

An Extremely-low-birth-weight Infant with an Extremely Early Onset of Sepsis Caused by *Bacteroides fragilis*

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Abstract

We herein report a case of an extremely-low-birth-weight infant with neonatal sepsis (NS) caused by *Bacteroides fragilis*. *B. fragilis* is an obligate anaerobic bacterium. A girl weighing 545 g was born by vaginal delivery at 24 weeks and 2 days' gestation. The amniotic fluid was foul-smelling and cloudy, and the infant developed early-onset NS at birth. She was initially treated empirically, but we had to switch to piperacillin/tazobactam because Gram-negative rods were detected only in an anaerobic culture bottle and not in an aerobic culture bottle on day 2. *B. fragilis* was isolated from the infant's blood culture and the mother's vaginal and amniotic fluid culture. Her condition improved without sequelae. We concluded that the anaerobe was responsible for ascending amniotic fluid infection. Although NS caused by anaerobic bacteria is rare, we should consider the possibility of anaerobic bacterial infection if a patient has foul-smelling, cloudy amniotic fluid and administer appropriate antibiotics.

Key words: Anaerobic bacteria, Neonatal sepsis, Foul-smelling amniotic fluid, Intrauterine infection