

VISUAL DIAGNOSIS

in 30 min or less

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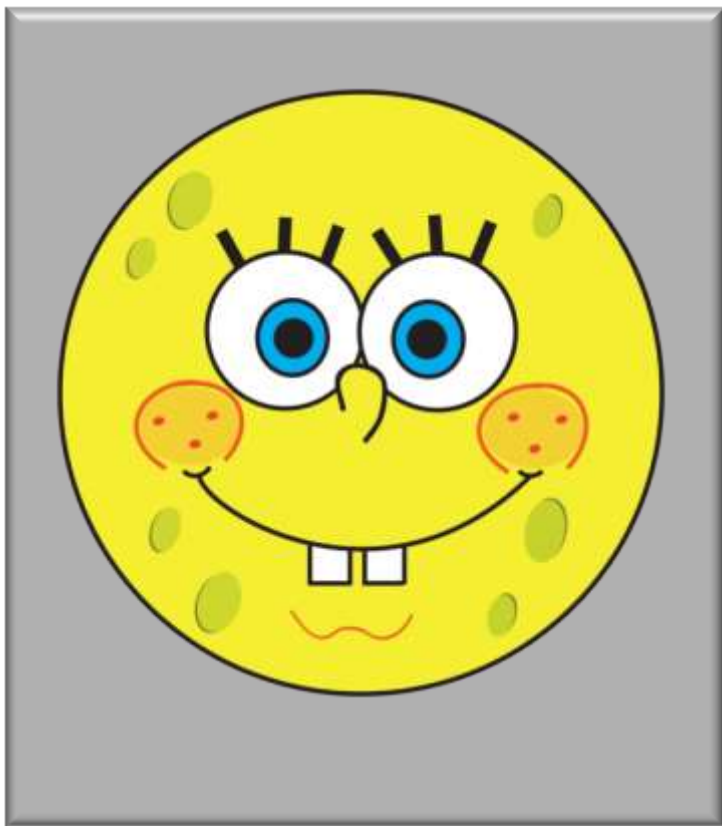
No financial relationships to disclose

A long time ago in a galaxy far,
far away...

***It is a period of chaos (Snowapalooza)
Rebel forces have taken their children out of
schools/daycare and rushed them to your
pediatric clinic.***

***Your ancillary testing is on the fritz. You must
rely on your visual skills to diagnose and
treat patients***

To identify distinguishing features to help you visually diagnose common and uncommon pediatric problems



Rashes Going a-
ROUND



Abdominal X-Rays:
Why Bother ?



But It's Just On My
FACE?



RASHES GOING A-ROUND

Round Rashes 1-3



10 year old male with lesion on right volar (palmar) surface for many months.



3yo male with lesion on mid abdomen. Being treated for impetigo. Some regional lymphadenopathy



10yo with 6cm diameter lesion on left shoulder. Not responding to topical steroids or anti-fungals

Round Rashes 4-6



12d infant with scaly rash on forehead and scalp



21d infant with rash on scalp, face. Somewhat fussy.



3yo male with lesions on upper thigh

Round Rashes 7-9

7.



12 yo male with lesion on scapula.
No pain, itching, or fevers.

8.



12yo male with rash on extremity.
Looked different 1 hr ago. T 100.4°F

9.



16yo male who swears this rash
wasn't present 20 minutes ago.



Skin-colored small firm papules with elevated border, no scale
Occurs predominantly in acral areas (ankles/wrists)
Usually asymptomatic, but can be painful

ANSWER:
CASE 1

Granuloma Annulare



Treatment: none

Spontaneous remission in several years

Round ulcerated lesion with a central adherent crust that often starts as a pustule

Usually Group A beta-hemolytic streptococci (GABHS)



3yo male with lesion on mid abdomen. Being treated for impetigo. Some regional lymphadenopathy

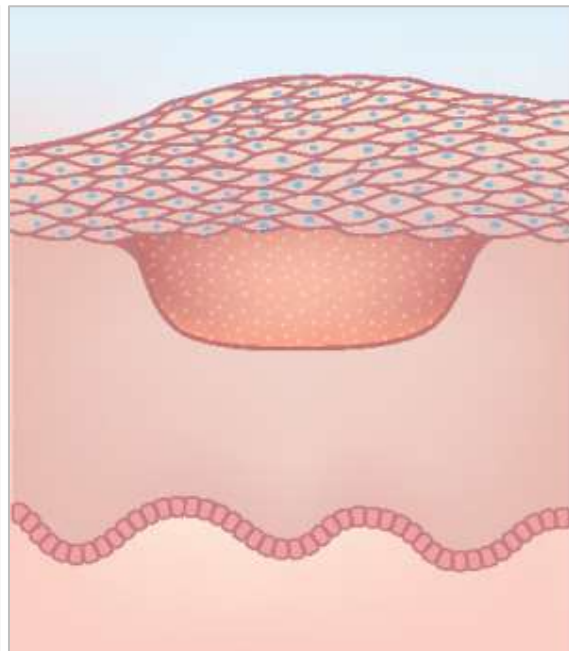


Non-toxin mediated (unlike SSSS)

