Acute Wound Care Wisdom

By Joy Boyd RN BN,

Alberta Health Services

Updated October 30, 2016

“ABCD”s of Acute Wound Care”*

A: Assess the wound and the patient

B: Best Practice Principles for cleansing and debridement and closure

C: Choose the most appropriate, available products for the wound type

D: Discharge Instructions / Documentation

*Carole Rush, Joy Boyd

Types of wounds seen in ER/UCCs

Cuts, lacerations, scratches, open/closed crush, burns, degloving, bites, abrasions, punctures, decubiti, amputations, skin tears, blisters, avulsed teeth, bleeding socket, epistaxis, wound dehiscence, abscess, nail avulsions, skin gouges (avulsions), cold injury, chronic ulcers, tar burn, ruptured blood vessels, corneal abrasions/burns, fracture blisters, gunshots, stabblings, compound fractures, infected wounds, skin infections/rashes/conditions, chemical exposures, electrical arc wounds, foreign bodies, hemorrhoids, contusions, hematomata, high pressure injury, dermatitis and parasites.

General Rules for Wound Care

Gauze is NEVER to be used as first layer on a wound. The only exception is WET gauze applied temporarily by medics or Triage. Gauze is destructive as a first layer on acute and chronic wounds. It desiccates the wound, and pulls away newly formed epithelials when it is removed. It introduces microfibers of cotton, which embed and set up foreign body reactions (granulomas). Gauze leaves hatchmarks in tender flesh, and robs the wound bed of oxygen.¹
No toxic cleansers!

Wounds must be allowed to heal in a moist environment to achieve the best outcome.¹

An occlusive dressing for longer application time is the best healing environment. (exception- leg vasculopathy)

Stop serial voyeurism. No peeking! No cleaning! Leave the dressing on unless there is pain, malodor, streaking, or it has disengaged. Each time the dressing is opened, epithelial bridging is interrupted, oxygen levels are altered, organisms are introduced and temperature regulation is disrupted.¹

Avoid the use of harsh dry cotton ribbon packing. It destroys new epithelial cells upon removal, and is painful to insert and remove. Use hydrofiber gel plain or silver.

Use most of your senses to assess a wound. See, hear, smell and touch.

**Wound Assessment**

Description including etiology, when it occurred, site, length, depth, width, shape, colour, purulence, blood ooze or squirting, clot, debris, or dead tissue, swelling, odor, and peri-wound condition. (don’t clean up forensic injuries until the police have taken their evidence/photos). Use a disposable measuring tape for accurate dimensions. Draw pictures in the chart.

**Cleansing of wounds**

**Use ONLY:**

Tap water, Normal saline, sterile water, Ringer’s lactate

Wound Cleanser (mild, non-toxic NS/surfactant product)

Use safety equipment such as gloves, gown, eye protection, or face shield. Wipe the Wound Cleanser bottle with Cavi-wipe after each use.
Techniques:

NS shower: bottle of saline with punctures in top
NS irrigation using 20 cc syringe & a # 16 IV cannula (minus the needle)
NS irrigation with a Zerowet shield on a 20cc syringe
Wound cleanser and wet gauze
Tap water and Wound cleanser at scrub sink
Non-chemicalized spongebrush with NS or Wound Cleanser

Avoid these products on/in open acute wounds:

Iodine
Chlorhexidine 2%, 2% w alcohol, 4% scrub brush
Alcohol
Hydrogen peroxide
Benzalkonium chloride (periwipes)
Bleach solutions, vinegar
or any other toxic agents

as they can be absorbed systemically. These agents are cytotoxic, nephrotoxic, or cytolytic, can cause embolism, and in the case of Iodine, thyrotoxicosis. Hydrogen peroxide is a dangerous and unsuitable agent for routine wound irrigation and debridement. 2,3,5,6,7,8,9,11.

Chlorhexidine, Hydrogen peroxide and Iodine are for intact skin prep only! (i.e. LP, venipuncture, chest tube etc.)

