

# NEONATAL PRESENTATION OF LASSA FEVER: REPORT OF THREE CASES

Q.O Salau, I.O Fasoranti, O.J Oladapo, T.O Jegede,  
O.O Ayodeji, B. Omotoso, C. Abejegah  
Federal Medical Centre (FMC), Owo, Ondo State

# Background and Methods

- Management of Lassa Fever (LF) during neonatal period is a daunting task
- Clinical presentation is non-specific & there is paucity of information on the subject
- This case series is presented to increase the awareness & knowledge of care for neonatal Lassa Fever
- The case notes were reviewed after the neonates' demise

# Case 1: Dec 2015

- An 8 day old term male neonate delivered via elective caesarean section (C/S)
- Admitted with fever of 1day, (Temp 39°C) and irritability
- Diagnosis of late onset neonatal sepsis was made
- Appropriate antibiotics was commenced according to unit protocol
- Other supportive therapy were instituted

# Case 1- Dec 2015 (cont.)

- **Day 2 to 4 of admission:** Condition deteriorated, developed signs of meningitis
- Cerebrospinal fluid analysis (CSF) showed elevated protein (486mg/dl)
- **Day 5:** Developed Acute Kidney Injury (AKI) and passed blood per rectum. Died same day
- No VHF screening done, but retrospective diagnosis of probable Lassa Fever was made due to similar presentation with case 2 (NCDC SOP 2017)
- Mother was asymptomatic throughout

## Case 2: JAN 2016

- Low Birth Weight male baby delivered via SVD at home admitted few hours after birth
- Initially managed for perinatal asphyxia and discharged home on the 10th day of life
- Re-presented on the 22nd day of life with fever of 1 day (T- 39.2°C)
- Diagnosis of late onset neonatal sepsis was made and baby was commenced on appropriate antibiotics

## Case 2: JAN 2016 (cont.)

- On the 24th day of life, the baby developed features of meningitis with poor feeding, reduced activity and seizures
- CSF showed elevated protein(238mg/dl)
- Developed AKI & prolonged bleeding from puncture site on the 25th day of life
- Lassa fever screening done(result positive postmortem)
- Condition deteriorated & baby died on 26th day of life (5th day of symptoms)

## Case 3: Oct 2018

- 5 day old female neonate delivered by emergency C/S
- Admitted with fever (37.7°C) poor suck of few hours, was hypoglycaemic and jaundiced
- Mother was admitted for puerperal sepsis. She had breast engorgement
- Initial assessment was early onset sepsis
- Appropriate antibiotics was commenced and other supportive therapy given
- **Day 2 and 3:** No remarkable change, tolerating nasogastric tube feeds

# Case 3 Oct 2018 (cont.)

- **Day 4 on admission:** Developed features of meningitis, poor feed tolerance
- CSF analysis showed markedly elevated protein (640mg/dl)
- **Day 5 and 6-** Developed AKI. LF screening done on repeat CSF sample (positive postmortem)
- Developed bleeding and died later on the 12th day of life (7th day illness)
- Mother's screening for Lassa fever was positive. She was treated with ribavirin and made full recovery

# Discussion

- Neonatal Lassa Fever (LF) can easily be mis-diagnosed as neonatal sepsis and as such wrong management instituted
- Mis-diagnosis of LF in neonates usually results in poor outcome and possible spread among care givers (Akpede et al., 2012)
- Only one of the mothers' had symptoms suggestive of LF
- The 3 babies developed meningitis, AKI and terminal coagulopathy which are poor prognostic features (Akpede et al., 2012, Okokhere et. al., 2013, Okokhere et.al., 2018)
- Lassa Fever in neonatal life has rapid progression and very fatal outcome in most cases (the 3 babies all died within 7days)

# Conclusion and Recommendation

- There is need for awareness among newborn care givers about the increasing incidence of neonatal Lassa fever infection
- High index of suspicion is needed for early diagnosis among neonates presenting with features of sepsis, meningitis and acute kidney injury in endemic areas
- There is need for facilities to make rapid diagnosis in order to improve management and survival

# References

- Standard Operating procedures for Lassa Fever Case management. *Nigeria Centre for Disease Control*. April 2017
- Akpede G, Kayode-Adeniji B, Dawodu S. Manifestations and outcomes Lassa fever in Nigerian children: a case series. *Archives of Diseases in Childhood* 2012; 97: A38 – 39
- P.O. Okokhere, Idowu A Bankole, George Okhale Akpede, Central nervous system manifestations of lassa fever in Nigeria and the effect on mortality, 2013, *Journal of the Neurological Sciences* 333(1):e604
- Okokhere, P., et al. (2018). "Clinical and laboratory predictors of Lassa fever outcome in a dedicated treatment facility in Nigeria: a retrospective, observational cohort study." *Lancet Infect Dis* **18**(6): 684-695