - Drugs (systemic steroids, immunosuppression)

Negative pressure wound therapy for skin grafts and surgical wounds healing by primary intention (Review)

Webster J, Scuffham P, Stankiewicz M, Chaboyer WP

Negative pressure wound therapy for acute surgical wounds

Negative pressure wound therapy (NPWT) is the application of suction (negative pressure) to wounds that are healing. NPWT has been used for many years for the treatment of chronic wounds, such as leg ulcers and bed sores. More recently, the system has been modified for use on clean surgical wounds, including skin grafts. We undertook a review of studies that compared NPWT with other wound treatments in order to see whether NPWT really works. We found nine trials to consider. These showed that it is still not clear whether NPWT promotes faster healing and reduces complications associated with clean surgery or skin grafts, or not.
Coding and Reimbursement

• CPT code 97607
  – Surface area ≤ 50 cm²
• CPT code 97608
  – Surface area ≥ 50 cm²
• Includes:
  – Provision of exudate management collection system
  – Topical application
  – Wound assessment
  – Instructions for ongoing care
• 2016 Medicare national average payment $225.55
Apps

- Haiku
- Tiger Text
- Doximity dialer
- Evernotes
- VisualDx
- Appointment reminder
- Photo collage
11/29/2006 – 11y F

Take Clinical Image
No encounter for media

Update ID Photo
Hi, Jayne S Joo

Welcome to TigerText. Let’s send your first group message.

Send Message
# Best Note-taking apps of 2018

<table>
<thead>
<tr>
<th></th>
<th>Evernote</th>
<th>Microsoft OneNote (Web)</th>
<th>Bear (for Mac)</th>
<th>Simplenote (Web)</th>
<th>Zoho Notebook (for Mac)</th>
<th>Google Keep (Web)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>$0.00</td>
<td>$6.99</td>
<td>Free</td>
<td>$0.00</td>
<td>Free</td>
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</tr>
</tbody>
</table>

[Link to the best note-taking and syncing apps](https://www.pcmag.com/roundup/347537/the-best-note-taking-and-syncing-apps)
“Peripheral Brain”
Antibiotic prophylaxis
7/6/15 Antibiotic prophylaxis - 30-60 min prior to surgery - non-oral site: cephalexin 2g (alt: clinda 600 mg, azithro 500 mg).

Antiseptics
6/28/14 Antiseptics Chlorhexidine (Hibiclens) - broad spectrum (bacteria, virus, fungus) - rapid onset, sustained activity - ototoxicity, eye irritation Hexchlorophene

Bilobe Flap
7/7/15 Bilobe Flap Bilobed transposition flap. A: The traditional design of the bilobed flap results in tissue protrusion at the pivot

Burow's Flap
7/5/14 Burow's Flap

Antibiotic prophylaxis
- 30-60 min prior to surgery
- non-oral site: cephalexin 2g (alt: clinda 600 mg, azithro 500 mg)
- oral site: amoxicillin 2 g (alt: clinda 600 mg, azithro 500 mg)

High risk:
- prosthetic heart valves
- h/o previous bacterial endocarditis
- complex cyanotic congenital heart dz
- surgical systemic pulmonary shunts or conduits

Moderate risk:
- MVP with regurgitation and/or thickened leaflets
- HCM
- acquired valve dysfunction (rheumatic heart dz)
Pyoderma gangrenosum

in

Adult

See also in: Anogenital

Contributors: Jeffrey M. Cohen MD, Vivian Wong MD, PhD, Susan Burgin MD

Synopsis

Pyoderma gangrenosum (PG) is an inflammatory, noninfectious, ulcerative neutrophilic skin disease of uncertain etiology, often occurring in individuals with chronic inflammatory bowel disease.

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Synopsis

Codes

Look For

Diagnostic Pearls

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Mohs Surgery Appropriate Use Criteria (AUC) app

There are many considerations when determining whether to use Mohs surgery for the treatment of skin cancer, such as the cancer type, location, and whether it is new or recurring, as well as the health profile of the patient.

With the AAD’s complimentary Mohs Surgery Appropriate Use Criteria (AUC) app, you can easily and systematically determine when Mohs surgery is most appropriate for your patients from your mobile device, right at the point of care. Download the app for both Apple and Android devices below.

Highlights of this free app:
- Decision support on the appropriateness of Mohs surgery for 270 unique scenarios.
- Guided navigation through tumor and patient characteristics.
- Color-coded body maps for high-, medium-, and low-risk areas.
- Supplemental clinical algorithms.
- Quick reference guide that can be shared with referring physicians and patients.

APPLE STORE  GOOGLE PLAY
Appointment reminders

https://www.solutionreach.com/

https://www.lumahealth.io/

https://ezderm.com/

http://www2.relatient.net/

https://www.televox.com/
Appointment reminder from Dr. Amy Woo & Associates

Dr. Amy Woo & Associates
Dr. Amy Woo & Associates
Dr. Amy Woo & Associates
Dr. Amy Woo & Associates

Jayne,
We look forward to seeing you at your scheduled appointment with Dr. Amy Woo & Associates. Please take a moment to confirm this appointment by clicking on the link below or giving us a call directly.

Your appointment is:
Wednesday, January 27, 2016
10:00AM

We appreciate your time and will see you then!

Dr. Amy Woo & Associates

If you would like to unsubscribe, click here.
Appointment Reminder for Caesar

Thu, Jan 4, 2018 at 11:50 AM

Open 7 Days! Weekend & evening apps available!

We offer payment plans on our wellness packages!

Please click the button below to confirm your appointment:

CONFIRM

Wellness Visits

Starting Monday February 6, 2017 El Camino Veterinary Hospital has changed their hours of operation to Monday-Friday 6am-8pm also offering weekend appointments Saturday 9am-6pm and Sunday 9am-4pm.
Thank you for your attention

Questions?