When you open a tray for the physician, pour normal saline into the container. If he insists on using Chlorhexidine, dilute it only with sterile water, NOT saline.
Wound Dressing Categories

Alginates
- Calcium alginate

Hydrofibers
- Aquacel, Aquacel silver

Hemostatic agents
- Surgi-foam, Surgicel

Non-adherents
- silicone mesh (Mepitel)

Low- adherents
- Primapore

Films
- Tegaderm, (Teg Absorbent* sp. order)

Foams
- Mepilex, Mepilex lite, Mepilex silver
  - Mepilex Transfer, Biatain

Foam silver
- Mepilex Ag

Hydrofibre gel packing
- Aquacel Ag, Aquacel plain

Cover Dressings
- Gauze, kling, burn net, abd pads, Coban

Tapes
- Paper, Medipore, Transpore, Mepitac (Silicone)

Dressing adhesives
- Cavilon, Mastisol, Opsite spray

Glue
- Dermabond

With some of these dressings the initial cost may seem high, but this is counterbalanced by the decreased number of dressing changes and less use of expensive health care visits, personnel and transportation. The final cost is pennies per day!
Acute Wounds

Remove/soak off any dried-on dressings or home-applied rags etc. Assess the wound. If wound continues to bleed excessively, apply wet saline gauze and then pressure (contraindication to pressure would be the presence of a foreign body such as a sliver or glass etc.).

Cleanse the wound with normal saline or Wound Cleanser or take the patient to a scrub sink to remove debris prior to physician intervention.

After closure (or not) of the wound, assess for appropriate dressing needs. Each type of wound requires a different approach.

**Closed superficial, uncomplicated cuts:** 7-10 day occlusive windowpane dressing (Cavilon/Mepitel/Tegaderm)

**Ragged, sutured wounds with gaps:** Moisture-retentive dressing such as Mepilex border (7 days), or Mepitel/Aquacel/Tegaderm (7-14 days)

**Avulsed fingernail/toenail:** Surgifoam pledget, Mepitel and cover dressing (Tegaderm) “sandwich” or Mepilex/Coban for 7 days. Dermabond with no dressing.

**Small area abrasions:** Mepitel/Tegaderm, Tegaderm film over Aquacel/Aquacel silver for 7-10 days, or Tegaderm Absorbent until the wound is completely healed.

**Deeper, larger area abrasions:** Aquacel Ag or plain Aquacel with cover dressings. Mepilex border. Mepilex Ag foam if highly exudative or dirty. Mepilex transfer/abd pads/burn net 7 days; Mepitel/Aquacel/Tegaderm. Change when dressing is saturated or infection is suspected.

**Ruptured blisters:** Aquacel Ag/Tegaderm; Tegaderm Absorbent, or Mepilex Ag/Tegaderm

**Ruptured blood vessels on the lower leg:** Surgifoam and Tegaderm cover. Do not use an occlusive dressing if the patient has diabetes, arterial or venous insufficiency, or oxygen-deprived conditions.

**Animal/human bites:** Mepitel/abd pads, or Mepilex foam and kling, because the wounds must be monitored day-to-day, in anticipation of infection. Many of these wounds are not sutured closed, so there is more exudate. Small bites can be covered with Mepitel/Aquacel and Tegaderm for visibility.

**Skin tears/avulsions** Various wound treatments, but best practice is Tegaderm Absorbent, which has no end-point. It stays on until the wound is healed. Surgicel to fit the bleeding void, then Mepitel/Tegaderm; Mepilex/ Tegaderm; Mepilex border; Steri-strips. Dermabond
Skin interruptions in open fractures are not sutured closed. Definitive treatment is done in the OR. Prior to applying the splint in ER, the wound must be cleaned and irrigated by the physician. Mepilex foam or Mepilex lite is then applied.

Traumatic partial and full amputations of digits: The ER physician may revise some of these injuries, but the majority goes to Plastics. If the patient is going home with no referral, the wound is dressed with Mepilex foam/Coban wrap for 7 days, with the patient covering his hand with a plastic bag for showering. If the patient is going to see Plastics same or next day, the suturing is gross closure only.

Burns

Most burns will have been cooled by the time the patient reaches the ER. However, the burn usually requires cool cloths, running water or immersion in cool water while the patient waits for treatment. Burns benefit from cooling up to three hours after the burn. Ice is not recommended, as it can cause further thermal injury.

At home, or camping, cool the burn with any available cold liquid such as juice, water, beer, or jump into the lake if you have to. The faster the burn is cooled, the better the results will be, because cooling prevents deeper injury and soothes painful nerve endings.  

Superficial burns (redness, such as sunburn) are very painful, but need little treatment. Aloe vera is a very effective agent; Tylenol/Advil prn. Wear loose clothing.

