DERMATOLOGY FOR THE INTERNIST

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GOALS

• ALL SLIDES ARE FOCUSED ON CLINICAL CASES IN THE FORM OF QUESTIONS AND MKSAP COVERED TOPICS

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• A 34-year-old woman is evaluated for very dry, painful hands. She works in a daycare center and washes her hands 15 to 20 times daily, often for 2 to 3 minutes at a time. She has been applying lotion multiple times daily with no relief of the pain. She has a history of obsessive-compulsive disorder and takes no medications.

• On physical examination, vital signs are normal. She has xerosis on the dorsal aspect of her hands with lichenification, erythema, and fissuring.

• The remainder of the physical examination is unremarkable.
ion to decreasing the frequency of hand washing, which of the following is the most appropriate therapy?

- Petrolatum Moisturized
- Topical Diphenhydramine
- Topical Lidocaine Gel
- Topical Neomycin

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A 22-year-old woman is evaluated for a red, itchy rash on her chest, back, abdomen, arms, and legs for 1 week. She notes that an area of redness and swelling arises and lasts less than 24 hours, followed by development of a new area in a new location. She has no lip, tongue, or throat swelling. She is unable to recall any new medication, food, or other exposures prior to onset of the rash. Medical history is unremarkable, and she takes no medications.

On physical examination, vital signs are normal. There is no lip or tongue swelling. The lungs are clear without wheezes. Skin findings are shown.
What is next most appropriate step

- Food allergy testing
- ESR, CRP and CBC
- Thyroid function testing
- No further evaluation
• In patients with uncomplicated acute urticaria, laboratory studies are almost always normal, and no further diagnostic evaluation is required in most patients before initiating therapy, if needed.
A 72-year-old man is evaluated for discoloration of the tongue and bad breath. He notes the gradual onset of the tongue changes, with development of significant halitosis in recent weeks. He otherwise feels well and has no other symptoms. Medical history is unremarkable. He smokes a half-pack of cigarettes per day and drinks two to three glasses of wine or beer each night. He takes no medications.

On physical examination, the patient is afebrile and vital signs are normal. The appearance of the tongue is shown.
What is next most appropriate step

- Fluconazole
- HIV testing
- Referral for Biopsy
- Brushing of the tongue

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• Management of black hairy tongue consists of tongue brushing as part of aggressive oral hygiene.
A 27-year-old man is evaluated for numerous moles scattered over his chest, back, abdomen, and extremities. He is concerned about the possibility of developing melanoma, although he does not believe that any of the moles have recently changed in size or appearance. His mother and two of his brothers also have similar lesions. Family history is significant for two early melanomas in his mother. Medical history is unremarkable, and he takes no medications.

On physical examination, vital signs are normal. Skin findings are shown.
What is the most appropriate management

- Biopsy as many pigmented lesions as possible
- Removal of all lesions >0.25cm
- Self examinations and dermatology referral
- Removal of only largest lesion
Dysplastic nevi are benign melanocytic lesions most commonly found on the trunk and extremities that have atypical clinical and histologic features that may make them difficult to distinguish from malignant melanoma.
A 38-year-old woman is hospitalized for a rash that developed during antibiotic treatment for pyelonephritis. She was diagnosed 1 week ago and was started on a 10-day course of trimethoprim-sulfamethoxazole based on urine culture results. Although her urinary tract symptoms have resolved, yesterday she noted the onset of a widespread, itchy rash. She also notes some facial swelling but has no difficulty breathing. Medical history is otherwise unremarkable, and she is taking no other medications.

On physical examination, temperature is 38.5 °C (101.3 °F). Her mucous membranes are normal. She has 3-cm lymph nodes in the anterior cervical and axillary regions and a liver edge palpable 4 cm below the costal margin. Skin findings are shown.
In addition to stopping antibiotics what additional evaluation or treatment is indicated?

