Issues in Prescribing Traditional Systemic Medications for Patients with Complex Medical Dermatology Problems

Joseph L. Jorizzo, MD
Professor, Founder and Former Chair
Department of Dermatology
Wake Forest School of Medicine
Winston-Salem, NC

Professor of Clinical Dermatology
Department of Dermatology
Weill Cornell Medical College
New York, NY
Conflict of Interest

Advisory Boards/Honoraria
Amgen
Introduction – Examples
1. Methotrexate – low dose weekly
2. Mycophenolate Mofetil
3. Hydroxychloroquine
4. Dapsone
Introduction

Quote from an anonymous patient:
“What I am told on the first visit is patient education – on the second an excuse.”
Introduction
Possibilities for a patient who presents with a complex medical dermatosis and systemic signs and symptoms:

1. Clinicopathologic diagnosis of dermatosis integrates all findings eg. Sarcoidosis – skin, eye, lungs, etc
2. Clinicopathologic diagnosis reveals a reactive dermatosis – communication with internist or pediatrician will outline underlying medical conditions eg. Vasculitis
3. No direct relationship – eg. Scabies/Fibromyalgia
Introduction

Patients wishes to know from the internet whether they need x or y therapy for their presumptive diagnosis. Instead it is important to not let the patient “drive” for their own benefit.
Introduction

Step 1. – Clinicopathologic diagnosis
Caution influence of therapy on biopsy and clinical appearance

Step 2. – Assess the extent (internal manifestations of disease)

Step 3. – Assess for etiology

Step 4. - Therapeutic ladder
Introduction
Systemic Medications

My General Approach

1. Package Insert explain should be read as a legal document – applies to original maximal use (eg. Methotrexate 50mg/day not 15 mg every 7 days)

2. Internet issues

3. “If you were my family member” – 3 main side effects PLUS “If you have a cold the urgent care provider may blame my medicine …”
My General Approach

4. Document side effects
5. Laboratory monitoring – my view
6. Focus on underlying disease
Methotrexate

Inhibits dihydrofolate reductase

- Antagonist
- FDA approved for psoriasis in a weekly dose in 1960s
- Inhibits DNA synthesis in immunologically active cells
- Excreted 80-90% in urine ½ life 3-10 hours for low dose metabolized in liver
Methotrexate Side Effects

- Main effects with weekly dosing – contraindicated in pregnancy
- Liver toxicity
- Adjust for creatinine clearance to avoid hematologic toxicity
- Interactions – low dose trimethoprim-sulfamethoxazole
- Other - lung
Methotrexate

Selected Uses

- Psoriasis
- Vasculitis
- Dermatomyositis
- Pyoderma gangrenosum/neutrophilic dermatoses
- Lichen Planus
- Bullous pemphigoid
- Other papulosquamous
- Eczematous eruptions
- Other
Mycophenolate Mofetil

- Inhibits B and T-lymphocyte proliferation
- FDA approved for transplant patients, lupus nephritis
- Excreted 93% in urine, half life 17.9 hours when given orally
- Prodrug converted to mycophenolic acid
Mycophenolate Mofetil
Side Effects

- Not with pregnancy or breast feeding
- Neutropenia, leukopenia, thrombocytopenia
- Immunosuppression
- Infections
- GI irritation
Mycophenolate Mofetil
Selected Uses

- Autoimmune bullous diseases
- Eczematous eruptions
- Cutaneous lupus erythmatosus
- Pyoderma gangrenosum and neutrophilic dermatoses
- Dermatomyositis
- Lichen planus
- Other
Hydroxychloroquine

- Complex mechanism of action
- FDA approved for malaria prophylaxis and treatment, SLE, rheumatoid arthritis
- Excreted from urine and liver, metabolized in liver
- Probably safe in pregnancy and lactation
Hydroxychloroquine Side Effects

- Retinopathy – daily dose related
- Aplastic anemia
- Psoriasis & porphyria exacerbation
- Gastrointestinal
- Hepatotoxicity
- Drug eruptions
- Hyperpigmentation
Hydroxychloroquine
Selected Uses

- Lupus erythematosus
- Dermatomyositis
- Lichen Planus
- Porphyria cutanea tarda – caution-start at 200mg 1-2x/week
Dapsone

- Sulfone that inhibits neutrophil myeloperoxidase, IgA adherence, and some neutrophil chemotaxis.
- Excreted primarily in urine after metabolism in liver.
- Half life 28 hours not including.
- Pregnancy category C.
- FDA approved for Hansen’s disease, dermatitis herpetiformis, ACP prophylaxis.
Dapsone
Side Effects

- Agranulocytosis
- Hemolysis
- Met hemoglobin
- Peripheral neuropathy
- Hypersensitivity syndrome – Dress/DIHS
- Gastrointestinal
Dapsone
Selected Uses

- Dermatitis herpetiformis
- Neutrophilic dermatoses
- Erythema elevatum diutinum
- Granuloma faciale
- Hansen’s disease
- Oral cicatricial pemphigoid
- Granuloma annulare
- IgA bullous dermatosis
- With oral colchicine for complex aphthosis and selected neutrophilic dermatosis
Summary

- Traditional systemic therapies are a bedrock of dermatologic therapy for complex medical dermatologic diseases

- They provide superb risk/benefit and are cost effective (except mycophenolate/donut hole)

- They are now under utilized due to time/hassle fear factors: package inserts, colleagues raised eyebrows due to trivializing dermatologic disease, and call backs