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Peristomal Skin Conditions

R. B. TURNBULL, JR. SCHOOL OF WOC NURSING

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Objective

- Explain the etiology, pathology, and clinical presentation of common peristomal skin conditions
- Describe nursing management strategies to address peristomal skin conditions

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Incidence

- Range for peristomal skin complications: 10-70%
- The most common complication is irritant dermatitis

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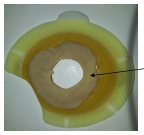
History

- Patient history of problem
  - Onset
  - Description of problem
  - Management to date
  - Coping
- Physical Exam
  - Inspection of
    - Stoma
    - Peristomal skin
    - Abdominal contours
    - Pattern for barrier erosion



Note meltdown of the skin barrier wafer

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General treatment guidelines

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Peristomal Skin Conditions

- Infectious
  - Folliculitis
  - Cellulitis
  - Candidiasis
- Peristomal moisture- associated skin damage (MASD)
  - Irritant dermatitis
  - Maceration/pseudoverrucous lesions
- Mechanical Damage
  - Lacerations
  - Pressure ulcers
  - Mucosal transplantation (implants)
- Allergic Contact Dermatitis
- Varices
- Suture Granulomas
- Unusual Presentations
  - Pyoderma Gangrenosum
  - Malignancy
  - Psoriasis
  - Radiation
- Other
  - Ulcers
  - Combination problems

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Infectious

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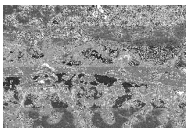
Definition

- Infections of the skin of bacterial, fungal, or viral etiology



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Types

- Folliculitis
- Cellulitis
- Candidiasis

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Folliculitis

- Inflammation of hair follicles on the peristomal skin
- Generally caused by *Staphylococcus aureus*

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Folliculitis

- **Causative factors**
  - Shaving
    - Close
    - Dry shave
    - Frequently
  - Careless pouch removal
- **Causative microbe**
  - Coagulase-positive staphylococci, usually staph aureus infections
- **Risk factors**
  - Obesity
  - Malnutrition
  - Chronic staphylococcal infections
  - Diabetes mellitus
  - Immunodeficiency

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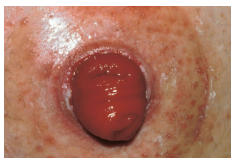
Folliculitis

- Clinical features
  - Itchiness
  - Solitary or many
  - Arise from hair follicle
  - Tend to be superficial
  - Erythematic, pinpoint pustules +/- crust



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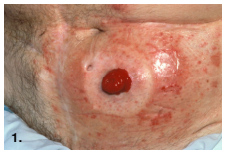
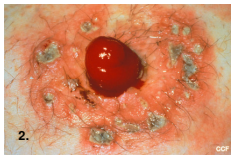
Folliculitis





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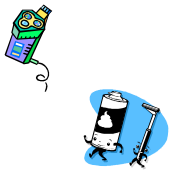
Folliculitis

- Interventions
  - Gentle pouch removal
    - Technique
    - Use releasant
  - Clip hair with scissors
  - Shave with electric razor
  - Shave in direction of hair growth
  - Use plenty of lather with safety razor



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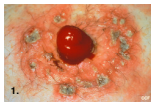
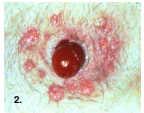
Folliculitis

- Interventions
  - Cleanse with an antibacterial soap may be useful
  - Antibacterial powder for severe lesions as needed, e.g. polymycin





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Cellulitis

- Serious infection usually caused by streptococci
- Assess for:
  - Heat
  - Pain
  - Swelling
  - Erythema
  - Systemic signs of infection
- Treatment
  - Systemic antibiotics
  - Incision and drainage
  - Modification of pouching system

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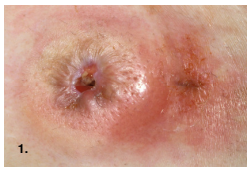
Cellulitis



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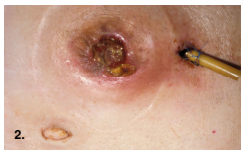