- CBC+LFTs
- Skin Biopsy
- Start steroids
- No further testing or treatment
• Patients with suspected drug hypersensitivity syndrome, also known as drug reaction with eosinophilia and systemic symptoms, should have a complete blood count with differential to evaluate for eosinophilia or atypical lymphocytosis and liver chemistry tests to assess for evidence of systemic organ involvement.
QUESTION

• A 75-year-old woman is hospitalized for heart failure and is undergoing diuresis, which has led to intermittent urinary incontinence. Medical history is otherwise unremarkable. Her only medication is furosemide.

• On physical examination, temperature is normal, blood pressure is 145/92 mm Hg, pulse rate is 78/min, respiration rate is 18/min. BMI is 29. She has bilateral crackles in the lung bases, an S3 gallop, and 2+ pitting edema of the lower extremities. There is erythema with superficial skin breakdown over the sacrum and coccyx at the top of the gluteal cleft. The area is moist.

• There is no bone or muscle visible, and there is no eschar and scant exudate. There is no surrounding satellitosis or scale.
<table>
<thead>
<tr>
<th>Dressing Type</th>
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<tbody>
<tr>
<td>Hydrocolloid dressing</td>
</tr>
<tr>
<td>Vacuum-assisted closure device</td>
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<tr>
<td>Wet-to-Dry Gauze packing</td>
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Treatment of Pressure Ulcers: A Clinical Practice Guideline From the American College of Physicians

Amir Qaseem, MD, PhD, MSHA, Linda L. Humphrey, MD, MPH; Mary Ann Torlocke, MD; Melissa Starkey, PhD; Thomas E. Denberg, MD, PhD; for the Clinical Guidelines Committee of the American College of Physicians (*)

Abstract

Description: The American College of Physicians (ACP) developed this guideline to present the evidence and provide clinical recommendations based on the comparative effectiveness of treatments of pressure ulcers.

Methods: This guideline is based on published literature on this topic that was identified by using MEDLINE, EMBASE, CINAHL, ERB Reviews, the Cochrane Central Register of Controlled Trials, the Cochrane Database of Systematic Reviews, the Database of Abstracts of Reviews of Effects, and the Health Technology Assessment database through February 2014. Searches were limited to English-language publications. The outcomes evaluated for this guideline include complete wound healing, wound size (surface area, volume, and depth) reduction, pain, prevention of sepsis, prevention of osteomyelitis, recurrence rate, and harms of treatment (including but not limited to pain, dermatologic complications, bleeding, and infections). To evaluate the quality of evidence and strength of recommendations, the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework was used.
### Table 1. Selected Pressure Ulcer Treatment Interventions

<table>
<thead>
<tr>
<th>Intervention*</th>
<th>Description</th>
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<tbody>
<tr>
<td>Air-fluidized bed</td>
<td>Redistributes pressure by forcing air through small beads in the mattress, generating a fluid-like surface</td>
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<tr>
<td>Alternating-air bed</td>
<td>Changes the distribution of pressure by inflating or deflating cells within the mattress and, sometimes, pressure adjustments</td>
</tr>
<tr>
<td>Low-air-loss bed</td>
<td>Regulates heat and humidity by flowing air and, sometimes, pressure adjustments</td>
</tr>
<tr>
<td>Hydrocolloid dressing</td>
<td>Adheres to the skin and absorbs wound exudates, forming a protective gel around the wound</td>
</tr>
<tr>
<td>Radiant heat dressing</td>
<td>Administers heat to the wound site to increase capillary blood flow and promote wound healing</td>
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<tr>
<td>Dextranomer paste</td>
<td>Topical paste used to absorb wound exudates</td>
</tr>
<tr>
<td>Oxandrolone</td>
<td>An anabolic steroid that increases protein production and is used to promote healing and weight gain</td>
</tr>
<tr>
<td>PDGF</td>
<td>A glycoprotein that has been shown to accelerate wound healing in animal models</td>
</tr>
<tr>
<td>Electrical stimulation</td>
<td>Uses surface electrodes to deliver high-voltage electric current through the wound and is believed to promote cell growth and differentiation</td>
</tr>
<tr>
<td>Electromagnetic therapy</td>
<td>Delivers an electric and magnetic field to the wound and is believed to promote healing by altering the cell membrane (5)</td>
</tr>
<tr>
<td>Therapeutic ultrasound</td>
<td>Application of low-frequency sound waves to damaged tissue, believed to improve wound healing</td>
</tr>
<tr>
<td>Negative pressure wound therapy</td>
<td>Application of negative pressure to the wound site that causes a vacuum and removes exudates while maintaining a moist environment, believed to promote wound healing</td>
</tr>
<tr>
<td>Light therapy</td>
<td>Application of energy from the infrared, visible, or ultraviolet spectrum to the wound site to promote healing</td>
</tr>
<tr>
<td>Laser therapy</td>
<td>Amplifies light with a high level of spatial and temporal coherence and is believed to improve wound healing</td>
</tr>
</tbody>
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PDGF = platelet-derived growth factor.

