Pearls and Hot Topics in Atopic Diseases
Wisdom from a 35 year Career

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Topics to be discussed

- Seasonal Allergic Conjunctivitis
- Allergic Rhinitis
- Asthma
- Atopic Dermatitis
- Epinephrine auto injectors
- Recurrent Otitis Media, Sinusitis and Purulent Rhinitis
- Acute Urticaria

Seasonal Allergic Conjunctivitis – Diagnostic Pearls

- Rarely, if ever, very painful
- Very itchy and almost always bilateral
- Almost never is beefy red, more boggy
- If really red, think secondary bacterial/viral infection
- No Photophobia unless cornea is scratched from rubbing...use fluorescein
- Clear watery discharge, never yellow or green, again unless if secondarily infected
- Worse in morning, better as the day goes on
Antihistamines by themselves are not very effective. Preventative eye drops:
- Alaway $5/oz.
- Zaditor $150/oz.
- Patanol $75/oz.
- Pataday $15/oz.
From my experience no difference in efficacy, only price.

When symptomatic, use cold wash cloth on eyes x5 minutes then cold eye drops—COLD SUPPRESSES ITCH.
Rescue Eye Drops: the “A”s, Opcon, Albalon, Naphcon—KEEP IN REFRIGERATOR.
Sport Glasses before going outside, wrap-around sun glasses for adolescents.

Antihistamines & oral decongestants.
Nasal Steroids help in AC.
LT receptor antagonists (LTRA) can be helpful as add on.
Loteprednol (Alrex)
Can alternate Loteprednol and Alaway, each qod—very effective strategy.
For severe AC, oral steroids and LTRA are a great combo.
Mouth Breathing can lead to facial issues
Observing nose breathing is a good way to tell you that nose is healthy
Mouth breathing for years can be habitual
Mouth breathing and “nasal congestion” with healthy appearing nasal turbinates…always think enlarged adenoids
Check for adenoids…with healthy turbinates, pinching nostrils and say the alphabet

Dosing Antihistamines—does time make a difference?
- Allergic symptoms usually worse in am
- Best time to give AH is at bed
- Use decongestant nose sprays just before nasal steroid for 3-4 days

Are all nasal steroids alike…for the most part yes except
- Fluticasone and mometasone are very lipid soluble
- When patients are on lung steroids for asthma, best to use the two above
- If patients are on ILCS, EXHALE THE LUNG STEROID THRU THE NOSE
- Nasal steroids should be given early in the am
### AR – Treatment – Nasal Steroids

- Efficacy of nasal steroids can be seen in as little as 12 hours
- Nasal steroids ARE effective when used PRN
- There is a dose responsive curve with nasal steroids
- Budesonide nasal spray has 44% less volume

### AR – Treatment – How to Prevent Adverse Side Effects from Nasal Steroids

- Turbinate enlargement comes from lateral aspect of nasal vault
- Septal mucosa does not become edematous
- Septal mucosa is susceptible to damage from any nasal spray, not just steroids
- To avoid necrosis & possibly perforation of septum, aim nasal spray “up and out”

### AR/AC Treatment Non-Pharmacological

- Shower before bed or wipe face and hair before going to bed
- Keep bedroom windows closed at night, or if use fan, blow it out
- Turn off attic fan
- Do not hang clothes outside to dry in spring
- Plant crocuses for spring hayfever
- Keep rescue eye drops in refrigerator
All inhaled steroids are bioavailable to the body, some more than others
- Fluticasone is an outlier in that it has a long half-life
- Greatest side effects are seen with Fluticasone
- Have seen patients with adrenal crisis on Fluticasone
- There are much safer steroids in kids than Fluticasone
- Budesonide nebulized at sleep to deliver dose

Inhaled steroids are absorbed and can cause adrenal and growth suppression
Inhaled steroids have the greatest effect on growth and growth hormone when given in the evening
Can and do effect growth velocity (~3-5% of kids on ILCs)
The vast majority of patients with growth velocity reduction get catch-up growth

Uncontrollable asthma however can cause irreversible growth suppression
Lung steroids can control asthma very well when given in the morning
Don't hesitate to prescribe a severe asthmatic epinephrine auto injectors
Exercised Induced Intolerance

- All SOB with activity is not always Asthma

Causes of EII
- Asthma itself
- Anemia
- Allergic Rhinitis in season
- Hyperventilation Syndrome
- Supraventricular tachycardia
- Deconditioning
- GERD

Causes of EII continued
- Arrhythmia
- Inappropriate expectations of how you should feel
- Exercise induced anaphylaxis
- Elite athlete syndrome
- Vocal cord dysfunction (VCD)

Ask how soon does your EII occur and how long does it take for you to recover

LTRA and albuterol are good therapeutic interventions

Asthma – LTRA

- Eosinophils and Mast Cells are rich in leukotrienes
- Pulmonary Leukotrienes cause pathology as seen in asthma
- Inhaled and oral steroids do not affect the production or effects of leukotrienes
- In patients, not well controlled on just ILCS, add LTRA
Chronic Cough in Young Kids... Asthma or TWI

