Chronic Sinus Disease with and without Polyps

Kenneth Rodriguez, MD
Sinusitis is a Love Story
Two Babies
One With...
One Without...
Disclaimer

• The cluster of symptoms that define “chronic sinus disease” overlap with multiple other disease processes

• The etiology of chronic sinus disease is not well understood
  – It is difficult to have strong studies given the heterogeneous nature of the disease
• Two or more of the following symptoms
• Greater than 12 weeks duration
  – 2 major
    – Nasal blockage/obstruction
    – Nasal discharge
    – Facial pain pressure
    – Decreased smell
Minor Signs / Symptoms

- Headache
- Fever
- Halitosis
- Fatigue
- Dental pain
- Cough
- Ear pain/pressure/fullness
  - One major two minors
Me Epidemiology

- **Chronic sinusitis**
  - 2-16% in population

- **Nasal polyps**
  - 20-33% of CRS patients
  - Aspirin exacerbated respiratory disease represents ? 15% of the patients with chronic rhinosinusitis with nasal polyps
Let us Start with Polyps

- **Sinus surgeon view**
  - Benign, stubborn, grape like projections most often within the ethmoid cavities
  - Nasal endoscopy can often diagnose
Exam Findings

- Objective confirmation of the diagnosis is made by sinus CT scan or nasal endoscopy – CRITICAL!!!!!!!!!!!!!!!!!!!!!
Differential?

- Schneiderian papilloma
- Antrochoanal polyp
- Angiofibroma
- Encephalocele
- Malignancy
BEWARE

• Be very careful with one sided polyp
  – Schneiderian papilloma can contain cancer
  – ”Polyp” medial to the middle turbinate can be brain
  – Cancer, cancer, cancer
What are they to the Patient?

- Classically long standing nasal congestion + loss of smell
- ? infection that they cannot clear

Summer, why can’t you smell that? I certainly can!!!!
Nasal Polyp Basics

- Most common age of onset is 42 years and the typical age of diagnosis ranging from 40–60 years
- Nasal polyps found in patients < 20 years or > 80 years raise suspicion
  - Cystic fibrosis / PCD
  - Malignancy
Nasal Polyp Overlap

- Allergy makes people worse???
  - Patients with NP had more (+) skin tests
  - Patients with medically refractory sinusitis were more likely to have multiple (+) skin tests and asthma
Individuals with sinus issues often have concurrent allergic rhinitis or asthma or both.

Key to work up is understanding:
- GOALS OF THE PATIENT
- Delivering targeted, cost effective care

Involve your partners if you need help.
Making it Simple

• What is feeding polyp growth?
• Inflammatory dysregulation
Transition Time
CRS Without Polyps
What Causes the Disease?

- We don’t know
- Many potential pathophysiologic mechanisms
  - Bacteria (chronic infection)
  - Osteitis
  - Superantigens
  - Biofilms
  - Fungus
  - Immune dysfunction
  - Mucociliary clearance problem
#2

- A separate lecture could be given just on theories of the etiology of CRS
- Until this is further clarified the disease will remain difficult to treat
- Let’s agree that it exists and focus on a reasonable method to diagnose and treat it
Transition Time
Classification

• Endotyping helps to explain
  – Differences in clinical manifestations
  – Variations in therapeutic response and prognosis
Endotyping

- An endotype is a subtype of a condition defined by a distinct functional or pathobiological mechanism
Transition Time
Let’s Go To CLINIC!
Goals

• Why are you here?
• Would you consider surgery?
• Cost?
• Ability to comply
  – < 30 years old different world
• Biases????
  – I don’t like sprays
  – I don’t like needles
Let’s Look

• Nasal endoscopy
First Up
• Summer: Daddy, lots of symptoms forever!
• Dad: Forever? You are 3 months old.
• Summer: You get what I mean. Please feed me.
Initial Management

- What is the discussion you have with a patient once you make the diagnosis of nasal polyps?
  - Doctor what are polyps?
    - Stress benign process
  - Doctor is there a cure?
  - Medication for the rest of my life?
Treatment

• Tailored therapy
  – What bothers you the most?
  – How realistic is it we can attain improvement in symptoms
  – Am I right the person to manage your symptoms?
    • Shortness of breath
    • Clear allergic drive
Shut Up and Tell Them Something Helpful

• Decision tree #1
  – Do they want surgery?
  – Do you want to do surgery on them?
    • If both are yes I would provide 14 days of Augmentin / Doxycycline and a 10 day prednisone taper beginning at 30mg and tapering over 10 days
    • Why taper – stretch the length of the course
Surgery – Remember this is a Love Story
Treatment

• Decision tree #1
  – Do they want surgery?
  – Do you want to do surgery on them?
    • If no to any question
      – Topical therapy
        » Things are about to get complicated
Topical Steroids