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Fungal/candidiasis

- Overgrowth of a fungal organism (*Candida)* of sufficient magnitude to cause inflammation, infection, or skin disease around the stoma
- Most common cutaneous *Candida* species is *C. albicans*

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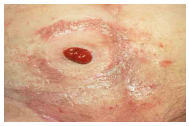
Candidiasis

- Causative Factor
  - Overgrowth of *Candida* stimulated by warmth and moisture



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Candidiasis

- **Predisposing conditions**
- Anemia
- Surgery
- Medications
  - Antibiotics
- Diabetes mellitus
- Immunosuppression
- Obesity
- Increased perspiration
  - Activity
  - Febrile episode
- Pouch leakage

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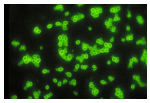
Candidiasis

- Clinical Features
  - Extra –follicular
  - Itchiness, burning
  - Dry and scaly or weepy, stinging
  - Bright red center with a group of satellite lesions—advancing border
  - Initial lesion pustule; may coalesce into a plaque
    - Pustules abraded with pouch removal



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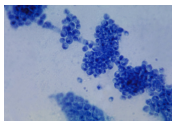
Candidiasis

- Diagnosis
  - Appearance generally diagnostic
  - Microscopic scrapings prepared with KOH (potassium hydroxide)



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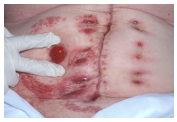

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Candidiasis

- **Interventions**
  - Provide dry environment
    - Proper fit to equipment
    - Porous tape
    - Pouch covers
    - Towel dry or blow dry on cool setting
    - Patient education
    - Use of skin sealants as needed
    - Refer as needed
- **Antifungal Preparations**
  - Use with each pouch change until rash resolve
  - Powders give greater degree of inhibition than cream
  - Medications
    - Nystatin powder
    - Lotrimin cream
    - 2% miconazole nitrate: Comparable potency to prescriptive items (OTC)

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Peristomal-Moisture-Associated Skin Damage (MASD)

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Peristomal Moisture-Associated Skin Damage

- Moisture associated skin damage (MASD)
- Types
  - Irritant dermatitis
  - Maceration/pseudoverrucous lesions

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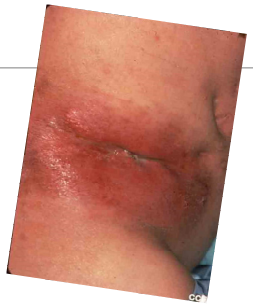
MASD

- Appearance
  - Moist
  - Painful
  - Shallow
  - Erythematous



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MASD

- Etiology
  - Substances come in contact with the skin and destroy or erode the epidermis
  - Damage is localized to the area of contact

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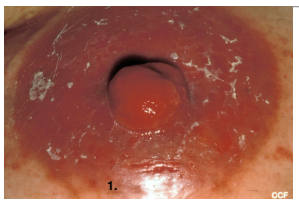

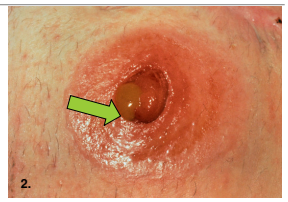

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MASD Irritant dermatitis

- Treatment
  - Refit pouching system
    - Aperture
    - Convexity
  - Create flat peristomal plane
  - Remove offending product
  - Establish a pouch change schedule

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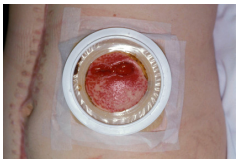
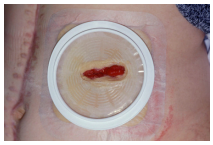
MASD Irritant dermatitis





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Irritant dermatitis treatment

- Treat skin problem
  - Red but not open
    - Protect skin
  - Denuded tissue
    - Dust area with skin barrier powder
    - Refit pouching system
    - Severe
      - Aluminum acetate soaks

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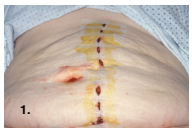

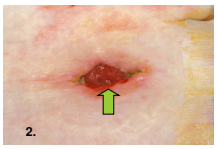

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Irritant dermatitis treatment