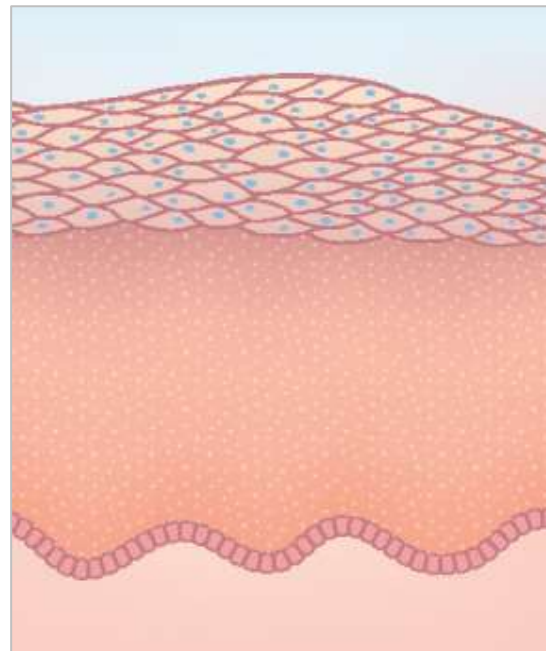


Sometimes confused with cigarette burns

Bullous Impetigo: Mid-epidermal



Ecthyma: Full thickness



Neither crosses into dermis (cellulitis)

ANSWER:
CASE 3

Fungal Folliculitis (Majocchi's Granuloma)

deep dermatophyte
infection of hair follicle

Topical steroids can mask
features of tinea
"tinea incognito"

Use systemic anti-fungals



10yo with 6cm diameter lesion on left shoulder. Not responding to topical steroids or anti-fungals



Routine Tinea Corporis



Herald Patch of Pityriasis Rosea



Tinea Faciei

ANSWER:
CASE 4

Neonatal Tinea Capitis



12d infant with scaly rash on forehead and scalp

ANSWER:
CASE 5

Neonatal Lupus (SLE)



21d infant with rash on scalp, face. Fussy



Trans-placental transfer of IgG anti-SSA/Ro & anti-SSB/La antibodies
Active maternal disease is often absent
Rule out 3rd degree heart block (occurs in 15-30% of affected pts)!

Redness and scale on dry skin
1-10 cm; usually on extremities

Nummular = coin, *Annular* = ring

Treatment:

topical steroids
topical antibiotics

*More recalcitrant to topical
therapy and often get infected*



ANSWER:
CASE 7

Erythema Migrans (Lyme)



Can be very large



Can be multiple lesions



12 yo male with lesion on scapula.
No pain, itching, or fevers.



Lyme



Lyme



Not Lyme (Tinea Corporis)

Flat red borders
Central clearing
No scale

ANSWER:
CASE 8

Erythema Multiforme



Notice: 3 zones of color
Predilection for hands/feet, extensor extremities
HSV-1 in 50%
Circulating immune complexes



