Sample Pediatric History and Physical Exam

Date and Time of H&P: 9/6/16, 15:00

Historian: The history was obtained from both the patient's mother and grandmother, who are both considered to be reliable historians.

Chief complaint: "The rash in his diaper area is getting worse."

History of Present Illness: Cortez is a 21-day-old African American male infant who presented to LBCH with 1 day of worsening rash on his abdomen. Cortez's mother stated that her baby seemed to be healthy since his discharge from the nursery until 1 day prior to presentation, September 5th, when she noticed a raised erythematous rash on Cortez's abdomen. She also noticed that her baby vomited her breast milk after three feeds. Consequently, she switched to formula, which he handled without vomiting. There were no rashes anywhere else on his body. On the morning of presentation, she noticed the rash had become fluid filled and had spread throughout the anterior diaper area including the inguinal region and upper right and left thigh. No intervention was attempted to treat the rash and nothing was noted to worsen the rash besides the passing time. Both mother and grandmother did not note any changes in Cortez's temperature, stool or urine quality or quantity, or appetite. In addition, there were no symptoms of increased work of breathing, cough, or lethargy. However, grandmother did say that Cortez was slightly more irritable today. This was Cortez's first medical visit following discharge after birth. Patient's family denies any illness within their current household and visiting relatives. The patient does not attend daycare.

ROS:
CONSTITUTIONAL: No fever, weight loss. Grandmother reported increased irritability.
EYES: Seems to have difficulty focusing at distances
EARS, NOSE, MOUTH/THROAT: No otorrhea, no congestion, Mom noticed a white dot on the roof of his mouth since birth
CARDIOVASCULAR: No history of heart murmur, no cyanosis.
PULMONARY: No cough or increased work of breathing, but mom did notice that he occasionally breathes fast then stops for a few seconds, then starts up again. It's most noticeable when he sleeps.
GI: Mom says Cortez passes a lot of gas. When he was breast-fed, he had a soft stool after every feed – sometimes 8-10 a day. He has only had two stools in the last 24 hours. His umbilical cord fell off three days ago.
GU: Cortez displays a strong stream of urine when he voids.
NEUROLOGICAL: Cortez was very shaky after birth but that's slowly resolved.
MUSCULOSKELETAL: No edema or trauma
HEMATOLOGY: No ecchymosis or bleeding.
DERMATOLOGY: see HPI

Birth History: Cortez was born at 40 weeks gestation via normal spontaneous vaginal delivery (NSVD) to 16yo mother G1P1 whose first prenatal visit was in the second trimester. His mother's prenatal screen revealed a negative Hepatitis B antigen, negative HIV screen, nonreactive RPR, Rubella immune, and GBS negative according to the OB discharge papers from the hospital; however, vaginal cultures came back positive for Chlamydia. This was treated in the second trimester, with repeat test coming back negative. She was never diagnosed with genital herpes and denies ever having symptoms of this condition. His birth weight was 3.0 kg (Mom doesn't remember length). There were no complications at delivery. APGAR's are unknown but mom says Cortez did breathe spontaneously at birth. Both mother and baby were discharged after a two-day hospital stay. Cortex did not require any respiratory support or phototherapy while in the nursery. Newborn screen was performed prior to discharge, but the results are not known.

Past Medical History: No past medical history to date. Mother denies any accidents and injuries. Mother has not established her pediatrician and Cortez did not receive his two-week well child check-up.

Past Surgical History: Circumcision, no complications

Immunizations: Hepatitis B vaccine was given in the nursery.

Medications: No medications

Allergies: No known allergies

Family History:
Paternal Grandfather - Unknown
Paternal Grandmother - Unknown
Maternal Grandmother - Healthy with no known medical problems
Maternal Grandfather - Unknown
Mother - Healthy with no known medical problems
Father - Unknown
There is no family history of diabetes, seizures, cancer, heart disease, hypertension or sickle cell on the maternal side. However, very little is known about the paternal side.

Social History: Patient lives with his unmarried mother and grandmother plus a maternal cousin with her 1 year old baby in a Memphis apartment. Mother has not graduated from high school at this time. She is not currently working outside of the home. The patient's father is uninvolved with the care. The family subsists on SSI and AFDC. Their residence contains no pets. No one in the home smokes.

Diet: Cortez was breast-fed exclusively until one day prior to admission. Since then he has received Similac, 3-4 oz. every 3-4 hours. He receives occasional water.

Development: Mother has bonded with her son taking the main responsibility of care and feeding. Cortez is able to hold his head up off the bed when prone. He cannot roll over and he smiles but not socially.

