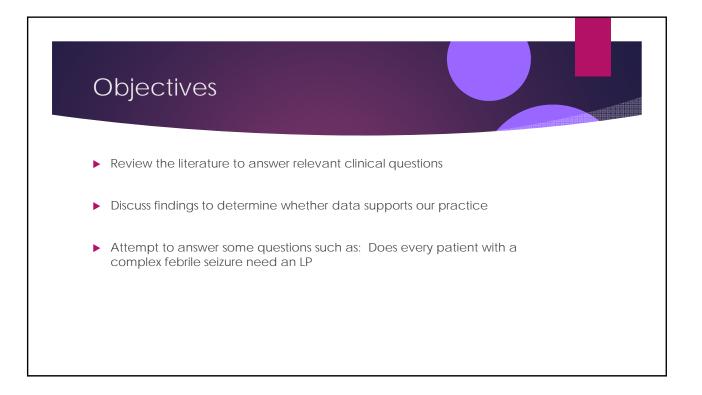
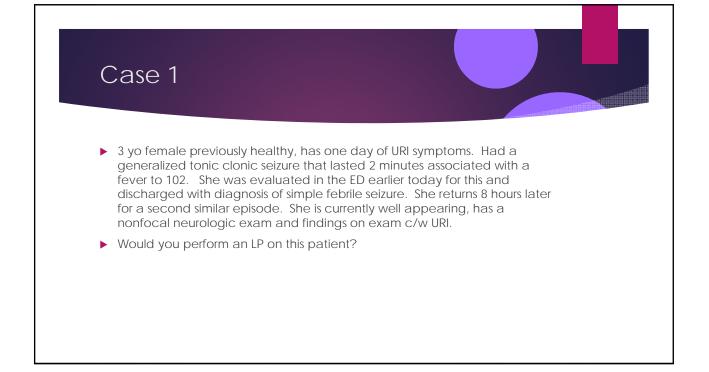
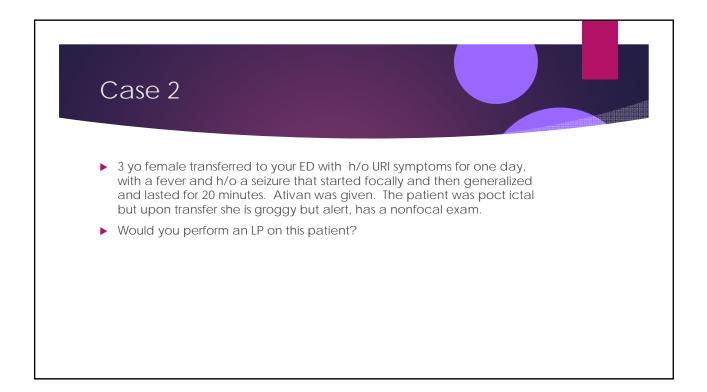
Reviewing the recent literature to answer clinical questions: Should I change my practice?

JILL MILLER, MD PEM ATTENDING CHKD ASSISTANT PROFESSOR PEDIATRICS, EVMS







Do all children who present with a complex febrile seizure need a lumbar

puncture? Annals of Emergency Medicine, 2017

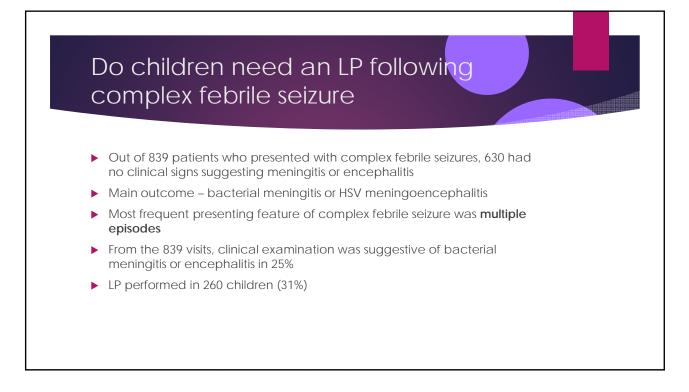
- Goal: to assess the prevalence of bacterial meningitis and HSV meningoencephalitis in children presenting with complex febrile seizure and to determine the risk in a subgroup of patients for whom clinical examination does not suggest those infections.
- Multicenter retrospective study conducted in 7 pediatric emergency departments in the region of Paris, France