- Use minimum amount of products
- Review product use and techniques
  - Reevaluate pouching system
  - Correct technique as needed
    - Change system rather than "tape a leak"
- Possible short term topical corticosteroid use for reddened skin

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1.
Hollister® Premium Powder
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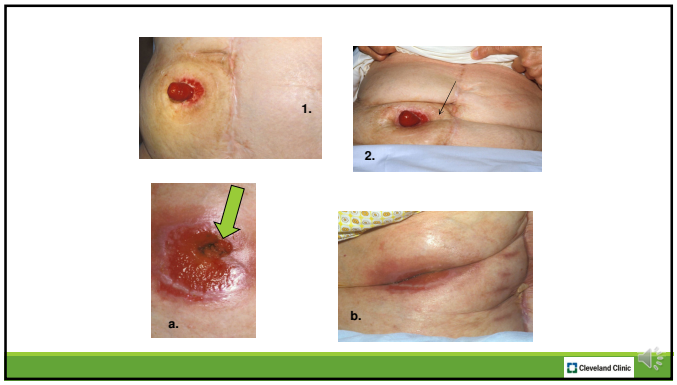
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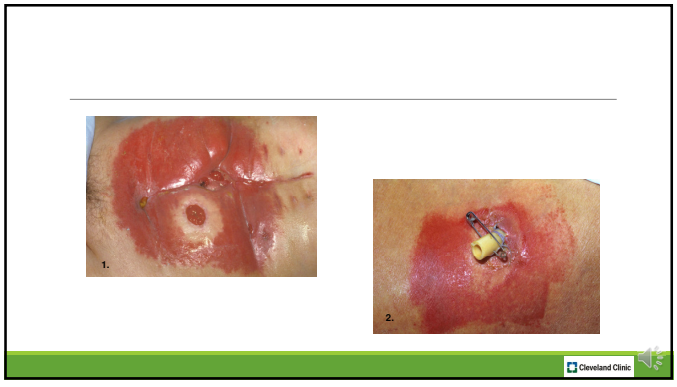
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Pseudoverrucous lesions

- Known in past as
  - Hydration
  - Hyperplasia
  - Hyperkeratosis
  - PEH: Pseudoepitheliomatous hyperplasia (biopsy)

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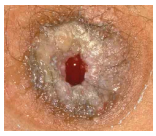
Pseudoverrucous lesions

- Definition
  - Chronic irritation from moisture leads to reactive thickening of the epidermis
  - Overgrowth of tissue caused by overexposure to a chronic irritant
  - Result of an improperly fitting pouching system that allows fluid to bathe peristomal skin
  - Microscopic exam shows thickened epidermis, (hyperkeratosis). No atypia or increased mitosis seen



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Pseudoverrucous lesions

- Clinical features
  - Pain variable
  - May bleed easily
  - Circumferential or partial
    - Localized to area of chronic exposure to effluent
  - Usually gray/white or reddish brown
  - Raised lesion(s) with warty appearance
  - Begin at stoma base and extends outward

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Pseudoverrucous lesions

- Causative Factors
  - Improper fit allowing fluid to be "trapped" under system
    - Convexity
    - Aperture size
  - Alkaline urine increases risk

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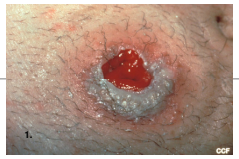

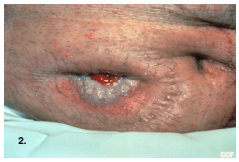

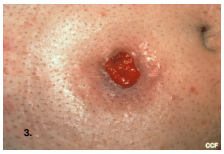

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Pseudoverrucous lesions treatment

- Treatment
  - Refit equipment
    - Aperture
    - Convexity
  - Shorten wear time as needed
  - Change to long-wearing barriers
  - Appropriate follow-up
  - Urinary stomas
    - Correct urine pH
    - Anti-reflux pouch
    - Bedside drainage at night
  - In select cases, use of silver nitrate
  - Rarely, relocation