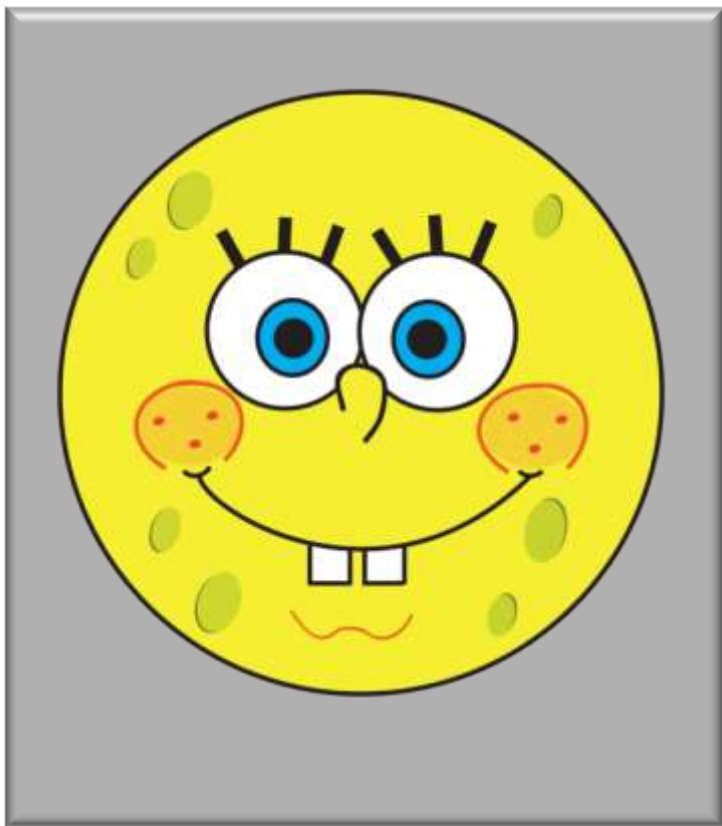
Sharply demarcated

Within hours of drug exposure

- Trimethoprim-sulfa
- Sulfonamides
- Acetaminophen



16yo male who swears this rash wasn't present 20 minutes ago.



Rashes Going a-
ROUND

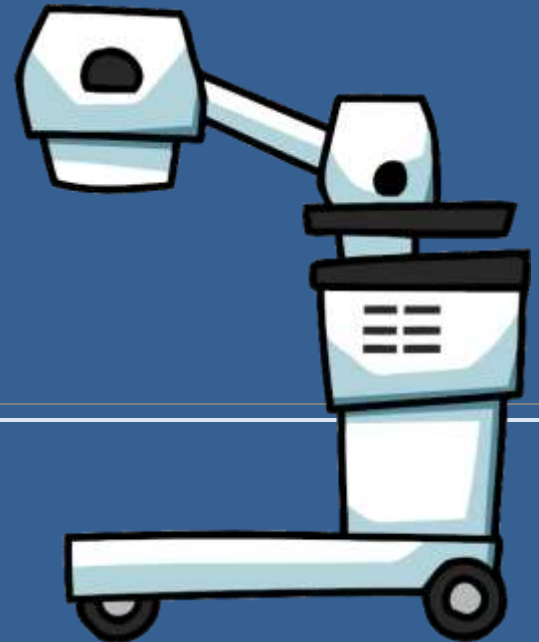


Abdominal X-Rays:
Why Bother ?



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ABDOMINAL X-RAYS: WHY BOTHER ?



Abdominal XR Cases....



CLINICAL CORRELATION RECOMMENDED !!!!