Do children need an LP following complex febrile seizure

- Febrile seizures occur in children 6 months 5 years of age.
 - Definition of simple febrile seizure
 - Single seizure
 - Duration less than 15 minutes
 - Generalized
- Definition of complex febrile seizure
 - Focal or
 - Prolonged or
 - Multiple seizures within 24 hours (>1)



- Before Hib and S. pneumo vaccines, global prevalence of bacterial meningitis in children with seizure and fever was 0.8%
 - And about 5X higher in children with complex febrile seizure vs simple
- 2013 metaanalysis included some studies in the post vaccine era and found pooled prevalence of bacterial meningitis in children with complex febrile seizure of 0.6%



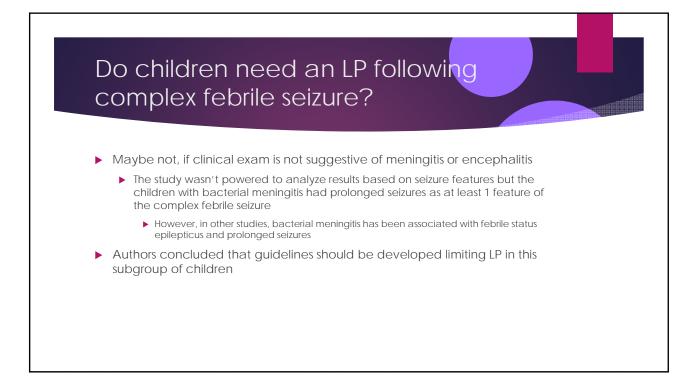
What do we want to know

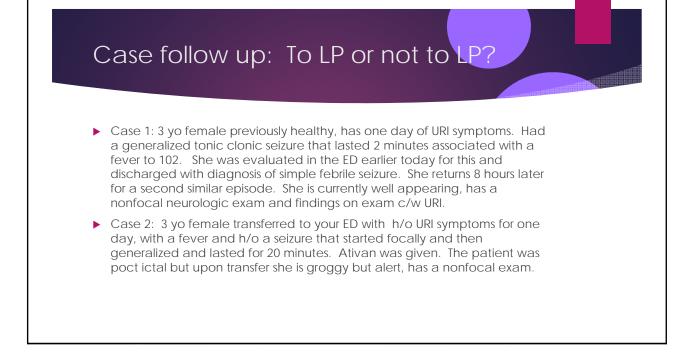
And what is the likelihood that we will find it in the spinal fluid?

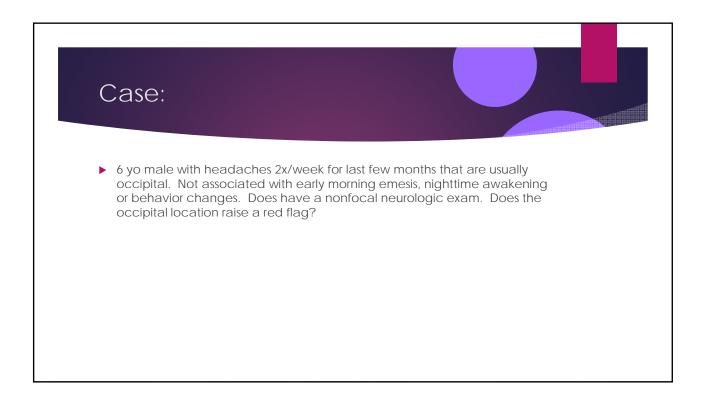
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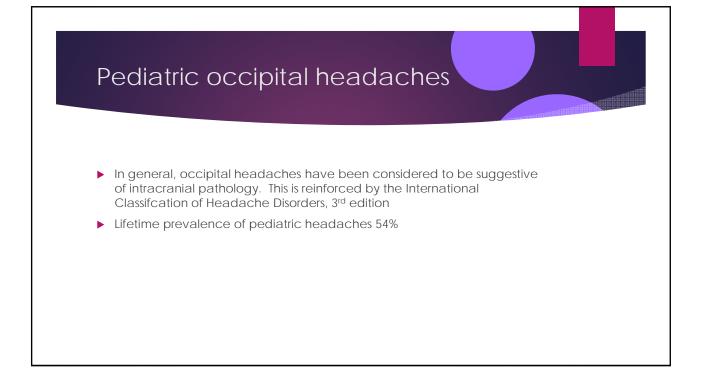
Do children need an LP following complex febrile seizure