• 3 main groups
  – Classic topicals
    • Fluticasone, Triamcinolone, Budesonide etc
  – I think they may get in the nose deeper
    • Fluticasone metered
    • Beclomethasone dipropionate
  – I think I want to go off label
    • Budesonide / Mometasone
As of now…

- **Current body of data demonstrates safety**
- ***Tell patient it is off label***
Typical Visit #1

• **The “Trial”**
  - Fluticasone 1-2 sprays each nostril BID
  - Consider adding Azelastine @ 1 month
  - Rinsing is not unreasonable but in some instances can be tough with polyps
    • Trapping / lack of easy access to the nasopharynx
Visit #2

- Rodriguez...you are terrible
- No benefit / I’m worse!!!
  - Now what?
    - Almost certainly oral therapy
3rd visit

• I am SOOOO much better
  – Smell is great
  – Breathing great
  • Look in nose and:
Lesson Here?

• Most important metric is how the patient perceives their symptom cluster
  – These symptoms are subjective
    – Further altered by depression, anxiety etc.

• Don’t be pushed to fix something if it is not broken
  – Another story is forming
The Deviated Septum – a Short Story

• I saw a women once:
  • Why are you here?
    – I have a deviated septum?
  • Why are you here?
    – My septum is deviated?
  • So?
    – What do you mean so?
  • How is your breathing?
    – Fine
  • Please leave my office
Now YOU!
Sadie: Can I have a treat?

Dad: Can you tell me about your sinus problems?

Sadie: Can I please have a treat?

Dad: If you tell me about your sinuses.

Sadie: Lots of symptoms forever.

Dad: Good dog.
No Polyps

• Same global treatment picture
• I am much less aggressive to give oral therapy upfront
Now Things get Complicated

- Oral antihistamines
- Montelukast
  - Asthma patients?
- Mucinex
- Ipratropium
  - Anterior nasal drainage
- Oral / topical decongestants
  - Nothing more than a rescue
I’m Scared

- Normal imaging but significant symptoms
- Migraine / chronic headache
- Known immune deficiency
- Cystic fibrosis / PCD
- Aspirin sensitive
- Crusting
Transition Time
Imaging – Soap Box Time

• POST TREATMENT!!!!!!!!!!!!!!!!!!!!!!!!!!!!

• Indications to scan
  • Work up for surgery – 1mm cuts
  • Complications – orbital / intra-cranial
    – Indications for contrast
      » Infectious complication (abscess)
      » Concern for malignancy

• I do not love scout films but…
CT Findings
Surgery

• Why are you having surgery
  • Get drugs in***
  • Debulk polyps / get rid of inflammation

• In my biased opinion complete surgery is key
  – Not all sinuses in everyone just completing each sinus that is diseased
    • No balloons in polyp surgery
Surgery

– I have a particular set of skills…
How they do...

• Difficult to predict who “wins”
  – Good prognosis
    • Lining appears normal when you are done
    • Obvious cause (dental infection)
    • Don’t have polyps
    • Not aspirin sensitive (or all the other things that scared me)
What do you do with Topical Steroids Now?

- I like Budesonide or Mometasone in rinses BID
  - Can get creative and concentrate
- Traditional topicals make sense
- Metered fluticasone
  - Remember it is a chronic disease
Biologics

• These drugs target factors associated with the type-2 inflammation observed in the polyp tissue

• Very exciting…in theory
Lots of Choices
Role???

- Surgically and traditionally medically refractory polyposis
  - Medical indications
    - Atopic dermatitis
    - Asthma

- Not front line from ENT side
I will make you a deal; I operate you desensitize

- Aspirin desensitization:
  - Significantly improve overall respiratory symptoms and quality of life
  - Reduce polyp formation infections
  - Lessen the need of oral steroids and ESS


**Long-term Clinical Outcomes of Aspirin Desensitization With Continuous Daily Aspirin Therapy in Aspirin-exacerbated Respiratory Disease.**

Walters KM¹, Waldram JD¹, Woessner KM¹, White AA¹.
When to do it???

• Post surgery
• Aspirin desensitization helps in preventing or limiting regrowth of NPs
• You CAN operate on people on ASA (just not a lot of it)
Truths – as I see them

• Polyps don’t kill you – remember that

• Oral steroids work great…but can kill you – remember that
Truths – as I see them

• These patients need a thoughtful medical work up
  – ENT
  – Allergist / immunologist
  – Pulmonologist
  – Rheumatology
  – Neurology

• Many people need medical salvage after surgery
Truths – as I see them

• Be thoughtful with imaging
  – Don’t fixate on CT findings
• Carefully explain long term management
  – Look for compliance early
• Give realistic goals
• Don’t forget you don’t know everything
Hunting for Symptom Improvement
Exam Pearls – for the non-ENT

• Consider purchasing an inexpensive zero degree nasal endoscope
  – The view is dramatically better than using a speculum or otoscope
More

- Consider learning nasal endoscopy as an adjunct to your practice
- Consider watching a sinus surgery
Thank you!!!

- Sadie and Summer did great!!!
- Questions?