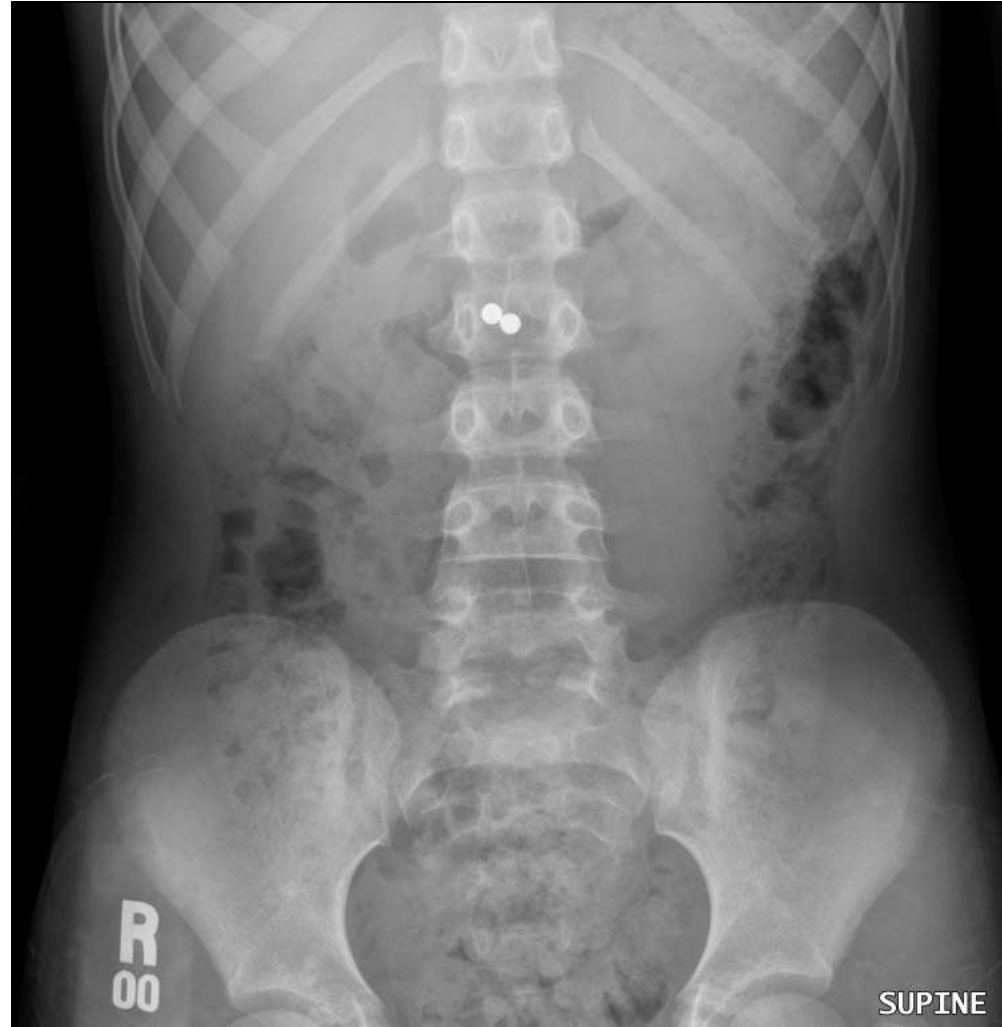
Abdominal XR Case #1

20mo male
with vomiting
and fussiness



Abdominal XR Case #2

9yo autistic male with constipation and history of pica



Abdominal XR Case #3

13yo female with LUQ and LLQ pain, vomiting for several days. History of depression and anemia



Abdominal XR Case #4

4yo male with pallor,
tachycardia, and abdominal
pain. Hx of Sickle Cell HbSS
disease



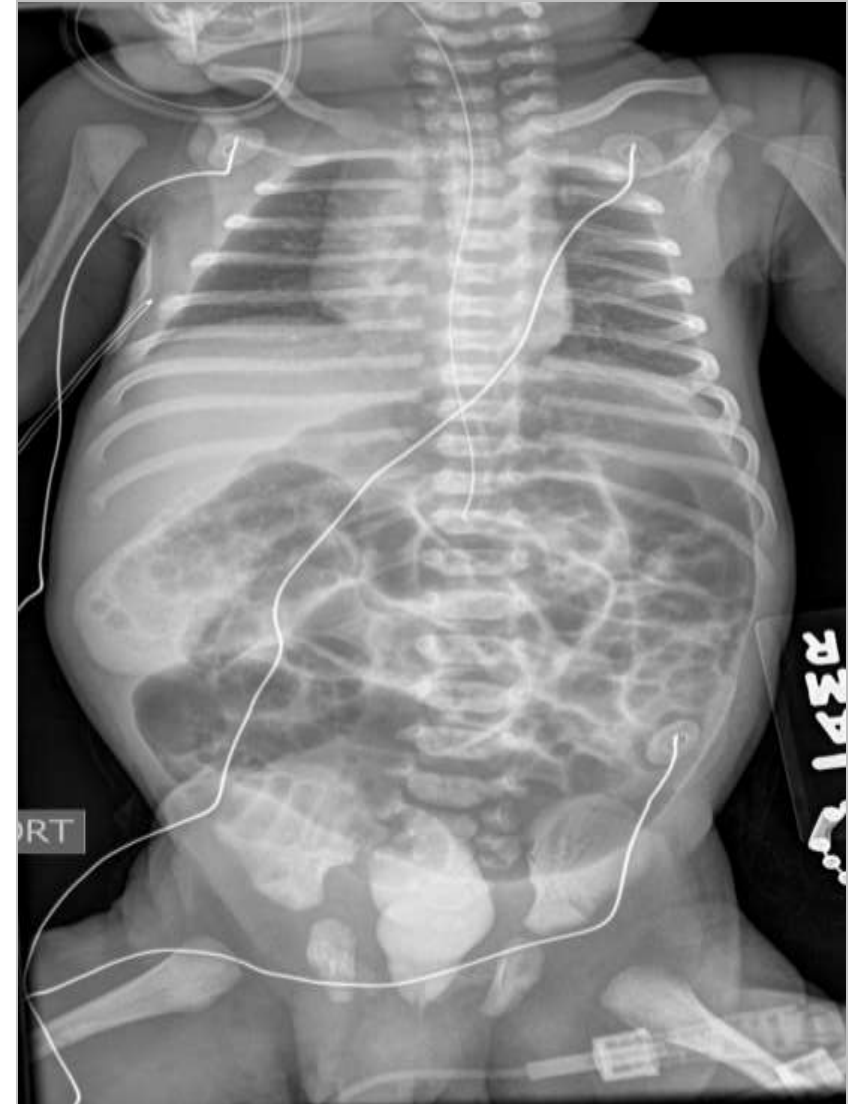
Abdominal XR Case #5

19mo male with
abdominal distention



Abdominal XR Case #6

21 day male infant with abdominal distention



Abdominal XR Case #7

5 week male
with vomiting



ANSWER:

CASE 1

Intussusception

20mo male with
vomiting and
fussiness



ANSWER:
CASE 1

Intussusception



Accuracy of Plain Radiographs to Exclude the Diagnosis of Intussusception

Cindy G. Roskind, MD,* Gunjan Kamdar, MD,* Carrie B. Ruzal-Shapiro, MD,† Jonathan E. Bennett, MD,‡ and Peter S. Dayan, MD, MSc*

Objectives: To prospectively determine the test characteristics of the 3-view abdominal radiograph to decrease the likelihood of ileocolic intussusception.