- Dry or wet…wet always coming from the chest
- Worse with exercise, crying, laughing, supports asthma
- Family history of asthma...supports asthma
- Presence of Atopic Dermatitis…supports asthma
- Positive ImmunoCap or Skin tests…supports asthma

CCK? Asthma

- Worse at night and with lying down
- Positive response to albuterol and steroids
- Methacholine challenge…use nebulizer and listen for cough or wheeze
- TWI only occurs with colds
- TWI…do not treat with controller meds

Atopic Dermatitis – An itch that Rashes

- Remembers lessons from allergic conjunctivitis…cold suppresses itch
- Cold washcloths or cool baths to suppress itch
- Never use hot baths or showers as this will degranulate mast cells
- Keep kids covered in cotton and avoid sweating – Atmokinesis
AD – Staph Aureus and AD, A frequently Overlooked Complication

- 90% of patients with AD have Staph A
- Staph presence is due to many factors
- Importance of Staph supported by dramatic clinical response to antibiotics
- Staph produces enterotoxins which are extremely inflammatory
- Vast majority of flares are caused by Staph A
- Treat with Keflex for 7–10 days

AD – Staph issues further treatment

- After oral antibiotics, bleach baths are needed to prevent recurrence of Staph
- Use 8 oz. of household bleach in 24 gallons of water or 2 tsp/gallon
- Soak in bath for 15 minutes then shower off bleach
- Nasal bactraban (spray or ointment) may be needed for recurrence of Staph
- Protopic & Elidel are not adversely affected by Staph whereas topical steroids are

AD – Skin Barrier Issues: A Place for Baths

- Skin of patients with AD is very dry with impaired skin barrier
- Frequent daily baths for 15 minutes 1–3x/day helps repair skin
- Use Dove soap, a Syn Det
- Place moisturizers on skin within 3 minutes of exiting the bath
- Place something on skin 14x per week
- Do not put oils in bath
- Vanicream and Vaniply
AD and Vitamin-D

- Vit-D very important in AMP production
- Patients with AD have reduced AMPs due to many factors
- Low Vit-D secondary to; increase sedentary life style with decrease sun exposure
- North-South gradient for AD
- Vit-D supplementation in AD patients augments AMP production

AD – Viral infections of the skin

- MC very common in AD; impaired skin immunity
- Check Vit-D level
- Use Apple Cider Vinegar
- Use topical steroids with ACV to reduce inflammation

AD – Viral infections of the skin Herpes

- Not itchy, unless present in active AD
- Associated with bad AD
- Lesions are painful and present in three phases
- Treatment…herpes can be very serious
AD – Food Allergy

- Patients usually under a year of age, is extensive and usually hard to treat
- Positive IgE or skin test with significant AD... DO NOT STOP A FOOD THAT THE PATIENT IS EATING EVEN IF YOU ARE SUSPICIOUS OF A FOOD, JUST REDUCE IT
- Positive IgE or skin test with mild AD... if child is fine, keep eating foods as is, do not stop it or reduce it

Food Allergy – When to introduce foods

- Start foods early, especially peanut and nut butters to prevent sensitization
- Prevalence of peanut allergy in Israel in ~6 yo kids is ~1.7% and in England ~ 1.8%
- Difference due to timing of ingestion

Epinephrine Auto Injectors

- Epi Auto injectors should be used quickly... best outcomes
- Shelf life longer than printed on device
- Can use beyond expiration date if liquid is clear
- Concentration of Epi will decrease with time
- Can use two 0.30 mg injectors simultaneously in adolescents or adults
- Can be used for severe asthma attack
- I recommend self-administration to adolescents as an exercise
Atopic patient have increased prevalence of URI.
Nasal tissue in AR has reduced local immunity.
Reduced immunity due to many factors.
Increased morbidity and job loss.
Treatment...nasal saline and nasal antibiotics.

Acute urticaria very common 35% in kids.
Most common cause, immune complex mediated urticaria.
4 Ps and other...cause for concern...points to vasculitis.
- Hives leave pigmentation when gone
- Hives persist beyond 36 hours in one location
- Hives are painful
- Hives once gone are palpable
Other...fever, joint pain, cough, sinus pain, weight loss, not feeling well.

Lab tests are for most part non contributory.
Dermatographism and cold, are most common physical urticarias in children.
Epi should be available for severe cold urticaria if patient is a swimmer.
Urticaria – Treatment

- Antihistamines…push dose…fexofenadine’s advantage – non drowsy
- Use Decongestants with AH when symptomatic
- Cool Showers/baths when unbearable
- Oral steroids for short period (5–10 days)
- Add LTRA for chronic urticaria
- Continue AH & LTRA (use LTRA in chronic) for 10–14 days after better