

Lecture IV: Principles of topical therapy

A Complete Approach to Treating the Chronic Allergy Patient

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Interactive Guide to Diagnosis and Management

Introduction

- **Signalment:** Bull Dog Karloff, a 3 year old white and tan male neutered 52 pound English Bull Dog
- **Chief Complaint:** Severe itching (pruritus), odor and redness to the skin (erythema) for 6 weeks.
- **History:** Patient has been to 3 other veterinarians for the same problem. Currently the patient is on:
 - Oral antihistamines
 - Skin vitamins
 - Being bathed 2x/month in human shampoo.




Questions

- **Common Questions:**
 - Is Boris on the correct medication?
 - Is Boris on the correct topical treatment?
 - Is the topical treatment making Boris' skin condition worse?
 - Is the client properly educated in the goals and protocols of treatment?
- After the examination and diagnostic process, the veterinarian diagnoses Boris with Atopy with a secondary bacterial and yeast dermatitis.



Topical Treatment Indications:

- Cleansing
- Moisturizing
- Antibacterial
- Antifungal
- Antiseborrheic
- Anti-itch



Types of products available

- Shampoos
- Conditioners
- Leave On Conditioners
- Sprays
- Ointments



Client Communication - Guidelines for topical medication

1. Choose the right products for the specific condition being treated.
2. Give specific instructions for use:
 1. Frequency – How often can the shampoo be used.
 2. Application - Leaving lather on an adequate period of time (usually 5-10 minutes).
3. If present, treat infections systemically as well.
4. Recheck regularly/modify therapy as needed.




Cleansing shampoos

- The goal of cleansing shampoos is to routinely clean the coat of debris and dirt.
- Normal healthy pets should probably be bathed no more frequently than every 10-14 days with a mild shampoo and conditioner.
- Conditioners help restore the natural oils to the hair coat that can be washed out by the shampoo.



Moisturizing Shampoo / Conditioners - Indications

- Moisturizing shampoos and conditioners are used for dry, mildly flaky skin.
- Leave in products have better contact time.
- Conditioners are helpful after use of a drying benzoyl peroxide or tar shampoo.
- Moisturizing ingredients include:
 - Fatty acids
 - Lipids
 - Urea
 - Glycerin
 - Colloidal oatmeal
 - Chitosanide
 - Propylene glycol
 - Sodium lactate
 - Lactic acid.



Physical Symptoms of Dry Hair Coat



- Dry flaky skin
- Dull coat
- +/- Itching (pruritus)
- +/- Odor
- +/- Shedding / Hair loss


Moisturizing Shampoos / Conditioners - Examples

- General: Colloidal oatmeal products work well as a gentle shampoo to decrease irritation and help restore hydration to the hair coat.
- Hypoallergenic/soap free shampoos may be helpful for dogs with sensitive skin.
- After bath conditioners can increase skin moisture.
- Contraindications: None.
- Recommended for weekly use.




Antibacterial Shampoos & Conditioners - Indications

- Used for bacterial skin infections / pyoderma.
- In very mild infections, antibacterial shampoos and conditioners alone may be sufficient.
- In most cases, topical products are used in addition to oral antibiotics to help speed resolution of infection.
- Antibacterial shampoos / conditioners are also helpful as preventative therapy in animals with recurrent pyoderma.



Clinical Symptoms of Bacterial Pyoderma

- Papules/pustules/ crusts/scales
- Redness (Erythema)
- Hair loss
- +/- Pruritus and excoriation
- Odor




Antibacterial products

- Chlorhexidine 0.5%-4%
 - General:
 - Works well in organic debris
 - Residual activity up to 2 days
 - Higher concentrations also effective for yeast infections
 - Contraindications: None
 - Duration of effect: Up to 48 hrs.
 - Recommended for bacterial +/- yeast infections.

Antibacterial products

- Povidone-iodine
 - General: Good for bacterial and fungal infections
 - Contraindications:
 - Inactivated by organic debris
 - Can cause contact dermatitis
 - Duration of effect: Residual activity 4-6 hours



Antibacterial products

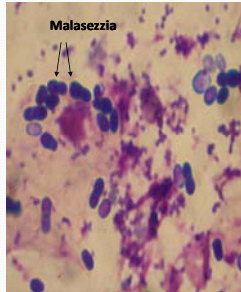
- Benzoyl peroxide
 - General:
 - Excellent for degreasing and removing scales
 - Used for oily skin conditions with bacterial infection
 - Contraindications: can be irritating/drying; do not use in dogs with dry skin.