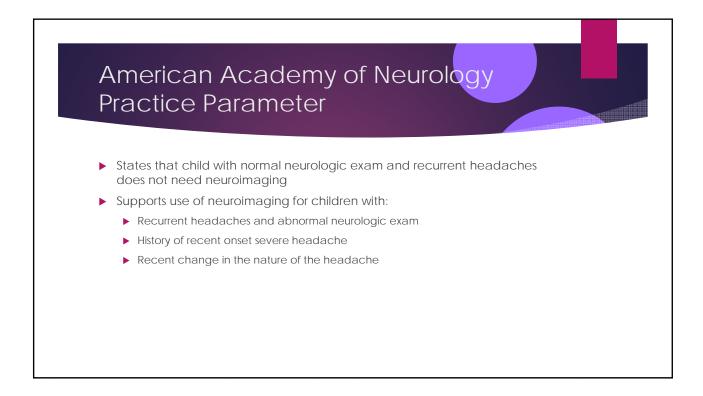
- Limitations
 - Retrospective may have missed some patients
 - 15% not followed up at all (but were not present in the national database)
 - Relatively low incidence at baseline
 - Small size of focal and prolonged seizure groups
 - Study does not generalize to communities with inadequate immunization coverage









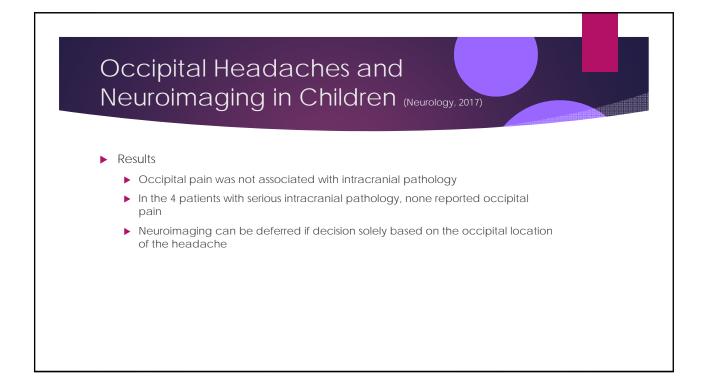


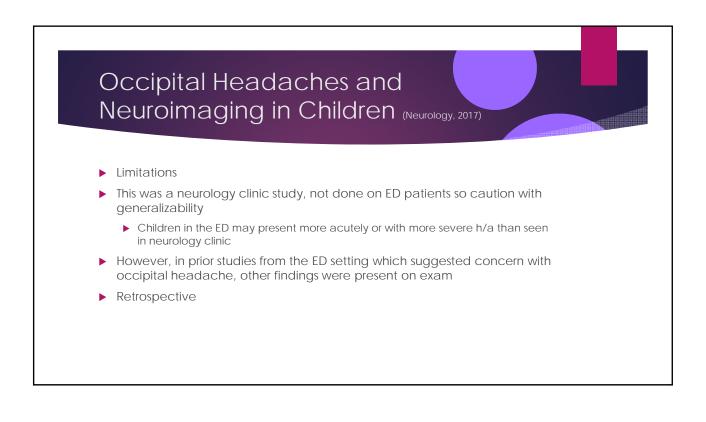
Occipital Headaches and Neuroimaging in Children (Neurology, 2017)

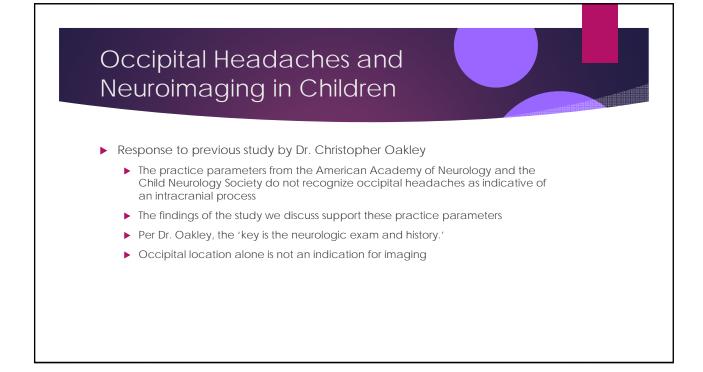
- Retrospective review of cohort of pediatric patients seen in a neurology clinic for headache
- Reviewed patients over a 1 year period from 1-18 years of age
- ▶ 586 patients seen for headache, 356 included in the study
- > 7% had an isolated occipital headache, 14% included occipital pain
- ▶ 308 had normal neurologic exam, of these 205 had neuroimaging
- More likely to have imaging if had occipital pain

