The Fine Art of Visual Diagnosis

of

Pediatric Infectious Diseases

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I have nothing to declare.

James H. Brien, DO

Objective

Focus on Visual skills.

James H. Brien, DO
Use Your Eyes

What Do You See

There Are Few True Visual Diagnoses
All Patients Need A History Taken

**Essential Elements for ID Evaluation**

1. Duration of the condition
2. Sick contacts
3. Immunizations (documented)
4. Travel / outdoor exposure
5. Animal / insect exposure
6. Sexual activity
Essential Elements for ID Evaluation

7. Location & Time of Year.
8. Previous therapy received for this condition - did it have any impact?
9. Repeat the history as often as needed until consistent.
10. Do a head to foot examination, augmented by appropriate lab tests and imaging.

Essential Elements for ID Evaluation

11. Lastly, organize a problem list and then a differential diagnosis.

Elements of Visual Diagnosis

What are specific areas on which to focus?
Elements of Visual Diagnosis

× General appearance / Deformity.
× Mucocutaneous lesions & rashes, including hair.
× Swelling / Distension of abdomen.
× Symmetry / Balance of anatomy.
× What about the parents / siblings?
  – Similar lesions / behavior, etc.
5-year-old admitted with:
- Temp = 103
- Vomiting
- Headache
- Petechiae on face!!!!!
- Otherwise, alert, active, healthy-appearing and in no distress.

Enterovirus

Plus a sty

Covered with intensely pruritic papulo-pustular lesions.
Father's wrist.

Mother's Hand

Scabies

[Images of medical conditions]
What if there’s a language barrier?

Chronic Diarrhea

Very typical of Candidiasis
- 3-year-old female is dropped off in a sack at a U.S. Army Battalion Aid Station in Afghanistan.
- Found to be malnourished, with respiratory distress and a back deformity.

Pott Disease

- Vertebral osteomyelitis due to *Mycobacterium tuberculosis*.
- Complications of TB disease; bone and joint, renal, miliary pulmonary, and meningitis; more likely in patients with poor immune response, like with malnutrition or primary immune deficiency.
Use **Your** Eyes

on this case about eyes.

9-Year-Old Female Running With A Pencil.

That's right, she tripped and stuck it in her eye.

9-Year-Old Female

× Seen in the ER & cleared by Ophthalmology – no eye damage.
× Few days later:
  – Marked swelling.
  – Ophthalmoplegia.
  – Mild fever.
Note “S”- shaped upper lid of Dacyoadenitis.
What’s Her Diagnosis?

A. Preseptal cellulitis
B. Postseptal cellulitis with ethmoiditis
C. Brain abscess
D. Dacryoadenitis with postseptal cellulitis / abscess

Another pencil to the eye w/o eye injury.
MRI about a week later.
1 week after surgery.

In both cases, history makes a difference.

Lastly

a 3 Year Old Male
3 Year Old Male

- Presents with acute onset of fever with a light red rash that is covered with fine papules.
- His appetite is unchanged, with no sore throat, but he seems fussy, especially during defecation and diaper changes.

3 Year Old Male

- There are no known sick contacts, but he is in Day Care 5 days a week.
- His immunizations are documented UTD.
- Examination reveals a fever of 102°F, a clear throat, normal TM’s and clear lungs, with multiple insect bites and a diffuse, fine papular, light pink rash.
3 Year Old Male

- His anal exam reveals some erythema extending out about one centimeter from the Mucocutaneous junction with some yellowish material appearing to come from the anal opening.
3 Year Old Male

- At this time, the only lab test performed is a culture of the anal area.

Summary

- Healthy 3-year-old male with acute febrile illness.
- Fine, papular, erythematous rash with perioral sparing.
- Painful perianal erythema with some yellowish material seen from the anus.

Summary

- The patient has Scarlet Fever.
- Does not always require Strep throat infection.
- Could be Strep Butt, especially if < 5 yrs.
Another patient with Scarlet Fever without a sore throat.

Continue to search.

Group A strep paronychia

Visual Diagnosis Summary

- Remember, for difficult cases:
  - Stick to the basics of a good H & P.
  - Repeat the history until consistent.
  - Listen to the parent(s) & look at them.
  - Exam & Use your Eyes, and use your
    Common Sense!