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## Case Reports

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### Listeriosis: An Opportunistic Infection

Ritu Gupta  
V.G. Ramachandran  
Piyush Gupta

*Listeria monocytogenes*, is a Gram positive, aerobic, intracellular pathogen with a predilection to cause illness in patients with diminished cell mediated immunity(1,2). Reports of listeriosis from India are scanty either because of its rarity, failure to recognize the bacterial growth, improper isolation techniques or lack of awareness. We present three cases of listeriosis to document the setting of this" infection and its varied clinical presentations in pediatric patients.

#### Case Reports

*Case 2:* A 4 hours old, term male newborn, born normally to a second gravida mother at a nursing home was brought with poor cry and respiratory distress. He had a birth weight of 2500 g and Apgar scores of 5 and 8, at 1 min and 5 min, respectively. There was no history of maternal pyrexia, diarrhea, backache, myalgias and leaking or bleeding per vaginum. Amniotic fluid was reported to be stained with

thin meconium. On examination, the child was lethargic and had respiratory distress. There were no petechiae, sclerema or hepatosplenomegaly. An X-ray chest revealed bilateral diffuse infiltration suggestive of meconium aspiration syndrome or congenital pneumonia. CSF was normal. Blood culture grew *Listeria monocytogenes* sensitive to penicillin, cephalixin, cloxacillin, gentamicin and ciprofloxacin. Injection ampicillin and gentamicin were given intravenously for 14 days. The respiratory rate settled by 4th day and oral feeds were started. The child was discharged after an uncomplicated hospital stay.

*Case 2:* A 1<sup>1/2</sup> month old male child was admitted with a four day history of fever, cough, respiratory distress and refusal to accept feeds. There was no history of cyanosis, convulsions or rash. The infant was being fed on diluted cow's milk given unhygienically. On examination the child was lethargic, febrile, had tachypnea, tachycardia and respiratory distress, hepatomegaly, cardiomegaly and bilateral crepitations in the chest. Cardiovascular examination revealed normal heart sounds and a harsh Grade IV, short systolic murmur in the third and fourth intercostal spaces in left parasternal area. There were no evidence of purpura or signs of meningeal irritation. A diagnosis of congenital acyanotic heart disease (VSD) with congestive heart failure was entertained. Possibility of bilateral pneumonia was also kept. Chest radiograph revealed cardiomegaly and diffuse parenchymal infiltrations. Echocardiography could not be done because of the sick condition of the child. He was treated with injection ampicillin, gentamicin, digoxin, frusemide, oxygen and fluid restriction. The child

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*From the Departments of Pediatrics and Microbiology, University College of Medical Sciences and G.T.B. Hospital, Delhi 110 095.*

*Reprint requests: Dr. Piyush Gupta, R-6A, Dilshad Garden, Near Telephone Exchange, Delhi-110 095.*

*Manuscript received: January 27,1997*

*Initial review completed: February 25,1997*

*Revision accepted: March 18,1997*

showed clinical improvement during the first three days of the hospital stay but on the fourth day, he aspirated milk and expired. The blood culture taken at the time of admission was positive for *Listeria monocytogenes* which was sensitive to penicillin, cefotaxime, chloramphenicol, cephalixin and gentamicin.

*Case 3:* A-1<sup>1/2</sup>-year old male child was admitted with complaints of fever for six days and multiple episodes of generalized tonic-clonic seizures for one day. There was a history of rash, consistent with measles, appearing on the second day of fever. Examination revealed a malnourished child with a weight of 6.0 kg. There was tachypnea, respiratory distress and bilateral crepitations in the chest. Consciousness was retained and meningeal signs were absent. There was no neurological deficit. CSF examination showed normal cytology, biochemistry and was sterile on culture. Fundus examination did not reveal any abnormality. A diagnosis of severe malnutrition with post measles pneumonia and encephalopathy was made. Blood culture taken at the time of admission grew *Listeria monocytogenes* which was sensitive to penicillin, erythromycin, gentamicin, cotrimoxazole and cefotaxime. The child was treated with intravenous crystalline penicillin and gentamicin for two weeks along with symptomatic management. He recovered fully and was discharged.

### Discussion

Human infections with listeria are seldom established without a concomitant compromising illness. A predisposing underlying condition was noticed in each of our three cases; one was perinatal, second was having a congenital heart disease with congestive failure and the third was severely malnourished and had a recent attack of measles.

The source of infection in non-neonatal cases can be food borne or nosocomial(3,4). A nosocomial acquisition is definitely ruled out in our cases since all the blood cultures for listeria were obtained at the time of admission. Moreover, the cases were spread out over a period of six months and during this period, concomitant blood cultures from other patients failed to reveal *Listeria monocytogenes*. It is reported that *Listeria monocytogenes* can survive and multiply in free living protozoa in nature and these may ultimately prove to be the missing link in the ecology and pathology of listeriosis(5).

The disease tends to have a wide clinical spectrum. Neonatal listeriosis shows two patterns of disease, that of early onset infection' (within the first five days after birth) and late onset infection (after five days of birth). Early onset infections present most commonly as sepsis, respiratory distress and skin involvement. Meningitis is a common feature in over 90% of cases with late onset disease(6). In older children, it can cause conjunctivitis, otitis media, localized abscesses, cutaneous lesions, hepatitis, pneumonia, meningitis, endocarditis, pericarditis, encephalitis or septicemia(7). The second case was having listeria septicemia and pneumonia, however a possibility of endocarditis could not be entirely eliminated since an echocardiography could not be done. All the three cases of our series had respiratory involvement. Seizures in the third case could be of toxic or metabolic origin as a normal CSF examination ruled out invasion of CNS by *Listeria monocytogenes*.

The treatment of choice for human listeriosis is a combination of high dose ampicillin on penicillin plus gentamicin administered intravenously for at least two weeks(1,2). Vancomycin and gentamicin combination has also been used successful-

ly in listeria endocarditis(8). Early suspicion and prompt therapeutic intervention is important for decreasing the high mortality due to listeriosis in various groups of compromised hosts.

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## Pseudo-Homozygous Type IIa Hypercholesterolemia

**Mukesh Gupta**  
**R.B. Sharma**  
**Manish Parakh**

Hyperlipoproteinemias are disturbances of lipid transport which result from accelerated synthesis or retarded degradation of lipoproteins that transport cholesterol and triglycerides through plasma(1). Although hyperlipoproteinemias appear in childhood, they are unfortunately diagnosed at an older age when they present with life threatening complications, such as

atherosclerosis. If they can be diagnosed during early childhood the associated complications can be prevented. We are describing a case of pseudo-homozygous hypercholesterolemia type IIa(2), a recently described rare variety of hyperlipoproteinemias, which was diagnosed early in life.

#### Case Report

A 10-year-old male child was admitted to our institution with a history of multiple swellings in the region of buttocks, the extensor surface of both elbows, and on the fingers since the last 5 years. Initially these swellings were of the size of a pea which gradually increased to have variable dimensions. At first they appeared on the dorsal aspect of fingers of upper limb and then on and around elbow, knee and intergluteal region. These swellings were not associated with pain or limitation of joint movements. Trauma to the intergluteal swellings during sitting sometimes caused minor bleeding. The child

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*From the Department of Pediatrics, Dr. S.N. Medical College, Jodhpur.*

*Reprint requests: Dr. Mukesh Gupta, E-22/10, Umaid Hospital Campus, Jodhpur 342 001*

*Manuscript received: November 26, 1996*

*Initial review completed: January 15, 1997*

*Revision accepted: March 18, 1997*