

## Short Communication

# Listeriosis in Second Trimester of Pregnancy: Case Report from India

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**SUMMARY:** Although *Listeria monocytogenes* infection occurs in sporadic and epidemic forms throughout the world, there are certain countries (especially Asian countries) that have reported only a few cases or failed to report even a single case. During her third visit at 17<sup>+5</sup> weeks of gestation, a 22-year-old primigravida presented with the complaint of an acute painful abdomen, leaking per vaginum and low-grade fever for the 2 preceding days. On ultrasonography, a single live fetus with no amniotic fluid was seen and the pregnancy was therefore terminated. *L. monocytogenes* was isolated from a high vaginal swab.

*Listeria monocytogenes* is a ubiquitous pathogen occurring in 50 species of mammals, birds, and fish (1). Although it occurs in sporadic and epidemic forms throughout the world, there are certain countries (especially Asian countries) that have reported only a few cases or failed to report even a single case (2-6). In a recent worldwide review (1990-2000) of ten case-series of nonperinatal listeriosis and six case-series of perinatal infection, only one Asian country, Israel, was included in both case-series (each case-series describing at least 15 cases was included in the review) (5). In human populations, carriage rates of *Listeria* in feces and the genital tract vary from 5-10% (7). Listeriosis is an uncommon disease in a healthy immunocompetent individual, though the otherwise healthy pregnant host shows a unique predilection for it. The incidence of listeriosis in the general population is 0.7 per 100,000. The incidence in pregnant women is 12 per 100,000 – that is, a 17-fold increase (8). Herein we report a case of perinatal listeriosis with a poor fetal outcome in the second trimester of pregnancy.

A 22-year-old primigravida presented in our antenatal clinic with amenorrhea for 7 weeks and bleeding per vaginum for 4 days. On ultrasonography (USG), two gestation sacs were seen. The first sac contained a live fetus approximately 7 weeks  $\pm$  1 week of age, and a second sac was empty and showed evidence of intraamniotic hemorrhage. The patient was put on complete bed-rest and prescribed folic acid and allylestrenol. Laboratory findings included hemoglobin = 12.6 g/dl and fasting blood sugar = 75 mg/dl. The Venereal Disease Research Laboratory test was non-reactive for both husband and wife, findings from complete urine examination were within normal limits, and urine culture showed no growth of significance. Lower abdominal discomfort and spotting per vaginum continued off and on. USG at 11<sup>+2</sup> weeks gestation showed a live fetus corresponding to the period of gestation in the first sac, and a second sac showing intraamniotic hemorrhage.

At 17<sup>+5</sup> weeks of gestation, she presented with the complaint of an acute painful abdomen, leaking per vaginum and a low-grade fever for the 2 preceding days. On examination, her vitals were stable. She was febrile (37.6°C) and her total

leucocyte count was 8,000/ $\mu$ l but with predominance of neutrophils. A high vaginal swab was taken for culture sensitivity. On USG, a single live fetus with no amniotic fluid was seen. In view of the absent liquor, termination of pregnancy was planned. The patient was induced with prostaglandins. She expelled the abortus but retained the placenta, which was subsequently evacuated under sedation. The postabortal period was uneventful. She became afebrile, and was discharged on the second day under administration of ciprofloxacin and tinidazole.

*L. monocytogenes* isolated from the high vaginal swab was found susceptible to amoxicillin, gentamicin, penicillin, ciprofloxacin, co-trimoxazole, and erythromycin. Listeriosis is an emerging zoonosis that constitutes a life-threatening disease for human fetuses and neonates, the elderly, and patients with certain predisposing factors. The pregnant woman may be infected at any time during gestation, though the third trimester is the most common. Infection in early pregnancy may result in pregnancy loss (9). Among perinatal infections, the highest case-fatality rate (45%) was reported in a study in Israel. This observation could be related to the frequency with which aborted tissues are cultured (5). The diagnosis of *L. monocytogenes* can easily be missed if cultures are not routinely taken from aborted fetal tissues or if blood (and other) cultures are not obtained from febrile pregnant women. The great variability in incidence rates and in other epidemiologic features between studies and among medical centers within studies suggests that many cases escape diagnosis (5).

In India, there was no case report of *L. monocytogenes* until 1973. A study was undertaken in that same year by Bhujwala et al., and out of 100 cases presenting with bad obstetric history, *L. monocytogenes* was isolated from the cervical swabs of only three cases (10). In another study by Bhujwala et al., this organism was not isolated from any of 125 samples of cerebrospinal fluid (CSF) obtained from meningitis cases of patients in various age groups (11). In 1975, Bhujwala et al. isolated *L. monocytogenes* from 9 of 670 women with bad obstetric history (12). In 1981, a prospective study was carried out by Thomas et al. in 1,300 newborns, and *L. monocytogenes* serotype I was isolated in two cases. The prevalence of listeriosis was 2.2% in meconium-stained babies and 0.2% among the total births (13). To our knowledge, no further studies or case reports from India have

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appeared in the last two decades.

We wish to emphasize the necessity of bearing listeriosis in mind if a pregnant woman presents at anytime during gestation with all the signs of a bacterial influenza-like infection, clinical amnionitis, and/or pre-term labor without evidence of a focus as was observed in this case. Such patients may experience a septic abortion within 3 to 7 days of appearance of symptoms (9).

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