Methods: We conducted a prospective cross-sectional study of children aged 3 months to 3 years suspected of having intussusception at a children's hospital emergency department. Clinicians obtained supine, prone, and left lateral decubitus radiographs. We determined the presence or absence of intussusception by air enema, ultrasound, operative report, or clinical follow-up. A masked pediatric radiologist reviewed all radiographs. The criteria evaluated were whether air was visualized in the ascending colon on each view and in the transverse colon on the supine view.

Results: Nineteen (14.8%) of 128 patients had intussusception. Using air in the ascending colon on all 3 views as the diagnostic criteria, the test characteristics of the 3-view radiograph were sensitivity, 100% (95% confidence interval [CI], 79.1–100); specificity, 17.4% (95% CI, 11.1–26.1); negative predictive value, 100% (95% CI, 79.1–100); and likelihood ratio of a negative test, 0. When 2 or more of 3 views had air in the ascending colon, sensitivity decreased to 89.5% (95% CI, 75.7–100) and specificity improved to 45.0% (95% CI, 35.6–54.3). Air in the transverse colon had moderate sensitivity, 84.2% (95% CI, 67.8–100), but further improved specificity, 63.3% (95% CI, 54.2–72.4).

Conclusions: The presence of air in the ascending colon on the 3-view abdominal radiograph can decrease the likelihood of or exclude intussusception. When clinical suspicion is low, the presence of specific criterion on a 3-view abdominal radiograph series may obviate the need for further studies.

Key Words: intussusception, radiograph, diagnosis, test characteristics
(*Pediatr Emer Care* 2012;28: 855–858)

ORIGINAL ARTICLES

www.jpeds.com • THE JOURNAL OF PEDIATRICS

The Role of Abdominal Radiography in the Diagnosis of Intussusception When Interpreted by Pediatric Emergency Physicians

Jessica Morrison, MDCM, Nathalie Lucas, MD, FRCP, and Jocelyn Gravel, MD, FRCP, MSc

Objective To evaluate the sensitivity and specificity of abdominal x-rays in the diagnosis of intussusception when interpreted by pediatric emergency physicians.

Study design This was a prospective experimental study. Participants were board-certified/eligible pediatric emergency physicians. They evaluated a module containing radiographs of 50 cases of intussusception and 50 controls, matched for age and sex. For each x-ray, the physicians stated whether the x-ray increased, decreased or did not affect suspicion of intussusception. The primary outcome was the percentage of cases for which physicians stated that the x-ray increased their level of suspicion (sensitivity). Secondary outcomes included the proportion of false-negative results and specificity.

Results Fourteen of 15 eligible physicians participated in the study. Overall, abdominal radiography increased the index of suspicion of intussusception in 48% of cases (sensitivity) and 21% of controls; however, in 11% of cases, the abdominal x-rays were incorrectly interpreted as being reassuring. The specificity was 21%. The radiographs were deemed equivocal for 41% of cases and 58% of controls.

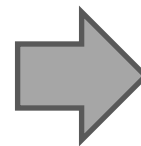
Conclusions Abdominal x-rays have a low sensitivity and specificity for diagnosing intussusception when interpreted by pediatric emergency physicians. (*J Pediatr* 2009;155:556-9).