* Brand-name products are listed as examples only and should not be considered endorsements from the American College of Physicians.

† Cliniseal (Hill-Rom).

‡ Duo Z (Hill-Rom), Lapidus Airlost System (American Hospital Supply), MicroPulse, Trilene (Pegasus Healthcare), TnCell and AlphaCell (Arlington Healthcare Group), and Air-Doc; Air Doc; TheraPulse (KCI) and KinAir (Arlington Healthcare Group).

The effectiveness of treatment strategies differ on the basis of features (anatomical site or severity) of the pressure ulcers, patient characteristics, and health care settings.
A 25-year-old man is evaluated in the emergency department for fever of 48 hours' duration and a rash for 24 hours. His illness began with fever followed by fine, red, itchy papules on the trunk, arms, and legs. The rash soon became painful. This morning, he awoke with the rash on his face and sores in his mouth, and when he touched his skin it peeled off. Two weeks ago, he began minocycline and tretinoin cream for acne. He has no other medical problems.

On physical examination, he is toxic appearing and in pain. Temperature is 39.4 °C (102.9 °F), blood pressure is 110/60 mm Hg, pulse rate is 116/min, and respiration rate is 18/min. His eyes are red, and his mouth and lips are covered with a bloody film. Representative skin findings are shown.
What management options is most appropriate

IV steroids

Discontinue minocycline and Tretinoin topical and consider a burn consult

Start Vancomycin and clindamycin
ANSWER - THE TREATMENT OF TOXIC EPIDERMAL NECROLYSIS BEGINS WITH DISCONTINUING THE OFFENDING DRUG AND PROVIDING AGGRESSIVE SUPPORTIVE CARE, SUCH AS THAT RECEIVED IN AN ICU OR BURN CENTER

- SJS and TEN –
  - antiepileptic agents, especially carbamazepine, lamotrigine, and phenytoin. Sulfonamides, fluoroquinolones, β-lactam antibiotics, minocycline, pantoprazole, sertraline, NSAIDs (oxicam and acetic acid type), tramadol, and allopurinol are also frequent causes.
  - SJS involves less than 10%.
  - SJS-TEN overlap involves 10% to 30%, and
  - TEN involves greater than 30%.
QUESTION

• A 52-year-old woman had a burning sensation involving the right side of her forehead and the tip of her nose for 2 days, followed by increased redness and the development of lesions involving the tip of her nose. Medical history is significant for hypertension, and her only medication is ramipril.

• On physical examination, vital signs are normal. Skin examination shows an erythematous patch on the right side of the forehead with scattered overlying grouped vesicles and a vesicle on the tip of the nose with background erythema. Mild conjunctival erythema is noted. The remainder of the physical examination is unremarkable.
On to starting an antiviral medication, what is the next step in many cases?

- Administer Herpes Zoster vaccine
- Start Mupirocin Topical
- Ophthalmology consult
- Start Gabapentin
Herpes zoster infection involving the V1 distribution of the trigeminal nerve can result in ophthalmologic complications including keratitis, scleritis, uveitis, and acute retinal necrosis.