Partial-thickness burns, also called second-degree injury, produce blisters and exudate. Ensure the patient is adequately analgesed.

Clean the burned area gently with normal saline or commercial wound cleanser.

Debride or deflate blisters if large, tense, circumferential, or if there will be loss of function, such as over a joint. Note: the burn physios debride all blisters as soon as possible, to get the silver products on the damaged tissues.
Burn Dressings

Fact: If you asked 10 ER nurses what best practice for burn care is, you might get 10 different answers. Some are good, some are not-so. If the patient with a small area of second degree is going home with no follow-up, apply Aquacel silver (dry), with a Tegaderm overlay, but don’t apply Tegaderm on areas of first-degree burn. It can stay on up to two weeks, and will self-disengage as the new epithelials push it off. Another options is Mepilex Ag for 7 days. Cut to fit the burn site, to avoid grey staining to intact skin.

If a burn clinic appointment has been made for next day, cover the open blisters/burn with Mepilex silver foam. If no hydrofiber or foam silver product is available, apply thin layer of Flamazine, Mepitel, puffed gauze and burn net the proper size for the limb.

Note: The burn clinic does not use Flamazine because it is difficult and painful to clean off burns, and causes maceration of tissues.

Encourage the physicians to send all burns to the Burn Physio Clinic. Since the clinic’s motto is “Any Burn, Any Time”, take advantage of this resource. Also, if the patient presents in the daytime, call the burn physios at the clinic, and ask if they can see the patient today. The staff is very accommodating.

If today, wrap the burn in sterile green towel and discharge pt. to the clinic (always with 12 Percocets.) The burn clinic department will take over care, thus the patient will have consistent burn therapy, and does not have to return to ER for dressing changes or narcotic needs.

Full thickness (3rd Degree) burns will require a Plastics consult for possible admission or skin grafting. Apply Mepilex foam (no silver) until seen by Plastics.

**Alternative burn dressings (depending on size)**

Tegaderm Absorbent

Mepilex border

With these the patient can shower!

**Pearls**

Do not apply any burn dressing tightly.

Silver products are never used on the face or neck (staining), and are not used on first-degree burns.

Polysporin no longer used on first degree burns. Apply aloe vera gel.
Do not apply Tegaderm over areas of burned skin, as it is very painful to remove.

**Blisters**

Blisters arise from: hot and cold thermal injuries, deep tissue injuries, or from underlying fractures, chemical burns, skin conditions, medical conditions, CO poisoning, abrasive/shear/pressure forces, radiation and toxic exposures from plants and animals/sealife.

Blister treatment is a contentious issue even among the pros. My source says to deflate or debride large, circumferential or tense blisters, and ones that will impair function, such as over a joint. It is also wise to deflate/debride them if a cast/splint is applied over fracture blisters.* personal communication with Sue Hull, MSN, RN, CWOCN  [www.woundconsultations.com](http://www.woundconsultations.com)

To deflate, aspirate the blister with a # 18 needle on a 10 cc syringe. Debride dead blister skin using sterile scissors and forceps. Leave a safe margin to healthy skin.

**Dressings**

Aquacel silver, Cavilon prep, then Tegaderm film.

Tegaderm Absorbent acrylic dressing (no endpoint)

Mepilex plain or Mepilex Ag foam, with burn net cover

Cavilon prep, Tegaderm

Mepilex border (silicone interface with foam)

On the ears, use Mepilex foam then puff gauze buffers between ear and head, and a burn net toque to hold the dressings in place.
Tar Burns and Removal

Tar occludes skin functions, encourages bacterial growth and also stains the skin.

**Scenario**

Road worker with hot tar on his arm comes screaming in pain to your yard as you are watering your plants. What do you do?

A: Stream cold water from the hose for onto the burns. Every second counts to prevent deeper tissue injury in the burn zone.

Go to the kitchen and get butter (not margarine). Call 911. Slather the butter over the entire tarred area. Cover gently with a clean towel. Now half of the work to treat the burn is done!

Butter will dissolve tar in 15-20 minutes, and ER/UCC personnel can clean it off easily. * Not everyone has butter, but Vaseline, Polysporin, baby oil, DeSolvit (lanolin with surfactant) or mineral oil works too.

Do NOT use hazardous substances such as acetone, gasoline, lighter fluid, as they are toxic and cause further damage.