ANSWER:
CASE 2

Multiple Magnet Ingestion

9yo autistic male with constipation and history of pica



ANSWER:
CASE 3

Trichobezoar



13yo female with LUQ and LLQ pain
History of depression and anemia

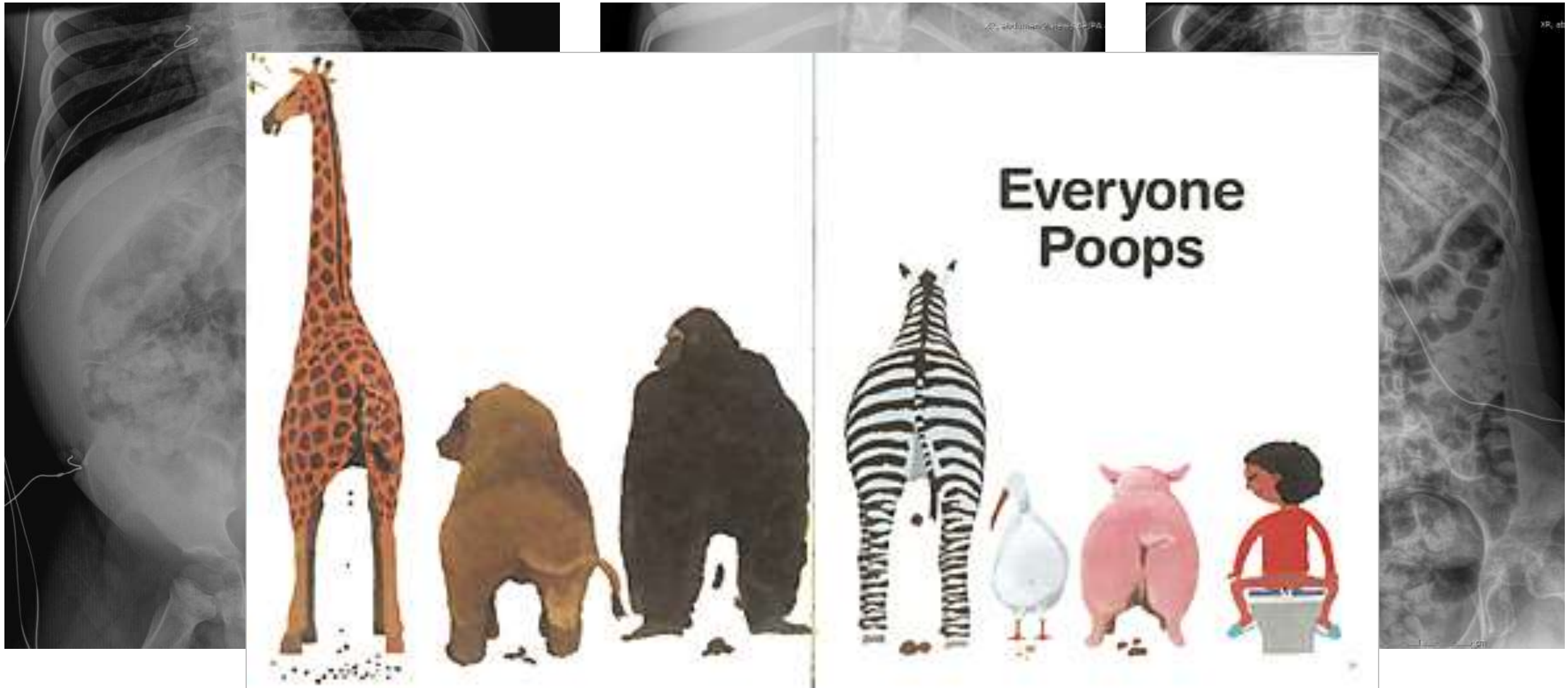
ANSWER:
CASE 3

Trichobezoar



ANSWER:
CASE 3

Trichobezoar



ANSWER:
CASE 4

Splenic Sequestration

4 yo male with
pallor, tachycardia,
and abdominal pain. Hx of Sickle
Cell HbSS disease