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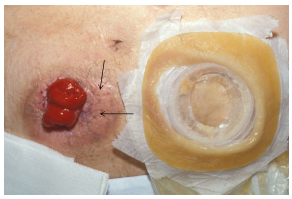

Hidden Leak

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Crystals

- Urinary stomas only
  - Look like sugar/salt crystals
- Etiology
  - Poor hygiene
  - Alkaline urine
  - Improper cleansing of equipment
- Composition
  - Ca++, Mg++, and ammonium phosphates
- Treatment
  - Vinegar soaks
  - Increase fluids
  - Refit equipment
  - Urine acidification

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Mechanical Damage

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Mechanical damage

- Definition
  - Loss of peristomal epidermis secondary to skin trauma
  - Results from an external item causing damage to the skin by compressing it (pressure), lacerating it, stripping the epidermis [medical adhesive-related skin injury (MARSI)], or causing friction damage

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Mechanical damage

- Causative factors
  - Fragile skin
  - Extremes in age
  - Poor pouching techniques
  - Improper use of equipment
- Contributing factors
  - Peristomal hernia
  - Prolapse of stoma
  - Weight gain or loss

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Mechanical damage

- Clinical Features
  - Usually painful
  - Irregular border to lesions
  - Generally shallow and moist
  - Lacerations, pressure ulcers
  - Erythema, denuded, ulcerated skin
  - Mucosal transplantation

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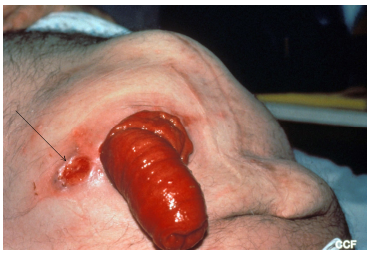

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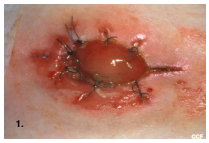
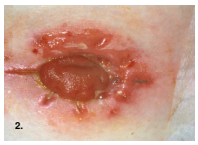
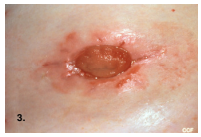

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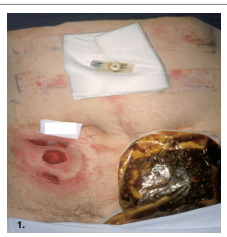
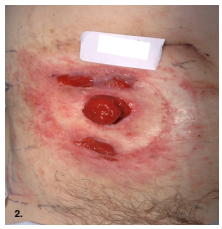

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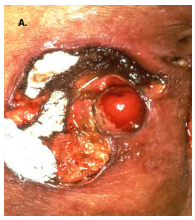

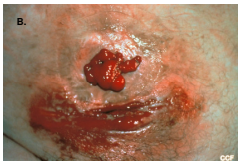

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Mechanical damage interventions

- Find root cause and eliminate it
- Proper fitting of belt
- Refitting of pouching system
- Proper application/removal techniques
  - Use of solvents, warm water
- Avoid everyday changes and "picking" at residue
- Use of skin sealants, powders, barriers as needed

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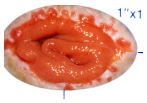
Mucosal transplantation

- Transplantation is also known as mucosal implants
- Result from improper suturing through epidermis at time of stoma formation
  - Can cause fitting problems
- Treatment based on severity



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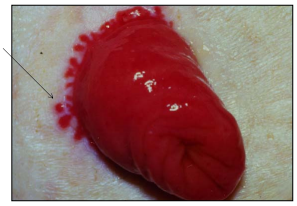

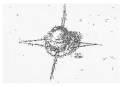

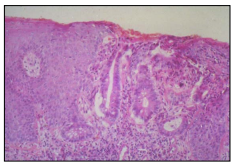

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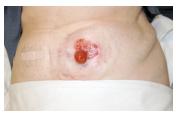
Mucosal transplantation

- Treatment
  - Proper surgical technique
  - More frequent change
  - Increased aperture and skin protection
  - "Dry" islets using skin barrier powder, silver nitrate, or electric cautery; pouch as usual
  - May require stomal revision +/-relocation



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Allergic contact Dermatitis

PERISTOMAL SKIN CONDITIONS

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Allergic contact dermatitis

- An inflammatory skin response resulting from hypersensitivity to chemical elements
- An immunologic cutaneous response to an allergen
  - A person is sensitized to a particular product causing an inflammatory (allergic) response
  - Requires an initial exposure to a potential allergen
    - Antibodies are produced
    - Upon subsequent exposure, an allergic response is triggered.