If patient arrives untreated to your ER/UCC, DON’T WAIT FOR A PHYSICIAN TO SEE! Cool the tar burn with cool running water for 20 minutes. Then, generously apply mineral oil or Polysporin to the tar, and cover with a sterile green towel. Do not attempt to peel off the tar, as underlying skin will be damaged further. WAIT! Get patient analgesia (IV opiates and Toradol).

When tar has dissolved, clean entire area gently with normal saline and saline-soaked gauze pads. If Burn Clinic can accept patient same day, send him with burn loosely wrapped in a sterile towel. If no openings at clinic, and if blisters are broken, apply Aquacel silver/abd pads/burn net or Mepilex Ag foam and send patient to Burn Clinic next day. Always send Percocet Rx home with patient.

Update Td immunization if required.


**Sutured/Stapled/Steri-striped Wounds**

**Dressing Options**

Mepitel, aquacel plain with Tegaderm cover

Mepitel with Tegaderm plain film when wound has little to no exudate
Mepilex border, or Mepilex pledget with Tegaderm cover

All the above dressings are water-resistant/proof, and most can be left in place for 7 days and more.

Apply Cavilon dressing adhesive 1-2 cm away from sides of wound. Let dry to tacky state, then apply steri-strips, with no stretching or shear force. They will stay on longer. Tegaderm to cover.

**Dermabond**

**Indications:**

Uncomplicated, superficial, straight cuts can be successfully closed using skin glue (cyanoacrylate).

It is contraindicated in deep, jagged lacerations, as the edges of the wound must be able to be approximated. Glue that goes into deep tissue will set up a foreign body reaction.

It cannot be used on any mucous membrane or near the eye.

**Dressing:**

Dermabond can be left uncovered.

Do not use Polysporin on Dermabond-closed wounds, as the oil-base breaks down the glue’s bond.

Showering, not soaking, is recommended.
Avulsions

Avulsion-type wounds include injuries where skin has been partially or totally removed, by abrasive, shearing, gouging, mechanical, twisting, or cutting forces.

**Scenario:** Avulsion of finger pad skin by meat slicer.

What to do to quell the bleeding?

Get a portion of a pledget of Surgifoam, saturate it in saline and squeeze out the liquid, apply the pledget to the bleeding surface, and wait 20 minutes. Place a collar of gauze around the base of the finger to catch bleeding. The product absorbs 45 times its weight in fluids, and by mechanically trapping platelets in the foam, activates the coagulation cascade and produces an artificial clot.

As there are no edges to sew together, the Surgifoam stays in place until the new epithelials start to fill the void in the skin. The dry, shrunken Surgifoam will be sloughed off just like a real scab.

The new skin will be super-sensitive for months, and may not appear the same as it did before (loss of contour, fingerprint changes etc.). We can apply an umbrella splint to protect the healing wound from additional trauma.

Apply Mepitel over the Surgi-foam, with a Tegaderm Sandwich OR a Mepilex/Coban dressing (waterproof).

**Alternative Method**

Apply T-ring finger tourniquet, wait a few minutes for the wound to stop bleeding, cleanse it, dry it off, then apply Dermabond glue in layers if necessary. Wait for five minutes then remove the T-ring. If bleeding does not recur, no further dressing is required, perhaps just an umbrella splint for a few days.
**Skin Tear**

**Scenario:**

Elderly demented patient traps her arm in the bedrail and now has a skin tear. This type of wound should not be sutured.

Clean the wound with normal saline or Wound Cleanser, pat dry, approximate any remaining skin edges using an applicator or sterile-gloved fingers, and apply Cavilon skin prep in the peri-wound area. Wait ~10 seconds until it gets tacky, and then apply a Tegaderm Absorbent film dressing over the wound. Write in marker around the outer edge “Do not remove until healed”, (the indicator being that all fluid has dried up), or if the outer adhesive edge has been breached by exudate. Draw an arrow to indicate the direction of removal.

* If the wound is bleeding, apply a small strip of hemostatic Surgicel over the skin void before applying the Tegaderm Absorbent.

**This best-practice dressing has several advantages:**

It has an absorbent central island that wicks exudate away from the wound, preventing maceration.

It is an acrylic polymer that is occlusive to water, yet allows air and vapor to pass through the membrane.

It avoids the use of gauze and kling, to allow showering.