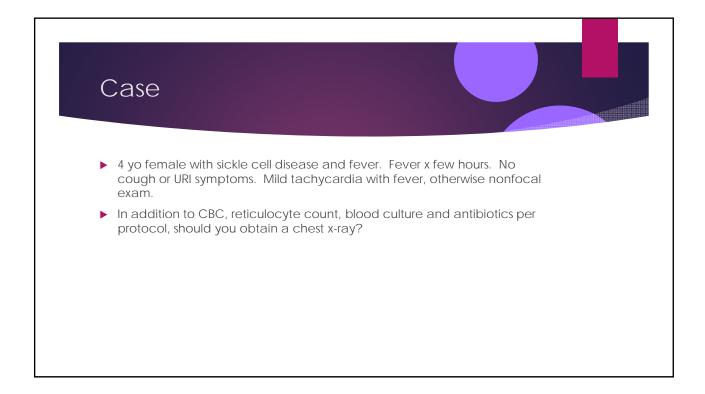
Occipital Headaches and Neuroimaging in Children (Neurology, 2017)

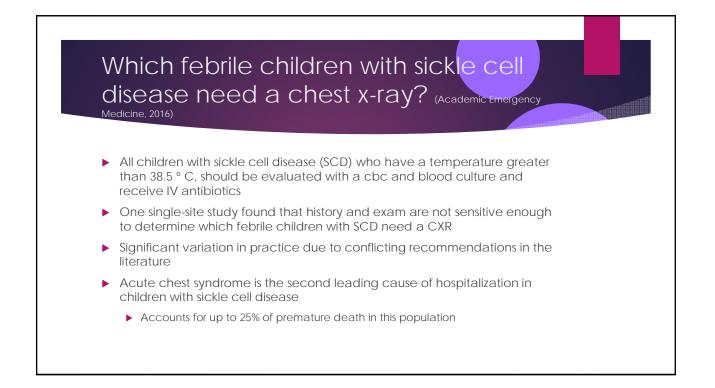
- Neuroimaging results (CT or MRI or both)
 - Normal in 179 patients
 - Abnormal findings
 - Sinusitis (23)
 - Benign cyst (13)
 - Chiari 1 malforamation (6)
 - Cerebellar ectopia (3)
 - ▶ Tumor (2) pituitary mass and tectal glioma
 - Findings suggestive of pseudotumor (1)
 - Ventriculomegaly (1)

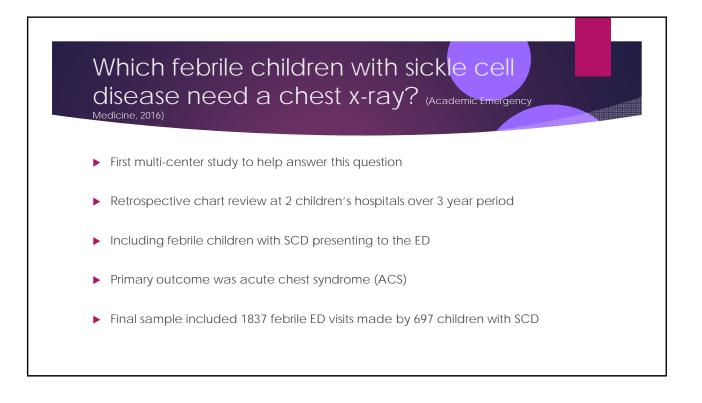












Which febrile children with sickle cell disease needs a chest x-ray? (Academic Emergency Medicine, 2016) 10% met criteria for acute chest syndrome 94% of those patient visits had at least one respiratory sign or symptom Most commonly cough, followed by tachypnea. Applying the current NHLBI recommendations (SOB, tachypnea, cough and/or rales) would have missed 27 cases of ACS Adding chest pain would detect 87.6% ACS Adding WBC >18.75 and history of ACS decreases risk of missed cases Using the model derived in this study, not all cases would be detected, 2.2% cases would be missed, an improvement from current guidelines