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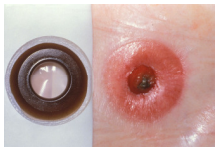
Allergic contact dermatitis

- Damaged or inflamed peristomal skin is at increased risk for sensitization
- Once a sensitivity develops, it usually lasts the patient's lifetime



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Allergic contact dermatitis

- Clinical features
- Skin appears erythematous, edematous, weepy, or bleeding
- Inflammatory reaction directly corresponds to area covered by specific product
  - May have diffuse, blurred borders
- Complains of itching, stinging, burning

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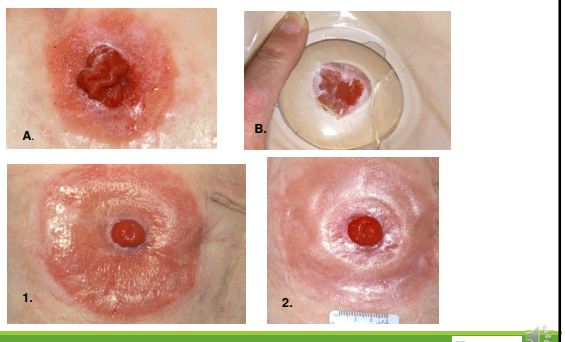

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Allergic contact dermatitis treatment

- Identify and remove allergen
- Avoid other irritants
- Eliminate unnecessary products
- Use of non-adhesive systems as needed
- Appropriate skin care: steroids and antihistamines as needed

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Patch testing

- Test employed to detect hypersensitivities to foods, pollen, or other allergens
- Performed to confirm a reaction to a suspected allergen or irritant

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Patch testing

- Procedure
  - Patient history
    - Products used
    - Existing skin conditions
    - Limited physical examination
- Application
  - Midabdomen, back, upper arms
  - Placed on clean, dry, skin.
  - Patches should be 1" square, placed 2" apart.
  - Cover with non-sensitizing tape.

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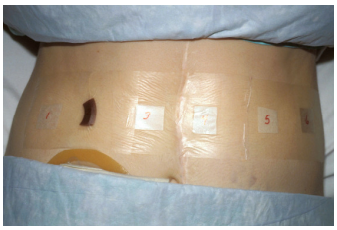
Patch testing



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Patch testing

- Remove patches in 48-72 hours.
- Read after 15-60 minutes have elapsed
  - Rules out transient erythema
- Delayed reaction:
  - Read again after another 24 hours, that is, total time of 96 hours

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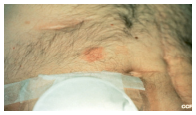
Patch testing

- Scoring as per the International Contact Dermatitis Research Group
  - Negative –
  - False positive –
  - Nonvesicular, weak reaction with erythema & edema; doubtful allergic response +
  - Vesicular reaction with erythema, edema, infiltration, and possible papules ++
  - Bullous, strong reaction +++



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Varices

PERISTOMAL SKIN CONDITIONS

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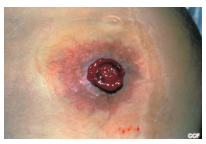
Peristomal varices (caput medusa)

- Bluish-purple discoloration of skin around the stoma
- The area blanches when pressed and displays irregular, small blood vessels



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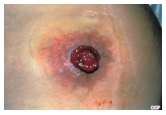
Peristomal varices

- A portosystemic shunt is created when the intestine is sutured to the skin.
- In patients with portal hypertension, the high pressure in the venous network of the mesenteric veins enlarges channels communicating with veins in the abdominal wall.
- These varices may bleed at the mucocutaneous junction.