ANSWER:
CASE 5

Abdominal Mass

19 mo male
with abdominal
distention



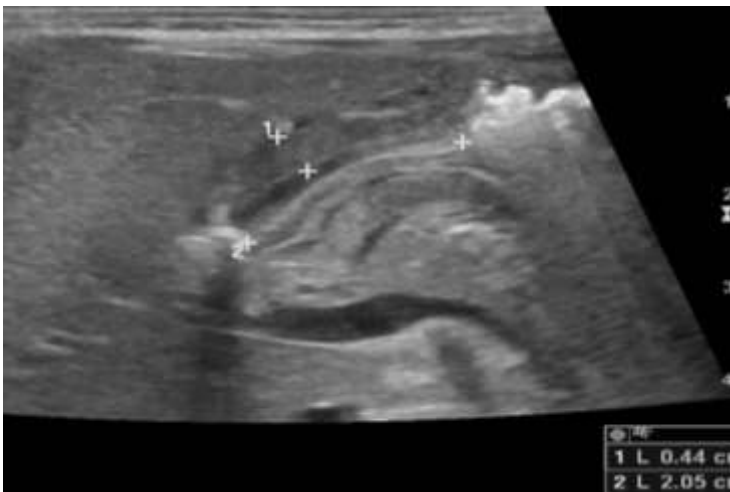
21 day male
with abdominal
distention

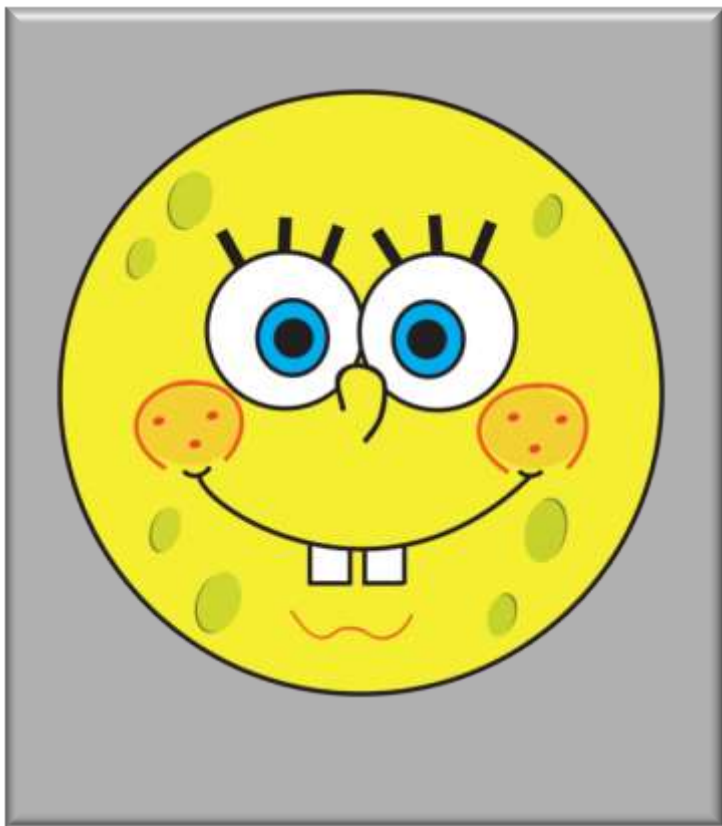


ANSWER:
CASE 7

Pyloric Stenosis

5 week male
with vomiting





Rashes Going a-
ROUND



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BUT IT'S JUST ON MY FACE



Facial Rashes 1-3



8yo male with worsening rash after sun exposure. Platelets=62k



8yo male with worsening facial rash. Unable to brush teeth this am. CPK=1285



3yo female with 2 days of fever and URI symptoms

Facial Rashes 4-6



5mo male with worsening facial rash.
Mom using cocoa butter and Selsun Blue



14yo female with facial rash after
sun exposure. Now scarring



10yo male came back from camping trip
with this facial rash

Butterfly “malar” eruption
spares nasolabial folds

Prepubertal male=female



8yo male with facial rash, thrombocytopenia



< 4 of 11 >

Cutaneous

Malar rash

Discoid rash

Photosensitivity

Oral ulcers

Serologic

↓ Hb, WBC, platelets

ANA+ (usually > 1:32)

Anti-DNA, anti-SM

Proteinuria, Urine casts

Clinical

Arthritis

Serositis (pleural/pericardial)

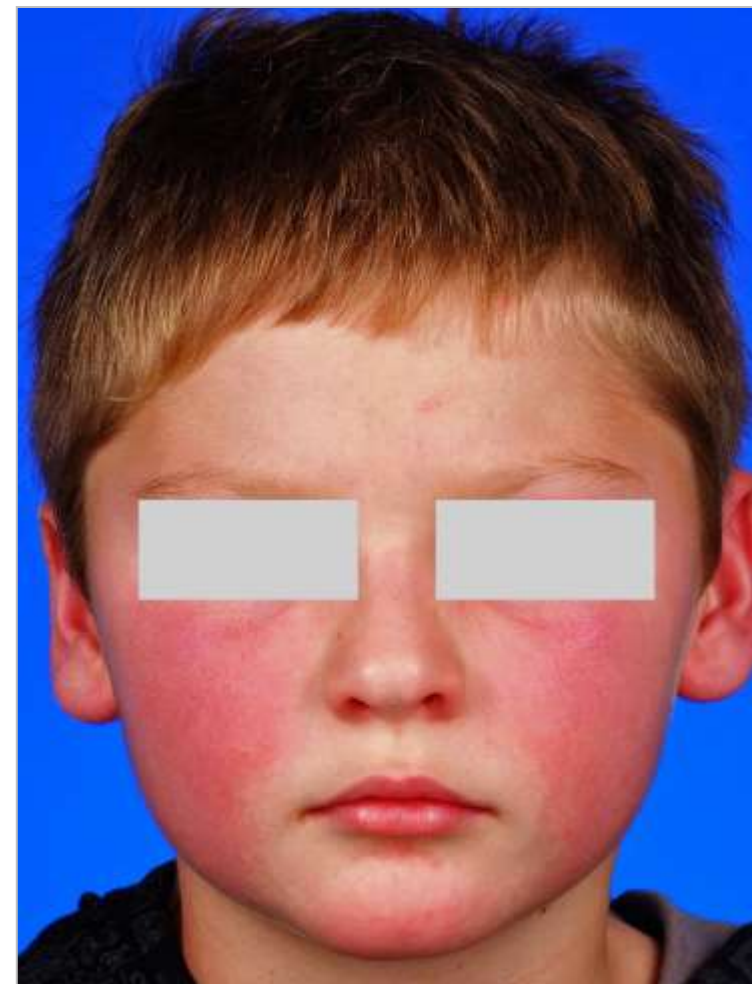
Neuro (seizures/psychosis)

