Retropharyngeal Cellulitis in a 5-Week-Old Infant

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ABSTRACT. An infant who presents with acute, unexplained crying requires a thorough examination to identify the source of distress. We report the case of a 5-week-old infant who had sudden irritability and was found to have retropharyngeal cellulitis caused by group B Streptococcus. Pediatrics 2002;109(3). URL: http://www.pediatrics.org/cgi/content/full/109/3/e51; group B Streptococcus, retropharyngeal cellulitis, infant, irritability.

Crying is an infant’s principle form of communication. Usually an infant’s source of distress can be identified easily, and the child can be consoled with holding, feeding, or other environmental changes. If, however, the crying is particularly acute or the infant remains inconsolable, then other sources of distress must be considered. Among these, life-threatening conditions including infection, child abuse, and abdominal catastrophe must be considered first. Identifying the source of distress can be particularly challenging in young infants who do not always present with the classic signs of disease. In this report, we describe an infant who ultimately was found to have retropharyngeal cellulitis and whose sole presenting manifestation was sudden-onset irritability and inconsolability.

CASE REPORT

A 5-week-old boy presented to the emergency department with irritability and inconsolability for 1 hour. The mother reported that the infant had been in his usual state of health earlier in the day. She had breastfed him and put him down to sleep, after which he awoke crying and inconsolable. The crying was so excessive that she feared he was in pain and immediately brought him to the hospital. The child had been in the mother’s care all day; there was no history of trauma to the child. He did not receive any medications, including antipyretics, before arrival. Medical and birth histories were insignificant; he was a full-term, healthy infant. The initial physical examination revealed an extremely irritable infant who was crying constantly. His temperature rose to 38.5°C. He was noted to keep his neck in hyperextension. His cry had become hoarse, and his neck and oropharynx were swollen. Contrast-enhanced computed tomography of the neck showed extensive retropharyngeal and cervical adenopathy and cellulitis. There was marked swelling of the oropharyngeal mucosa and retropharyngeal plegmon, which extended from the level of the oropharynx into the infrahyoid neck with narrowing of the oropharyngeal airway.

Because of increasing respiratory distress, the infant was endotracheally intubated and a sepsis work-up was performed. Treatment with ampicillin-sulbactam, gentamycin, and dexamethasone was initiated. Urine culture and cerebrospinal fluid culture and Gram stain were negative. A blood culture became positive for group B Streptococcus after 3.17 hours of incubation. The infant was treated with a 14-day course of ampicillin. Repeat blood cultures were negative. A computed tomographic scan on the third hospital day showed improved retropharyngeal cellulitis and adenopathy, and he was extubated successfully on the fifth hospital day.

Additional investigation revealed that the mother’s prenatal screens all were negative, including group B streptococcal (GBS) testing, which was performed at 36 weeks’ gestation. The delivery was vaginal at 41 weeks’ estimated gestational age. The amniotic fluid was heavily meconium-stained, and the infant was bulb-sucked in the delivery room. He was immediately vigorous and did not require intubation for additional suctioning. The postnatal course was unremarkable; in particular, there was no suggestion of trauma to the retropharynx from the suctioning at delivery. The infant was discharged at 2 days of life.

DISCUSSION

Since the 1970s, GBS infection has been recognized as a major source of morbidity and mortality in the neonate and is in fact the most common cause of invasive infections in newborns. The clinical presentation is described as either early- or late-onset, depending on whether the onset of disease occurs during the first week or between 7 days and 3 months of life. Early-onset disease typically occurs via vertical transmission from a mother’s colonized genital tract, whereas late-onset disease is transmitted both vertically and horizontally from nosocomial and commu-
Retropharyngeal infections are extremely rare in young infants. Among retrospective studies, a total of more than 150 children with retropharyngeal abscess or cellulitis were identified, but none of the infants were younger than 3 months. Asmar BI. Bacteriology of retropharyngeal abscess in children. Pediatr Infect Dis. 1990;9:267–276


The clinical manifestations of GBS infection vary according to the age of the infant. Early-onset disease most commonly manifests as sepsis, meningitis, and pneumonia, all of which frequently present with respiratory signs such as tachypnea and grunting as an initial clinical finding. The dominant presentations of late-onset GBS disease are meningitis, bacteremia, and bone and joint infection. Clinical signs in these infants are almost always nonspecific and include fever, irritability, poor feeding, and lethargy. A less common clinical manifestation is cellulitis. These infants present with symptoms similar to those seen in other forms of late-onset infection and also have swelling and erythema of the involved site. The submandibular and parotid areas are the most frequently involved sites, and, in one report, several infants are described as having enlarged lymph nodes associated with the infection. The majority of reported cases have GBS bacteremia at the time of presentation.

Retropharyngeal infections are extremely rare in young infants. Among retrospective studies, a total of more than 150 children with retropharyngeal abscess or cellulitis were identified, but none of the patients was younger than 3 months. In a literature review extending back to 1966, we were able to find 12 case reports of retropharyngeal infection in infants younger than 3 months without a preexisting abnormality. Of these, 5 infants had sustained trauma to the retropharynx from endotracheal intubation or nasopharyngeal continuous positive airway pressure. Seven of the infants presented with no identifiable cause. Of the 12 infants described, 2 had infection caused by group B Streptococcus (Table 1).

Initial clinical signs commonly reported in young infants with retropharyngeal abscess or cellulitis are typically respiratory distress, poor feeding, and sub-mandibular swelling. Several of the infants were also described as being irritable and having a hoarse, weak cry. Lateral radiographs of the neck, when obtained, consistently revealed widening of the retropharyngeal space. Similar to our patient, many of the neonates initially were afebrile. The total leukocyte count was variable among the cases described, which is not unusual, as total leukocyte counts have been shown to be poor predictors of infection in young infants.

An infant with acute, unexplained crying and a negative initial physical examination must always be evaluated until the cause is determined and serious conditions are ruled out. A thorough examination should be performed to identify signs of infection, trauma, corneal abrasion, intestinal malrotation, testicular torsion, incarcerated hernia, and hair tourniquet. The extremities should be palpated for possible fractures and observed for signs of unusual posturing or decreased motion, and radiographic examination, including skeletal survey, should be considered. Finally, as illustrated in this case, consider occult soft tissue infections; in the case of retropharyngeal abscess or cellulitis, cervical spine radiographs should be obtained if indicated.

REFERENCES


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