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Peristomal varices

- Identify and treat underlying liver disease
  - Shunting (TIPS-transjugular intrahepatic portosystemic shunt)
  - Liver transplant
- Bleeding episodes
  - Direct pressure to bleeding area
  - Hemostatic agents such as silver nitrate, cautery, suture ligation, epinephrine-soaked gauze
  - Sclerotherapy
  - Surgery
    - Mucocutaneous disconnection
    - Relocation of stoma—varices will recur at new site if underlying disease not corrected

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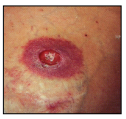
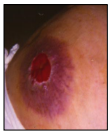
Peristomal varices

- Gentle removal of pouch
- Gentle peristomal skin care
- Use of less aggressive adhesives, less stiff pouching systems
- Education of what to do for bleeding episodes





Hampton and Bryant, Ostomies, 1992

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Granuloma

PERISTOMAL SKIN CONDITIONS

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Suture granulomas

- Granulation tissue occurring at skin-stoma base in areas of retained or reactive suture material
- Friable tissue that easily bleeds
- Probe to determine if fluid filled
- Can be single or multiple
- Treatment
  - Silver nitrate
  - Electrocautery or surgical removal

Retrieved from: http://itslikethisuc.blogspot.com/2013/02/dont-trust-dr-google.html

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Unusual Presentations

PERISTOMAL SKIN CONDITIONS

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Peristomal Pyoderma Gangrenosum (PG)

- Rare
- Etiology unclear, but is felt to be due to an alteration in the immune system
- Lesions can be secondarily infected
- Associated with inflammatory bowel disease such as Crohn's disease and UC, arthritis, or hematologic disorders

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Peristomal Pyoderma Gangrenosum (PG)

- Lesions are multiple or solitary
- Begin as a red lesion that becomes indurated and ulcerated
- Base enlarges, discharging purulent-looking and hemorrhagic exudate

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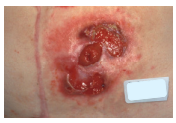
Peristomal Pyoderma Gangrenosum (PG)

- Dusty reddish purple/blue margins and blue halo are classic
- Borders are erythematous, irregularly shaped
- Severe pain is classic, described as "exquisite pain"



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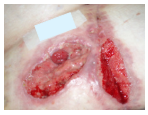
Peristomal Pyoderma Gangrenosum (PG)

- Clinical appearance most telling
- No specific diagnostic test available
  - Biopsy is histologically nonspecific and used to rule out other disease processes
- Lesions occur in the parastomal area, lower extremities, face, buttocks, abdomen



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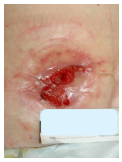
Peristomal PG: Treatment

- Treat underlying disease process
- Medication
  - 6MP
  - Steroids
  - Remicade
  - Sulfonamides
- Local ulcer treatment
  - Includes intralesional steroids, topical immunomodulators: tacrolimus (Protopic) or pimecrolimus (Elidel)



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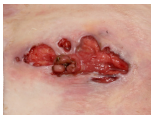
Peristomal Pyoderma Gangrenosum (PG)

- Local treatment
  - Conservative debridement
  - Topical dressing choice based on wound characteristics
- Refit pouching system as needed
  - Decrease pressure as able
  - Non-adherent pouching system if ulcers extremely large



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Malignancy

- Rare condition
- Different presentations
- Treatment
  - Wide excision
  - Stoma relocation
- Pouching
  - Varies based on presentation

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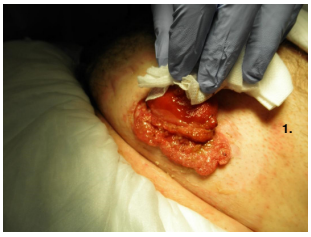

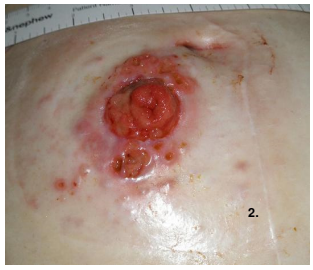

Photos courtesy of Chizu Sakai-Imoto, BSN, RN, CWOCN

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Radiation concerns

- Type of reaction dependent upon
  - Daily dose given
  - Size of treatment field
  - Total dose of radiation delivered
  - Time interval between radiation and surgery