It provides windowpane view to follow healing and any onset of infection.

In the demented, it is not itchy or seen to be an irritant (no picking or pulling like gauze-covered wounds).

Can be left in place until the skin has regenerated (no end-point). Stays on longer with the use of Cavilon skin prep.

**Alternative dressings for skin tears**

Mepitel/Aquacel/Tegaderm 14 days

Mepitel/Tegaderm for non-bleeding small tears/abrasions 14 days

Mepilex border foam dressing 7 days

Mepilex/Tegaderm 7 days

Biatain foam/Tegaderm 7 days
Wound Dehiscence

A surgical wound that has spontaneously opened prematurely in the post-operative period.

Scenario:

Lady, 5 days post-partum C-section, had staples removed this morning. She sneezed, and now her wound has opened 3 inches. Clear sero-sang is draining into a makeshift dressing and has soaked her panties.

Clean the wound gently with normal saline irrigation or Wound Cleanser spray.

Insert Aquacel plain packing into the open part of her incision. Cover the wound with a Cavilon prep/Tegaderm film dressing. Can stay in 5-7 days. Refer to Home Care or Ob-Gyn who did her surgery. She can shower with this dressing.

Abrasion

Scenario:

Skateboarder presents with 10” by 4” skin avulsion on left calf from a collision with a concrete barrier.

No suturable edges to close. Skin has been avulsed and is very dirty with debris and clotted blood.

Give analgesia! If necessary, give IV Ketamine to allow more vigorous cleansing.

Clean the wound with normal saline shower, Wound Cleanser, or Zerowet irrigation shield on a 20cc syringe.

Soft debridement: use wet saline gauze pad, or non-chemicalized scrub brush, and stroke from middle to periphery of wound.

Hard debridement: use forceps to pick out debris, and scissors to cut away dead skin flaps, (ensure that physician agrees to delegate this procedure, or nurse has skill set) then use a non-chemicalized spongebrush with NS or Wound Cleanser.

Dressings

For small areas, Tegaderm Absorbent is best practice, as it is waterproof and has a windowpane to view the progress of the wound. Can stay on until wound heals or infection is noted.
For larger areas, Mepitel, Mepilex Transfer, Mepilex silver or Aquacel Ag, are possible choices, abdominal pads overlaid, burn net (caution here as it should not be constrictive). These dressings can be worn for 7 days, and the wound checked without removing the contact layer.

**Abscesses**

After I & D, the physician may choose to pack or not pack the drained abscess. Studies show that packing abscesses delays healing, does not improve outcome, results in more lost work days, increases and prolongs pain, requires ongoing analgesia, results in worse scar, and is more expensive in nursing time, dressings and visits to health professionals. *

If the choice is to pack, we avoid using the harsh cotton packing with or without Iodine. This packing is very destructive to healing tissue. When it is removed and re-packed, the process is quite painful to the patient. Plus, Iodine is thyrotoxic. We encourage the use of Aquacel Silver packing. This bacteriocidal hydrofiber gel ribbon contours to the abscess walls, is soothing to healing tissues, and upon removal it slides out in a gelled state, thus not causing pain or disturbing the new epithelials. Aquacel silver can stay in for 7 days without being changed.


Post Dental Extraction Bleeding

Some patients experience bleeding from a recent dental extraction site. Those on anticoagulants are most at risk for this complication.

Hemostatic agents are beneficial in this instance.

Simple treatment is to place a pledget of Surgi-foam, then a cylindrical dental roll into the socket, and have the patient bite down gently for 30 minutes.

The coagulation cascade begins when the platelets are trapped in the foam and produce a fibrin net, which then forms an artificial clot. It stays in place and biodegrades a few days later.

Other options:

A small ball of Surgicel placed in the socket with a dental roll over top.

Epinephrine-soaked surgical pattie.

Note:

No cotton balls, please, as the fibers get pushed into the wound bed.
*The Ideal Dressing:*

Maintains a moist environment at the wound/dressing interface

Absorbs exudate without leakage

Provides thermal insulation and mechanical protection

Provides protection from organisms (bacterial, fungal etc.)

