

PEDIATRIC EMERGENCY MEDICINE: TALES FROM A COMMUNITY ED

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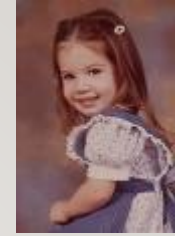
DISCLOSURE



CASE PRESENTATIONS

- Toddler with a fever
- 19 year old with LLQ abdominal pain
- 17 year old with bilateral leg tingling for 10 days
- 15 year old boy hit in the neck with a lacrosse ball
- 13 year old boy with abdominal pain, vomiting, loose stool
- 9 year old with a headache and diplopia

CASE 1:TODDLER WITH A FEVER



- 13 month old
- CC: Mom:“I have an anxiety disorder related to health issues and my husband would kill me if he knew I brought her here” She was fine yesterday, dancing* and today quiet and clingy
- T103.8 F, HR 140, RR 28, BP wnl
- Physical exam: A quiet adorable 13 m/o little girl sitting in mom’s arms not moving much, eyes open, awake and alert

PHYSICAL EXAM

- HEENT: PERRL, bilateral light reflexes of TMs, bilateral adenopathy, no pharyngeal lesions, no nuchal rigidity not meningeal signs but limited ROM
- Chest: clear, no wheezes no rales nor rhonchi
- Abdomen: soft, no organomegaly, no rebound, nor guarding
- Extremities: warm and well-perfused
- Skin: no petechia and no purpura, no bruising nor lesions, warm and well-perfused
- Neuro: quiet, awake and alert

PHYSICAL EXAM

- Kneel on the floor and try to make eye contact with her and she doesn't rotate her neck the way that you would expect her to
- Generate a differential:

DIFFERENTIAL

- Pharyngitis?
- anything else?



EXPAND THE DIFFERENTIAL



DIFFERENTIAL

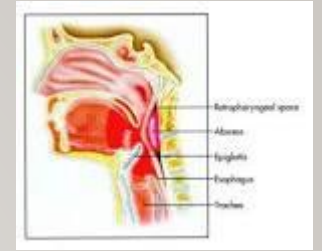
- Meningitis/Encephalitis
- Trauma: Penetrating, Blunt, internal External
- Pharyngitis: Viral vs Bacterial
- Bacterial Tracheitis/Epiglottitis
- Tumor: Lymphangioma, Hemangioma
- Retained FB.....**anything else?**



LABS AND IMAGING

- WBC 38,000!
- Temp 104 F
- Imaging: AP and Lateral Neck
- Widened prevertebral/retropharyngeal space

IN COLLABORATION WITH THE NURSE....



- Order a soft tissue neck.....



PROGRESSION

- IV, NPO, position of comfort
- Ampicillin-sulbactam
- Transfer to tertiary/quaternary care facility
- ALS Ground

- CT ??

RETROPHARYNGEAL ABSCESS

- Peak age 2-4 years
- Often polymicrobial: Strep pyogenes, Staph aureus, MRSA, Fusobacteria, Haemophilus
- Presentation: Dysphagia, Odynophagia, drooling, decreased PO, Dysphonia, Resp distress, Neck swelling, Trismus (20%), ? Chest pain
- Labs: CBC (left shift and bands), blood culture
- Imaging: Soft tissue neck, AP and lateral neck. CT with IV contrast

CASE 2: 19 YEAR OLD GIRL WITH LLQ ABD PAIN

- ED was full
- Waiting Room Full
- CC: 19 year old LLQ abd pain after eating Taco Bell
- Saw her in triage and denied pain, she wanted to leave
- Tender LLQ on PE and she reports a positive pregnancy test at home
- ?? 13 weeks

FURTHER HISTORY



- Asked “ever been pregnant before?”
- Answered “yes I had an **immoral** pregnancy last year”
- “**Immoral?**”
- Yes “**Immoral**”
- It was 2 am...kinda tired....I thought “ah!! a MOLAR pregnancy!!”
- Don’t see too many of these in the Children’s ED!

DIFFERENTIAL

- Food Poisoning
- Ectopic Pregnancy
- Ovarian Torsion
- TOA
- PID/STI
- Trauma
- Constipation

MOLAR PREGNANCY OR HYDATIDIFORM MOLE

- 400 B.C. Hippocrates
- Gestational Trophoblastic Disease (GTD), placenta and potential to invade uterus and metastasize
- Although benign, premalignant
- Prior molar pregnancy predisposes to another (1-1.5%)
- Increased risk (<15 yrs or >35 yrs)
- Unusually high human chorionic gonadotropin

HYPERTHYROIDISM

- In later gestational ages
- hCG > 100,000 for several weeks
- May have thyroid storm if undergoing anesthesia
- Thyrotropic factor: hCG thyroid stimulator/homology

EARLY PREECLAMPSIA

- Typically > 34 weeks gestation
- Think about a complete mole if <20 weeks gestation



CASE 3: 17 YEAR OLD GIRL WITH BILATERAL LEG TINGLING/NUMBNESS?

