

LISTERIOSIS.A CAUSE FOR CONCERN

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ABSTRACT

Introduction; Worldwide, *Listeria monocytogenes* is estimated to infect 23,150 people, with a mortality of 23.6 percent in adults & 14.9 percent in infants. Although considered one of the most deadly and adaptable bacteria found in food, countries accounting for 48 percent of the world's population do not report *Listeria*. Herein we report a case of *Listeria monocytogenes* sepsis in a 26yr old pregnant female with poor fetal outcome. Case report 26 yr old primigravida with 36 weeks of pregnancy came to the gynaecology casualty with chief complaints of; high grade fever and cough. Physical examination and Laboratory investigations confirmed that the patient was in septicaemia. USG, confirmed intrauterine death of the fetus. Patient was empirically started with meropenem and vancomycin after drawing blood for culture. Blood culture grew *Listeria monocytogenes*. A single dead baby was delivered on caesarean section. Patient was continued on the same antibiotic treatment for ten days and responded well. Conclusions; Foodborne listeriosis is a potentially fatal disease in high risk groups. In developing countries high index of suspicion, improved food safety standards and better diagnostic facilities are the need of the hour to tackle and identify such cases.

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INTRODUCTION

Worldwide, *Listeria monocytogenes* is estimated to infect 23,150 people, with a mortality of 23.6 percent in adults & 14.9 percent in infants. Pregnant women, their newborns older adults and people with weakened immune systems comprise the susceptible group. ¹Although considered one of the most deadly and adaptable bacteria found in food, countries accounting for 48 percent of the world's population do not report *Listeria*. Herein we report a case of *Listeria monocytogenes* sepsis in a 26yr old pregnant female with poor fetal outcome.

Case report 26 yr old primigravida with 36 weeks of pregnancy came to the gynaecology casualty with chief complaints of; high grade fever and cough. On examination the patient was febrile (temp 103^oC), tachypnaeic with a pulse rate of 127/min, and BP=106/82 mmHg. Chest auscultation revealed bilateral crepts. On per abdomen examination no fetal movement was palpated and on auscultation, fetal heart sound was absent. Laboratory investigations of the patient showed leucocytosis (WBC count=15000/cc), Hb =8 gm%, HbA1c, T 3.T 4 and TSH Levels were within normal limits. USG, confirmed intrauterine death of the fetus. Patient was empirically given meropenem and vancomycin after drawing blood for culture. She was given trial for labour but her condition deteriorated and an emergency caesarean section was conducted. A single dead fetus was delivered. The

condition of the patient was stable. She was shifted to medical ICU.

Blood culture on automated continuous blood culture monitoring system (BacT Alert Biomerieux Vitek 2 Compact) signalled positive after 24 hours of aerobic incubation. Direct Grams smear revealed gram positive bacilli (Fig 1). Subculture on blood agar grew, small translucent β- haemolytic colonies after 24 hrs of aerobic incubation at 37 °C (Fig 2). Automated Identification and antimicrobial sensitivity system (VITEX 2 COMPACT) {card no; 628} identified the culture as *Listeria monocytogenes*. Patient was continued on the same antibiotic treatment for ten days. She responded well and was discharged after ten days.

DISCUSSION

Invasive listeriosis is a severe and potentially fatal form of food borne disease that occurs in high risk population groups. Although a food borne pathogen *Listeria monocytogenes*, commonly presents as bacteraemia or meningitis. In pregnancy the rate of infection is 18 times higher than in the general population with consequent threat to the viability of the fetus². De Noorhout¹ in his review and Meta analysis of global burden of listeriosis observed that among cases of listeriosis there was a prevalence of 20.5% cases of perinatal listeriosis. The study however pointed to data gaps in the South East Asian region countries which include India. This could be attributed to poor resources for diagnostic identification and a low index of clinical suspicion.

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Listeria infection is more common in pregnant females than in other high risk groups. Studies show, cellular immunity is minimal due to increased progesterone, making pregnant women particularly susceptible to intracellular microorganisms like *L. monocytogenes*.³ Globally, A third of cases of listeriosis occur in third trimester of pregnancy. Barbudha et al⁴ In their study observed that maternal/neonatal listeriosis is the most common form of listeriosis in India as well⁴. The patient in our case report had a poor fetal outcome. Studies have shown that one out of five pregnancies complicated by listeriosis result in abortion or still birth^{2,3}.

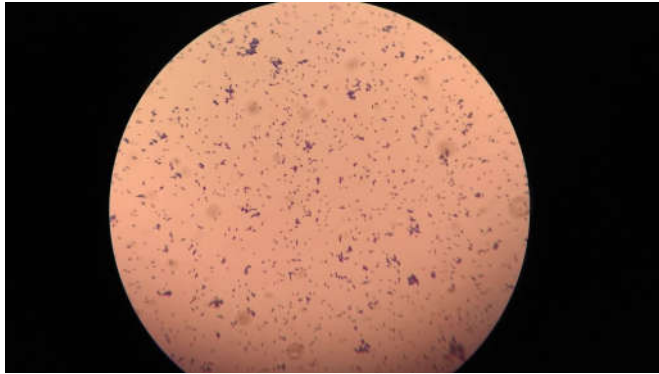


Fig 1 Gram positive bacilli of *Listeria monocytogenes* from a direct blood culture signal positive bottle (100X)



Fig 2 β -haemolytic colonies of *Listeria monocytogenes* on Blood Agar .

We could not obtain history of consumption of any known implicated food from the patient owing to the serious clinical condition she was in. However, consumption of homemade soft cheeses is a common practice in rural areas and most of the times food hygiene and food safety are compromised in poor socioeconomic setup, from where our patient hailed from⁵. This is true for most of the places in the South East Asian region. We believe such food borne related infections are grossly under -reported in this region.

Our patient presented with high grade fever and Flu like symptoms. Such symptoms have been documented as a presenting feature, in pregnancy by various other studies^{2,3}. Such patients should be closely watched by Obstetricians keeping in view the concerns of fetal outcome.

CONCLUSIONS

Foodborne listeriosis is a potentially fatal disease in high risk groups. In developing countries high index of suspicion, improved food safety standards and better diagnostic facilities are the need of the hour to tackle and identify such cases.

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Conflict of interest. None

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