Trivia bonus: WHAT IS THE NAME OF THE SIGN ASSOCIATED WITH VESICULAR LESIONS ON THE TIP OF THE NOSE?
A 53-year-old woman is evaluated in the clinic for a 1-week history of increased swelling, redness, and pain in her lower legs. She has not had trauma to her legs and has not noted any drainage. She has not had fevers and has otherwise felt well. Medical history is significant for heart failure. Medications are ramipril, metoprolol, and furosemide, which she has not been taking recently as she has not had her prescriptions refilled.

On physical examination, vital signs are normal. The neck veins are prominent. Mild bibasilar crackles are present. There is no inguinal lymphadenopathy, and the remainder of the general examination is unremarkable. Skin findings are shown.
Stasis dermatitis is sometimes confused with cellulitis; however, patients with stasis dermatitis will have no leukocytosis or lymphadenopathy and will be afebrile.
A 41-year-old man is evaluated because of his “red face.” He notices that his face gets redder when he goes out in the sun, gets out of the shower, or drinks hot coffee. He is most bothered by the pimples he gets on his cheeks and chin. His skin is not itchy or painful. He takes no medications, drinks three or four beers on the weekend, and otherwise feels well. General physical examination findings are unremarkable. Skin findings are shown.
What is an appropriate treatment for this condition?

- High potency topical steroids
- Topical diphenhydramine
- Topical Antifungal
- Topical metronidazole

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ANSWER – TOPICAL METRONIDAZOLE

• ROSACEA - common chronic condition of the facial skin characterized by pink papules, pustules, erythema, and telangiectasias and is typically found on the forehead, cheeks, nose, and chin

• BONUS QUESTION – WHAT IS ANOTHER COMMON NON-DERMATOLOGIC MANIFESTATION OF ROSACEA?

• Ocular rosacea reportedly affects 6% to 18% of patients with cutaneous rosacea. Symptoms of ocular rosacea are watery eyes, foreign body sensations, burning, and dryness. Conjunctivitis and styes are common
A 57-year-old man is evaluated for a new lesion on his left temple. He had a successful renal transplant 7 years ago. He has no previous history of skin cancer. His medications are mycophenolate mofetil and tacrolimus.

On physical examination, vital signs are normal. A well-demarcated scaly erythematous nodule is noted on his left temple as shown.
What is the likely diagnosis for this skin lesion?

- Seborrheic keratosis
- Basal Cell Carcinoma
- Melanoma
- Squamous cell carcinoma
This patient has cutaneous squamous cell carcinoma (SCC). Skin cancer is common in transplant recipients with a 65-fold increased risk for cutaneous SCC and a threefold increased risk for Malignant melanoma.

Cutaneous squamous cell carcinoma presents as a slowly evolving, isolated keratotic or eroded macule, papule, or nodule that commonly appears on the sun-exposed skin including the face, scalp, neck, pinna, or lip.
A 53-year-old woman is evaluated for a slowly enlarging, telangiectatic, pearly, ulcerated 1-cm plaque on the left temple. It bleeds periodically when traumatized. Medical history is significant for atrial fibrillation. She takes warfarin daily. She is otherwise in good health.

On physical examination, vital signs are normal. Cardiac examination shows an irregular heart rate but is otherwise normal. The remainder of the examination is unremarkable.
What is the likely diagnosis?

A. Basal Cell Carcinoma
B. Squamous Cell Carcinoma
C. Non-pigmented Melanoma

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ANSWER – BASAL CELL CARCINOMA

• Basal cell carcinomas typically occur in sun-exposed areas on older persons with fair skin, and although they rarely metastasize, most have the ability to cause significant local tissue destruction if not removed.

• Nodular basal cell carcinoma is the most common histologic subtype, typically presenting as “pearly” (translucent) telangiectatic papules that may develop a central area of erosion with rolled-up borders.
THANK YOU!
QUESTIONS?

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