Antibacterial products – Other products

- Triclosan
 - General: A good antiseptic added to some antiseborrheic shampoos.
 - **Contraindication:** None
- Ethyl lactate
 - General: A mild, non-drying antibacterial and antiseborrheic agent
 - **Contraindication:** None

Antifungal Shampoos & Conditioners - Indications

- Malassezia infections can occur commonly with patients suffering from
 - Atopy
 - Food allergy
 - Bacterial infection
 - Hormonal disease
- Ringworm/dermatophytosis is also a fungal skin infection which can benefit from adjunctive topical treatment
- When diagnosed, antifungal therapy can include topical and systemic medications.




Clinical Symptoms of Yeast Dermatitis

- Patients suffering from yeast skin infections can have signs of:
 - Hair loss
 - Lichenification (Thickening of the skin)
 - Pruritus
 - Oily scaling
 - Odor
 - Erythema



Ringworm: Zoonotic Concern

- Dermatophytes (Ringworm) can be infectious to clients.
- Clients must be educated to wear protective clothing while treating their pet.
- Clients should wash their hands with a strong antiseptic soap after handling their pet.
- Further, the patient's chart should be documented that the client has been informed about the concerns and risks of zoonotic disease.



Antifungal products

- Miconazole / Ketoconazole
 - **General:** used for yeast/ringworm infections
 - **Contraindications:** None
- Chlorhexidine 2-4%
 - **General:** This topical treatment is used for yeast infections, and also bacterial infections.
 - **Contraindications:** These treatments are less effective for ringworm
 - **Duration of effect:** Residual activity up to 2 days.
 - **Recommended for** 1-2 times / week administration

Antifungal product – Other therapies

- Povidone-iodine
 - Also antibacterial
 - Short residual activity, can cause contact dermatitis
- Selenium sulfide (Selsun Blue)
 - Used for greasy skin/yeast infection
 - Can be irritating
 - Do not use in cats due to their delicate skin
- Sulfur (Lyme Dip)
 - Best for ringworm
 - Also decreases itch
 - Not degreasing
 - It has a very potent odor and can stain clothing

Antiseborrheic shampoos - Indications



- Seborrhea is a defect in keratinization (skin formation) which results in excessive scaling +/- oily skin.
- Two types of seborrhea:
 - Dry (seborrhea sicca)
 - Oily (seborrhea oleosa)
- In most animals, seborrhea is a symptom, not a diagnosis
- Look for underlying cause
 - Allergy
 - Infection
 - Parasites
 - Nutritional imbalance
 - Hormonal disease

Oily Seborrhea – Clinical Signs

- Clinical signs of Seborrhea oleosa are:
 - Oily Hair Coat
 - Scaling
 - +/- Pruritus
 - +/- Hair loss
 - +/- Erythema



Antiseborrheic shampoos for oily skin

- Benzoyl peroxide
 - **General:** A degreasing shampoo that removes crusts, aids in follicular flushing and has antibacterial effects
 - **Contraindications:** The shampoo can cause drying and irritation, so a conditioner is recommended after bathing.

Antiseborrheic shampoos for oily skin – Other options

Tar shampoo	Selenium sulfide
<ul style="list-style-type: none">• degreasing• decreases scaling• can be irritating-use conditioner• not antimicrobial• do not use in cats• use as last resort	<ul style="list-style-type: none">• degreasing, decreases scaling• can be irritating-use conditioner• do not use on cats

Dry Seborrhea – Clinical Signs

- Clinical signs of seborrhea sicca are:
 - Dry / Flaky Hair Coat
 - +/- Hair loss
 - +/- Erythema
 - +/- Pruritus



Antiseborrheic shampoos for dry skin

<ul style="list-style-type: none">• Sulfur/Salicylic Acid shampoo<ul style="list-style-type: none">• General: Decreased scaling with mild antibacterial action. The shampoo is non-drying and aids in decreasing pruritus.• Contraindications: None	<ul style="list-style-type: none">• Ethyl lactate shampoo<ul style="list-style-type: none">• General: Decreased scaling with good antibacterial action. The shampoo is non-drying.• Contraindications: None
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Anti-Pruritic Shampoos/Conditioners - Indications

- PRURITUS IS A SYMPTOM
- Caused by a primary disease:
 - Allergy
 - Parasites
 - Infection
- Conditioners and leave-on products work best due to increased contact time



Clinical Signs of Pruritus



- Scratching
- Hair Loss
- Erythema
- Rash
- Odor
- Patient discomfort

Anti-Pruritic shampoos

- Colloidal Oatmeal Shampoos
 - General:
 - A mild shampoo, often combined with other products.
 - Can be combined with a leave on conditioner to help increase duration of effect.
 - Contraindications: None
- Antihistamine Shampoos
 - General:
 - Shampoos containing antihistamines, such as Diphenhydramine (Benadryl) can help reduce symptoms of Atopy (allergies).
 - These shampoos can be used with leave on conditioners to help increase duration of effect.
 - Contraindications: Diphenhydramine can cause contact hypersensitivity.