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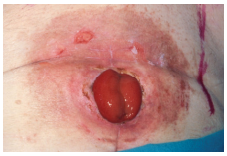
Radiation concerns

- Immediate as well as late effects
  - Damage to small blood vessels
    - Ischemia
    - Necrosis
    - Fibrosis



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Radiation concerns

- Cool water and soft cloth for cleansing of skin
  - "Dab" versus rubbing
- Avoid all irritants: soaps, perfumes, solvents, pastes, cornstarch, creams, ointments
- If possible, site outside radiation field

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Radiation concerns

- Protect damaged skin
  - Consult radiation oncologist
- Replace metal systems for those without metal
- Products containing zinc, bismuth or other heavy metals contraindicated during therapy

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Radiation concerns

- Protect stoma mucosa/peristomal skin from injury
  - Trim nails
  - Gentle tapes
  - Pouch covers
  - Lubricant in pouch to prevent rubbing
  - No straight razors
- Petrolatum gauze over stoma if dressing used
- Prevent sun exposure to radiated area both during and after treatment

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Radiation concerns

- For perianal skin protection
  - Aquaphor ointment (water miscible)
- Discontinue irrigation if diarrhea occurs
- Consult with radiation oncologist regarding specific treatment regimes for damaged skin
- Monitor for incision line breakdown

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Psoriasis

- Chronic genetic skin disease that can occur in the peristomal region and present pouching difficulty
- Characterized by discrete erythematous papules and plaques covered by a silvery white scale
- Course unpredictable

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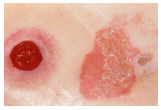
Psoriasis: Koebner Phenomenon

- Precipitation of local eruption of psoriasis at site of trauma, i.e. along incision lines.
- Treatment:
  - Topical steroids
  - Coal tar preparations
  - Antimitotic meds
  - PUVA (photosensitizing meds with ultraviolet light)
- WOC concerns



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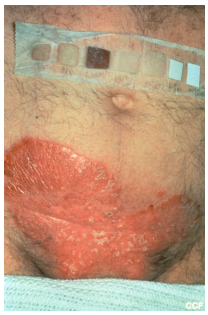

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Other

PERISTOMAL SKIN CONDITIONS

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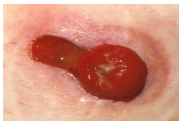
Parastomal ulcers

- Associated most commonly with Crohn's disease
- Assess for "unroofing"-- i.e., debridement of area



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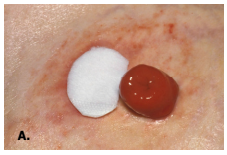

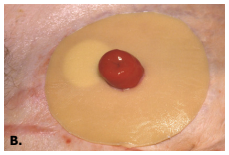

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Parastomal ulcers

- Dependent upon assessment of ulcers, but includes absorptive powders, non-adherent dressings, hydrocolloids, alginates, hydrofiber, foams, transparent film dressings, and antimicrobials

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Pemphigus

- Pemphigus: Rare autoimmune disorder in which antibodies attack the intercellular substance of the epidermis. Characterized by blisters, bulla, erosions, and crusts.
- Treatment
  - Steroids
  - Topical compresses
  - Antibiotics to prevent/treat secondary infection
- Pouching
  - Evaluate for non-adherent system

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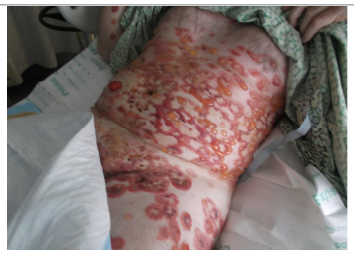
Bullous Pemphigoid



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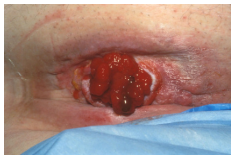

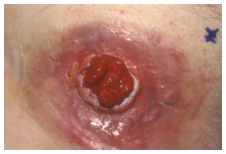

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