- Well-appearing, elite athlete, returned from lacrosse camp
- Saw PMD 3 days earlier because leg numbness and tingling
- Felt to be dehydration
- Orally hydrated for 3 days and no better!
- No neuro deficits



PHYSICAL EXAM

- HR 48, RR 16, BP 100/60, 65 kg, afebrile
- HEENT: PERRL, no erythema, no adenopathy
- Chest: clear
- Abdomen: no organomegally
- Extremities: warm and well-perfused, pulses 2+, motor and reflexes symmetric
- Skin: no rashes

DIFFERENTIAL

- Electrolyte disturbance
- Dehydration
- Trauma
- Rhabdomyolysis
- Tick-borne illness
- Guillain-Barre
- Supratentorial? Stress-related

LABS

- Electrolytes including K⁺ normal range
- CBC: not anemic and no shift
- HCG neg
- Udip: no blood
- CPK: normal range
- Could walk so discharged her home with some other labs pending

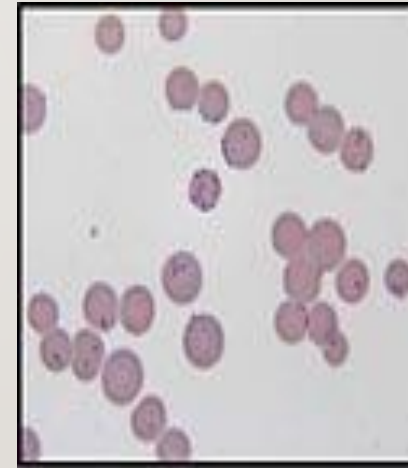


WISH LIST?



MYCOPLASMA PNEUMONIAE

- Extrapulmonary manifestations
- Direct type: locally induced cytokines
- Indirect type: Immune modulation
- Vascular occlusion: vasculitis or thrombosis
- Smallest free-living bacterium



MYCOPLASMA PNEUMONIAE EXTRAPULMONARY MANIFESTATIONS

- Encephalitis (children>adults) Out of 2000 cases, Mycoplasma most common identifiable cause. Early and Late onset. Elevate IL-6 and IL-8.
- Spinal Cord disorders
- Transverse myelitis: immunologic mechanism
- Peripheral nerve disorders
- Cranial nerves
- Nerve roots/neuropathies

ACUTE DISSEMINATED ENCEPHALOMYELITIS (ADEM)

- 11 year old boy with headache, dizziness and diplopia
- Life-threatening disease that involves extensive lesions spreading over the brain and spinal cord
- Immunologic mechanisms postulated
- *M. pneumoniae* genome in the CSF
- *M. pneumoniae* antigens inside macrophages in perivascular inflammatory infiltrate (brain)
- Vascular injury

FOR BOTH PATIENTS

- Mycoplasma IgM elevated
 - Treated with Azithromycin (Zithromax)
 - Both rapidly improved
 - But would need to think about it to treat it.....
-
- Also think about Lyme and Cat Scratch

CASE 5: 15 YEAR OLD BOY HIT IN THE NECK WITH A LACROSSE BALL

- Left side
- Knocked to ground A&O x 3
- GCS is 15
- Normal neuro exam, no progression
- Soft tissue neck?? Looking for tracheal deviation
- Nurse: tenderness, redness, left jaw pain, difficulty swallowing



PROGRESSION

- Discharged home
- Hand numbness and tingling
- Headache and vomited x 2
- Neck feels tight
- Oval area of erythema over SCM on left
- Pain with turning of the head



IMAGING: CTA

- Non-opacification of the entire cervical portion of the left internal carotid artery with reconstitution at the petrous segment,
- Carotid Artery Dissection with foci concerning for acute to subacute infarction involving the left frontal and parietal cortex.
- PICU, heparin drip



BONUS

- 42 year old man
- Penis pain after an “event”
- “No need to discuss”
- How things progressed.....



TALES FROM A COMMUNITY ED

- Summary of Cases
- COMLRM
- EMTALA
- Good Samaritan Laws
- MSE: Medical Screening Exam
- And More!

THANK YOU!