Anti-Pruritic Topical Medications

- **Topical anesthetics**
 - **General:**
 - Pramoxine is a topical anesthetic, often combined with oatmeal as a leave on conditioner
 - Good residual activity
 - Lidocaine is also a topical anesthetic, marketed as a spray
 - **Contraindications:** Lidocaine can cause contact sensitivity.
- **Topical steroids**
 - Reliably effective to decrease pruritus
 - Medication needs to be used selectively
 - Can worsen bacterial infection
 - May cause systemic or local side effects with long term use

Anti-Pruritic Topical Medications

- 1% hydrocortisone
 - **General:** Mildest topical steroid. Available in shampoo, spray, conditioner, lotion
 - **Contraindications:** Active skin infection.
 - **Recommended use:** No more frequently than 2-3 times / week administration when used long term.



Anti-Pruritic Topical Medications

- 0.015% Triamcinolone Acetonide spray
 - **General:** Water/denatured alcohol base spray that is absorbed quickly after application. Very effective at reducing signs of pruritus.
 - **Contraindications:** Minimal side effects can include
 - Sneezing
 - Slight decrease in White Blood Cell population
 - Polyuria /Polydipsia (Rare)
 - Contraindicated with a concurrent skin infection
 - **Recommended administration:** Twice daily for 1 week, then once daily for 1 week then every other day for 2 weeks.
- Allermyl
 - **General:**
 - Cleansing/hydrating/antipruritic spray
 - Non-steroid-based Linoleic acid which helps maintain epidermal barrier
 - Also contains Monosaccharides / Vitamin E which have anti-inflammatory effects
 - **Contraindications:** None.
 - **Recommended frequency of use:** 2-3 times weekly for 2 weeks, then as needed.

Interactive Self Test

Case I – Bull Dog Karloff

- Question # 1: What is the first and most important thing to inform the clients?
 - a) You have been on the wrong shampoo and conditioner.
 - b) Recommend a low tar shampoo.
 - c) Bull dogs are chronic skin patients?
 - d) Treatment will be focused on topical medication and oral medication. Bull dog will have to be rechecked regularly. Treatment may take weeks to months.



Case I – Bull Dog Karloff

- Question # 2: What is the best choice for a topical shampoo?
 - a) Ketochlor
 - b) Benzoyl Peroxide
 - c) Selenium Sulfide
 - d) Lime Sulfur



Case I – Bull Dog Karloff

- Question # 3: Which of the following topical treatments would not be a good choice in this case:
 - a) 1% Hydrocortisone spray for pruritus
 - b) Antihistamine Conditioner – Atopy
 - c) Tar Shampoo - Degreasing
 - d) Pramoxine Conditioner – Topical Anesthesia




Case II: Flaky McDraw



- Question 4: Flaky McDraw comes in to the hospital with history of generalized scaling and hair loss. The veterinarian diagnosis the patient with Sebaeous Adenitis, an inflammation of the oil producing glands of the body. The following lesions are seen. Which of the following best describes this lesion?
 - a) Bacterial Infection
 - b) Yeast Infection
 - c) Dry Seborrhea
 - d) Oily Seborrhea

Case II: Flaky McDraw



- Question 5: Which statement is the best description about seborrhea sicca?
 - a) It is caused by a fungal infection.
 - b) It is caused by a bacterial infection.
 - c) It is a symptom of another disease entity.
 - d) It is zoonotic.

Case II: Flaky McDraw




Question 6: What is the best topical treatment options?

- a) Benzoyl Peroxide with an Episoothe Conditioner.
- b) Sulfur / Salicylic Acid Shampoo
- c) Colloidal Shampoo with Antihistamine Conditioner
- d) 1% Hydrocortisone Spray

Case III – Wriggles Dermus




Case III – Wriggles Dermus



Question 8: The veterinarian diagnosis a primary Demodectic Mange with a secondary bacterial skin infection. Which drug in contraindicated for treatment in this type of infection:

- a) 1 % Hydrocortisone
- b) Povidone – Iodine
- c) Selenium Sulfide
- d) Lime Sulfur


Case III – Wriggles Dermus



Question 9: Which of the following would be a good treatment choice for Wriggle's physical symptoms

- a) Tar Shampoo / Episoothe Conditioner
- b) Colloidal Shampoo and Corticosteroid Conditioner
- c) 10 % Ethyl lactate shampoo
- d) Chlorhexiderm Shampoo and anti-histamine conditioner.

Case III – Wriggles Dermus



Question 10: What is the best statement about overall treatment of this patient?

- a) Topical treatment on its own should be sufficient to treat this patient.
- b) A single topical and systemic treatment will be sufficient to treat this patient.
- c) This patient needs repetitive systemic and topical treatments and regular rechecks to properly control the infections and symptoms.
- d) The patient is incurable.



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