PHYSICAL EXAM

Vitals: Temp 37.8 rectal Pulse 156 Respiratory Rate 45 BP 86/47 SpO2 98% on room air
Growth parameters: Weight 3.41 kg (10-25%ile) Height 54 cm (50%ile) Head Circumference 37.5cm (50%ile)
General: Patient is a well-developed, well-nourished infant in no apparent distress. Patient is asleep but easily arousable. Appears well hydrated.
Head: Normocephalic, atraumatic with thick hair. Anterior fontanelle measures 1x1 cm, is soft and flat with normal pulsations. Posterior fontanelle is fingertip. Sutures show mild molding with a remnant of a small right parietal cephalohematoma.
Eyes: Pupils equal, round and reactive to light. Extraocular muscles appear intact but patient too young to cooperate with exam. No discharge, conjunctivitis or scleral icterus. No ptosis. Patient focuses briefly on face. Fundi-unable to visualize. Positive red reflexes bilaterally.
Ears: Clear external auditory canals. Pinnae normal is shape and contour. No pre-auricular pits or skin tags. TM's grey bilaterally. No erythema or bulging.
Nose: Normal pink mucosa, no discharge or blood visible. Normal midline septum.
Mouth: moist mucous membranes, small 1mm white papule on posterior roof of mouth c/w Epstein's Pearl. No evidence of a cleft on palpation of roof.
Pharynx: Unable to visualize tonsils. Pharynx shows no erythema or ulcerations. Normal movement of soft palate.
Neck: Grossly non-swollen. No tracheal deviation. No decrease in ROM. No lymphadenopathy, goiter or masses detected.
Chest: Tanner II breast development – palpable nodule below bilateral areolae. Round chest cavity. No increase of accessory muscles – no evidence of increased work of breathing. Lungs are clear to auscultation bilaterally. No stridor, wheezes, crackles, or rubs. Good air movement.
CV: Quiet precordium, no right ventricular heave, no thrills. PMI in left mid-clavicular line in 6th intercostal space. Regular rate and rhythm. Normal S1 with normally split S2 on respiration. No murmurs, gallops or rubs. 2+ pulses in all extremities including strong bilateral femoral pulses. Capillary refill less than 2 sec.
Abdomen: Soft, non-tender, non-distended. Bowel signs present. Liver edge palpable 1 cm below costal margin but scratch test reveals normal liver size of 5 cm. No noted splenomegaly. No masses. Umbilicus healing well – no erythema, discharge or foul smell; mild diastasis recti present.
Genitalia: Circumcised; normally placed urethral meatus. Bilaterally descended testes measuring 1.5cm bilaterally, GU Tanner I, Pubic Hair Tanner I; no hernias, no hydroceles.
Extremities: Warm, no clubbing, cyanosis or edema. No gross deformities. Good skin turgor with no tenting. Negative Barlow and Ortolani signs – no hip clunks.
Back: straight, no lordosis, no kyphosis. Symmetrical Gallant reflex present. No sacral dimple, no hair tuft.
Skin: Vesicular lesions filled with whitish-yellow fluid covering the lower abdomen, inguinal region and upper thighs. The largest lesions measure 2mm by 3mm in size. Nikolsky sign -

negative. Several small pea sized nodes palpable in both inguinal regions. Positive Mongolian spot (slate gray patch) about 5 cm in diameter on sacrum.
Neurological: Moves all extremities symmetrically, appropriate tone.
CN I deferred
CN II can focus on face briefly, PERRL
CN III, IV, VII unable to tell if eyes move in all directions
CN V corneal reflex deferred
CN VII symmetrical facial expression, closes eyes forcefully
CN VIII startles to clap
CN VII, IX, X, XII positive gag, symmetrical soft palate movement, normal swallow and cry
CN XI deferred
Normal symmetrical moro, gallant reflexes. Normal asymmetric tonic neck reflex. Normal stepping reflex. Symmetrical biceps and patellar DTR's, upward going plantar reflexes, 2-3 beat clonus both feet. Negative Brudzinski and Kernig signs.

Labs: (Date and Time all labs)

CBC w/ differential: WBC 12.7 (N 29%, **L 59%,** M 9%, E 3%, B 1%), Hgb 15.9, Hct 47.5, Plts 458, RBC 4.39, RDW 14.7

CMP: Na 137, K 5.2, Cl 103, bicarb 23, BUN 6, Cr 0.5, Glu 102, Ca 10.6, Total Protein 6, Albumin 3.3, Total bilirubin 0.7, ALT 7, AST 30

Urinalysis: (Date and Time) Collected by catheterization. Negative for bacteria, leukocyte esterase, nitrite, WBC and RBC

CSF (Date and Time) Glucose 49, Protein 161 (H), WBC 3, RBC 28,565 (H), No organisms seen on gram stain

Blood and urine cultures are pending.

Diagnostic Imaging:

CXR (Date and Time) Preliminary findings are negative. Official reading pending.

Differential:
Causes of Generalized Rashes include: Herpes Simplex, Erythema toxicum, Transient neonatal pustular melanosis, Epidermolysis bullosa, Incontinentia pigmenti, Congenital erosive and vesicular dermatitis, Congenital varicella, Staphylococcal scalded skin syndrome, Neonatal scabies
Causes of Localized Rashes include: Miliaria, Bullous impetigo, Herpes simplex

Discussion: Although this rash is presenting in a localized area, we should at least consider other causes of generalized rashes since this may simply be the initial presentation that has yet

to spread. When prioritizing our differential, we should first consider those diseases that are most common as well as those diseases that are most likely to cause serious harm or possibly death.