Allows gas and fluid exchange

Absorbs wound odor

Is non-adherent, conformable and easily removable

Facilitates debridement (removes dead tissue and foreign particles)

Is non-toxic, non-allergenic to both patient and staff

Is sterile, and is free from particulate and toxic components

Obliterates dead space

Is simple to apply and remove

Eliminates pain upon removal

Is cost effective, and is available in several shapes and sizes

*Adapted from DermNetNZ with written permission. Nov 2011*
Choose a wound-appropriate dressing to:

- Minimize frequency of dressing changes
- Decrease pain at dressing changes
- Eliminate destruction of healing tissue
- Maintain healthy peri-wound integrity
- Maintain moist healing environment
- Prevent infection
- Allow patient to shower
- Produce a pleasing appearance of scar

Guidelines for the safe use of Tubular Gauze

- Do not use when a simple dressing is adequate.
- Do not apply if not trained in the proper application and contraindications.
- Do not twist the gauze while the cage is anywhere over the digit, as this exerts torsion and can lead to digital ischemia.
- Do not apply with axial/longitudinal traction. Shearing forces damage tissues.
- Do not use more than two layers.
- Do not roll proximal edges when applying.
- Do not use any other product such as elasticized burn net on the cage. Burn net is very constrictive and can cause ischemia if too tight.
- Avoid using on patients at risk with COPD, diabetes, peripheral vascular disease, hyperlipidemia, or mixed connective tissue disorders, as their tissues are already compromised.

adapted from:

West J Emerg Med. 2009 August; 10(3): 190-19
**Benefits of Less Frequent Dressing changes**

Faster healing in body’s own moist environment

Decrease in wound pain

Decreased trauma to the wound bed and peri-wound skin

Pleasing cosmetic appearance of scar

Budget impact: decrease in:

  - Infection rates
  - Visits to MD
  - Home Care visits
  - Wound specialist referrals
  - Antibiotic use
  - Costs of dressings and supplies
  - Ambulance transfers
  - Hospital visits
  - Prolonged treatment time\(^4\)
Wound Care Pearls

Employ Best-Practice for optimum outcome.

Do no further harm to this wound.

Don’t use toxic cleansers and substances.

No gauze directly on the wound

“Polysporin and Gauze” is no longer best practice

Encourage physicians to order “Wound-appropriate dressing”

Stop serial voyeurism of wounds by using longer-term, moisture-retentive dressings.

Use occlusive dressings so patient can shower.

Use Cavilon prep under all film dressings.

Don’t use burn net as tube gauze.

Don’t use harsh cotton packing (Iodophor or plain).

Debride blisters. The skin is dead, and the wound needs the silver to be bioavailable to work efficiently.

Flamazine, petroleum products, Polysporin on decline

Document the wound and treatments as though you are going to court to be a forensic witness!

Send burns to the FH burn clinic, and don’t wrap dressings tightly.

Authored by Joy Boyd R.N. B.N. FMC ER

Acute Wound Care Nurse
Outpatient Burn Clinic (Foothills)  
“Any Burn, Any Time”

Rationale for referral

• Burn depth can be difficult to assess at first presentation, and apparent depth can progress significantly over time.

• Even outpatient burns can have significant analgesia needs for wound care and dressing changes; also, many patients will have forms they need filled out and often have no family doctor to provide these services for them.

• Patients benefit from consistent burn therapy techniques and follow-up, thus avoiding return visits to ER/UCCs for dressing changes.

• Finally, the majority of patients would benefit from assessment by a plastic surgeon for serial assessment of burn depth and organization of definitive surgical care, if needed.

Accordingly, please ensure that your referral to Outpatient Burn Clinic includes a request for “prn Plastic Surgery consultation”, and a legible signature or PRACID#.

To refer M-F 0830-1545, call Burn Physio at 403-944-2333

Outside of these hours, FAX a copy of the ED/UCC chart to 403-944-2299, attn.: Burn Physio. The patient will be called directly.

On weekends, write on face sheet that the patient should be seen before Monday. Page the Weekend Burn/Ortho Physio at #11859 (daytime only).

For all referrals, please send a copy of the ED chart with the patient, and give discharge analgesia, such as Percocet (12). Update Td prn.

Duncan Nickerson, MD, FRCSC, Division of Plastic Surgery
References


3. Naznin M Dixit. Transient hypothyroidism in a breastfed infant whose mother had a perirectal abscess packed with iodoform gauze. Sciencestage.com/d/17700179


6. Oberg MS, Lindsey D. Do not put hydrogen peroxide or povidone iodine on wounds. AJDC 1987: 141: 27-8


