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Case Report Of Confirmed Cholera In 18 Day Old Neonate In Dadaab

Dr Jeldah Mokeira

Cholera ERT Co-Ordinator IRC Hagadera, Dadaab Refugee Camp, Kenya

Abstract:

Introduction: Children less than 2 years rarely present with cholera. It may present like other forms of severe diarrhoea in neonates and it is not uncommon in neonates born in cholera endemic areas presenting clinically with diarrhoea (Khan et al, 2005). Late diagnosis leads to high fatality due to renal complications and seizures. The youngest reported case of cholera in a neonate is a one day old neonate in India who developed hyponatremic dehydration with pre renal ARF. (Deswal et al,2014). In Hagadera the children below 2 years make up 21.54% of all cases managed at the CTC. While the commonest serotype of Vibrio worldwide is El Tor (Deswal et al, 2014), 01 Ogawa has been the isolate in the current outbreak.

Clinical summary: We describe diarrhoea due to Vibrio cholera 01 Ogawa in an18 day old neonate who was not breast feeding. Breast feeding is known to provide passive immunity and a degree of active immunity protecting infants and neonates from disease. Diarrhoea was profuse and the baby succumbed within 5 hours of presentation to the CTC despite aggressive treatment with fluids and antibiotics.

Conclusions: Missed opportunities highlighted were case definition tends to exclude the neonates and infants reducing index of suspicion, delays and community related gaps as evidenced by family bringing baby to hospital late, mother not practising exclusive breastfeeding, WASH gaps.

Recommendations: Broadening of case definition to cater for neonates and infants, ensure facilities are always prepared for neonatal management, more sensitization for the community on importance of breastfeeding and timely proper health seeking behaviour, Urgent address of WASH gaps.

I. INTRODUCTION

Cholera outbreak was declared in Hagadera refugee camp in Dadaab on 19th November 2015 and has been continuing into the third month at the time of this writing. A total of 840 cases were listed by this time with 8 Deaths and a CFR of 0.95.Hagadera refugee camp is the most populated of the 5 camps in Dadaab complex and is also the economic hub for the population in this set-up. Both Hagadera and Kambios are served by the CTC in Hagadera within the hospital compound which is open 24 hours daily since the set up. Most of the people affected in this outbreak have been children aged below 12 years. 21.54 % of all admissions in the CTC are infants below 2 years old and out of these 1 was a neonate.

II. CASE PRESENTATION

HISTORY

Patient presented to the CTC with his parents on 22nd January 2015 with a history of vomiting, refusal to feed and diarrhoea. He was examined and found to be flaccid, unresponsive, severely dehydrated, with muscle wasting, afebrile but hypothermic and hypoglycaemic. The pulse was unrecordable.

FAMILY SOCIAL HISTORY

- ✓ Baby was born at home uneventfully and was never breastfed.

- ✓ Immediately after birth at home mother was sick with headaches and back aches, was admitted to the hospital for 6 days with the baby.
- ✓ While in the hospital the mother continued to give the baby formula against medical advice. She hid to do it and reports it to have been because she did not have enough breast milk.
- ✓ Mother feeds baby on water and formula milk (anchor brand which is said to be heavy and difficult to digest for neonates).
- ✓ Baby was confined in room with the mother and only parents were handling the baby.
- ✓ He was the first one to get ill followed by aunt who is responsible for preparing the meals for the family. The aunt was followed by the baby's father, then the mother and then 13 year old relative in the same compound.
- ✓ The family does not eat left over food.
- ✓ Comes from a household where 7 people have been treated for cholera in this outbreak, 2 children before the baby was born and 5 in current episode, including both parents. 2 other people not related to the baby had been treated from the neighbourhood in the current outbreak.
- ✓ The household members and neighbours interact closely with each other like sharing meals and children playing together.
- ✓ Household has 23 people all sharing 2 latrines of which one is almost full.
- ✓ Family keeps goats for milk, the goats sleep in the bathroom area of the compound hence they can pick contamination. These goats are milked for the family and the udder is not washed nor the milk boiled before use.
- ✓ Children also play with the goats and feed their food remains to the goats.
- ✓ Hand washing practices in the home do not involve using soap unless after a fatty meal.

MANAGEMENT

- ✓ IV access established, dextrose 20 mls of 10% was given as per MOH protocols.
- ✓ Rushed to maternity unit for oxygen and warmth from the heater.
- ✓ IV HSD given 108mls in 1st hour then 252mls to follow in over 5 hours.
- ✓ IV antibiotic ceftriaxone given.
- ✓ RDT done and turned positive.
- ✓ Improvement noted after half an hour. Baby was pink, Pulse became recordable at 100, temperature improved to 36.8, RR was 50 and baby became responsive to pain.
- ✓ Was left on oxygen by nasal prongs 2l/min and was monitored ¼ hourly.
- ✓ After about one hour baby was noted to develop peripheral cyanosis.
- ✓ Pulse oxymetry was done and indicated low O2 saturation.
- ✓ Resuscitation was started with ambu-bag and chest compressions 30:3.
- ✓ Bolus of HSD was given 20mls.
- ✓ Team gave adrenaline but there was no improvement.
- ✓ Baby died at 11:30am.

III. CONCLUSIONS

MISSED OPPORTUNITIES

- ✓ Case definition tends to exclude the neonates and infants hence the CTC was not set up to resuscitate neonates.
- ✓ Inadequate resuscitative equipment in CTC for neonates.

DELAYS AND COMMUNITY RELATED GAPS

- ✓ Family brought baby to hospital after he had been losing fluid for more than a day.
- ✓ Exclusive breastfeeding not practised. Baby was on formula and might have been forced to feed if refusing predisposing to aspiration which could have led to pneumonia which in turn could have predisposed to pulmonary oedema.
- ✓ Possible oral-faecal contamination from family members during formula feeding leading to cholera.
- ✓ Slow active surveillance- The CHW in the relevant block failed to notice the sick child while he had been unwell for a whole day prior to family bringing him to hospital.

WASH GAPS

- ✓ Lack of latrines.
- ✓ Insufficient safe water for household use.

IV. RECOMMENDATIONS

- ✓ Broadening of case definition to cater for neonates and infants.
- ✓ Ensure adequate resuscitative equipment for all groups of patients.
- ✓ More sensitization for the community on importance of breastfeeding by IYCF team.
- ✓ Intensify community sensitization through CHP on need for early and appropriate health seeking behaviour to avoid delays in patient management.
- ✓ Urgent address of WASH gaps by WASH team.

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