ANSWER:
CASE 2

Juvenile Dermatomyositis



Periorbital heliotrope rash



8yo boy, unable to brush teeth

ANSWER:
CASE 2

Juvenile Dermatomyositis



Hyperkeratotic nailfolds with erosions



Gottron papules over MCP/PIP joints



Parvovirus B19 (Fifth disease)

“Slapped cheek” rash (nasal bridge spared)
2-3 days after prodrome



3yo female with two days of fever, URI sx

ANSWER:
CASE 4

Atopic Dermatitis (Eczema)



5mo male with worsening facial rash.
Mom using cocoa butter and Selsun Blue



Diaper area often uninvolved both from humidifying effect of diaper and because it can't be itched



Should I NOT bath him?

Daily baths are good if short (<3min),
avoid hot water, blot water and
apply emollient

Should I get allergy testing?

Only 20-30% of mod-severe AD has
food allergy contributing

Address: psychosocial anxiety, quality
of life, school performance



Autosomal dominant
inherited disorder of
porphyrin metabolism

Defect in ferrochelatase

↑ tissue protoporphyrin IX



14yo female with facial rash after sun exposure. Now scarring



Acute photosensitivity (burning, pruritis) after 1-10 min sun, involves nose, cheeks, hands

Treatment: Bile salts (↑excretion of protoporphyrins), avoid sunlight

ANSWER:
CASE 6

Contact (Irritant) Dermatitis



Poison oak



Poison sumac



Poison ivy

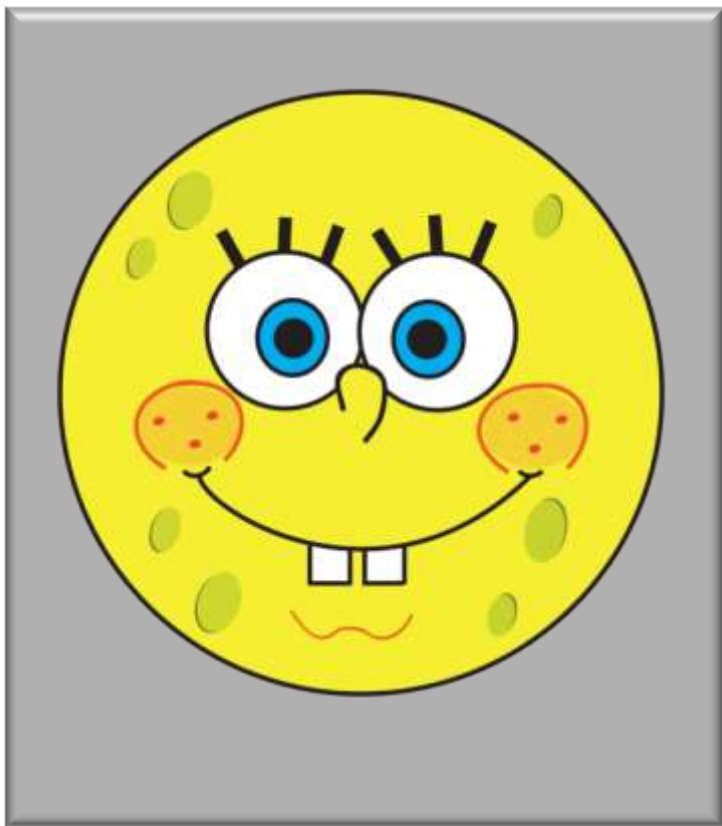
Burning POISON IVY !

Aerosolized urushiol oil (burning brush)

Treatment: systemic steroids



10yo male came back from camping trip with this facial rash



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ROUND



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BONUS

What's causing the callus' ?



13yo male
right index finger
lives in suburbs



13yo male
bilateral thumbs
lives on farm

What's causing the callus' ?



Video Game Finger



Milk Maids' Thumbs
"Farmers Fingers"



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