Miliaria – The most common cause of localized vesicles in an otherwise healthy infant would be miliaria. This is a transient disorder of immature eccrine (sweat) glands that typically results in tiny vesicles filled with clear fluid. These are most often seen in areas that are moist and hot (like the diaper area) and tend to come and go. The vesicles that Cortez has are too big for the usual vesicles of crystalline miliaria.

Neonatal rashes – Other common neonatal rashes are erythema toxicum and Pustular melanosis. Erythema toxicum had a flea-bitten appearance of tiny papules on a large red flare. Pustular melanosis had larger thick walled vesicles filled with turbid fluid all over the body. When these rupture, they leave a collarette and a hyperpigmented macule. This is not seen in Cortez.

Herpes simplex (skin, eye, mouth or disseminated form) – The most dangerous causes to consider are infectious. Neonatal Herpes can be devastating even if caught early. Typically, there will be positive maternal history for herpes but a negative history does not rule it out. Lesions tend to be small vesicles on a red base that occur in clusters but can occur singly. The infant may have no systemic symptoms or may present in a toxic condition. Because this disease can be fatal, treatment is started when the condition is suspected, not held until a diagnosis is confirmed. Both enterovirus and adenovirus may present with the same lesions. However, patients should be treated as if they have herpes until the definitive diagnosis is made.

Staphylococcal infections – Staph infections can also be deadly. Staph scalded skin syndrome is an exfoliative dermatitis characterized by diffuse, tender erythema (toxin mediated), flaccid bullae, sheets of desquamating skin and a positive Nikolsky sign. The face, groin and axillae are most commonly affected. Less serious Staph bullous impetigo is frequently seen in the diaper area, and may be the cause of the bullae that we see in Cortez.

Congenital varicella should be suspected if a history of late gestation maternal exposure is obtained. This is not the case in this patient. **Neonatal scabies** can present with vesicles but these are usually found all over the body including scalp, palms and soles. **Epidermolysis bullosa, Incontinentia pigmenti, Congenital erosive and vesicular dermatitis** are in the differential diagnosis. However, all are much rarer, have larger, thick walled bullae or are seen mostly in females. They should be kept for consideration if other more common causes are ruled-out.

Assessment: Cortez is a 2-week-old term, previously healthy male infant with acute onset of a localized, vesicular diaper rash and associated irritability. The most likely causes of his rash include herpes simplex, Staph scalded skin syndrome (SSSS), and bullous impetigo based on his history and physical exam findings.

Plan:

1. Vesicular rash possibly due to HSV, SSSS, or bullous impetigo; worsening – At this time the etiology of Cortez's rash is unclear, but since the differential diagnosis contains life-threating conditions he needs to be evaluated and treated for these causes. He has received a full sepsis workup, including: CBC with differential, blood culture, UA and urine culture by catheterization, CXR, CMP, and CSF analysis (including cell count, protein, glucose, gram stain and bacterial culture, and PCR for HSV). Additionally, we will also obtain a sample of the vesicular fluid to send for: gram stain, bacterial culture, viral culture, and HSV PCR. He should also receive HSV viral culture swabs of the eyes and mouth. He should be started on appropriate antimicrobial therapy while we are awaiting culture and PCR results. He will be placed on acyclovir 20mg/kg/dose q8h IV to cover for HSV, cefotaxime 150mg/kg/day divided q8h IV (or ceftazidime) to cover for GBS and E. coli (which are common pathogens for neonatal sepsis), and vancomycin 15mg/kg/dose q12h IV to cover for Staph aureus. Contact isolation precautions for potential HSV and Staph aureus. We will monitor Cortez closely with vital signs q4h and reassess if he starts to worsen.
2. Irritability is likely related to discomfort from his rash and seems to be improving. We will monitor him carefully, and provide comfort measures. If he appears to be in pain, he may receive acetaminophen.
3. Elevated protein and RBC count in CSF – This is most likely related to a traumatic tap, rather than meningitis, since he had no increase in WBCs in the CSF nor any signs of meningitis on exam (although these may be difficult to assess in neonates). If he deteriorates, we will consider repeating the LP to obtain further diagnostic information, such as repeat HSV PCR.
4. Vomiting; Fluids, Electrolytes, Nutrition (FEN) – The infant's vomiting has now resolved and he is tolerating PO fluids well. However, because he is being placed on both acyclovir and vancomycin, we will start IV fluids to maintain hydration and prevent acute kidney injury. We will order the patient's home formula ad lib and will consult lactation as mother wishes to re-establish breastfeeding. We will monitor daily weights and strict Is and Os.
5. Health Maintenance – We will obtain the results of Cortez's newborn screen and help his mother establish a pediatrician for follow up.
6. Social – Consult medical social work to help with TennCare insurance issues.

Disposition: Cortez requires inpatient care due to need for further diagnostic workup, IV antibitoics, and IV hydration.

Jane Doe, M3