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LETTER TO THE EDITOR

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Are we losing the gains of the Oral Rehydration Therapy Strategy? An illustrative case

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Dear Editor,

Incidence and deaths from diarrhoea in childhood have declined remarkably in the last decade.[1]Much of this could be attributed to the Oral Rehydration Therapy strategy introduced by the WHO[2]. In Nigeria, this was adapted into standard guidelines with salutary effects[3]. The strategy hinges on hygienic practices, non-use of feeding bottles, use of appropriate oral fluids for the prevention and correction of dehydration from diarrhoea, selective use of antimicrobials, continued feeding during episodes of diarrhoea, avoidance of anti-emetics and anti-motility drugs[2]. A recent study has demonstrated inappropriate use and abuse of anti-microbials, anti-emetics and anti-motility drugs at all levels of the health system in Nigeria[4]. At a Community Cottage Hospital in the Niger Delta supported by Shell Petroleum Development Company, children are often seen with multiple drugs for diarrhoea prescribed in patent medicine dealers shop, health centres and clinics, with serious consequences. We describe here an illustrative case.

Infant BTO was admitted at eight months of age into the Obio Cottage Hospital Oginigba, Port Harcourt, with history of diarrhoea, vomiting and fever for five days and convulsions on the day of presentation. Child was initially managed by patent medicine dealers with several drugs as tabulated below Table 1 (see also fig 1). Standard ORS dissolved in 750ml of water was also given. Child had fever (40.7^{o}C), evidence of severe dehydration and seizures. Diagnoses of diarrhoea with severe dehydration, hypovolaemic and septic shock, bronchopneumonia (? aspiration pneumonia) and severe malaria were made. PCV was 26%, sodium level 151mmol/l and random blood sugar 0.8mmol/l. Infant was rehydrated with normal saline 20m/kg/hr repeated a total of three times, seizures controlled with intravenous diazepam. Intravenous ceftreaxone, and after urine production, genticin were given. Hypoglycaemia was corrected with ten percent glucose. After initial anti-shock therapy, infant was given 75ml/kg of Ringer's lactate over six hours and then moved to ORS by naso-gastric tube. PCV dropped to 21% by the sixth day and child was transfused. Infant regained consciousness after seven days but with evidence of cortical damage- increased tone in all limbs and cortical blindness.

It would appear we are beginning to lose some of the gains made by the ORT strategy. In this illustrative case, the mother, from a sub-urban area, was using feeding bottle to feed the infant. The ORS was improperly mixed and may explain the hypernatraemia and subsequent convulsions and coma. Several branded drugs containing promethiazine, chlorpheneramine, hyoscine bromide, pseudoephedrine, kaolin, some of which may have contributed to the child's seizures and coma, were given. In addition, several anti-microbials were given. The sedation, which interfered with feeding, contributed to the severe hypoglycaemia. The use and abuse of various oral dehydration salt solutions and drugs for diarrhoea by patent medicine dealers in Nigeria have been reported by several authors.[5,6]

Dear Editor, it is our contention that the intense campaigns on diarrhoea prevention and management in childhood that were once mounted in Nigeria should be revisited. We may be beginning to lose the gains made.

Thanks.

Fig 1: 8 months old infant with feeding bottle and some of the drugs given in the same episode of diarrhoea.

Table 1: Drugs used/ abused in the index infant

Drug used/Abused		Usefulness in Diarrhoea	Adverse effects
Trade name	Active Substance		
Anti-microbials			
Emgyl	Metronidazole	Useful only in proven E. histolytica and Gardia lamblia, both rare in infants	Diverts attention from ORS. Nausea
Chloraphin	Chloramphenicol	Nil against common diarrhoea organisms	Can cause bone marrow failure
Fleming	Amoxicillin + clavunalic acid	Not effective against most diarrhoea organisms. Useful in dysentery (blood in stool)	Can worsen diarrhoea
Emmox	Amoxicillin	Not effective against most diarrhoea organisms. Useful in dysentery (blood in stool)	Can worsen diarrhoea
Anti- Diarrhoeal's/ Anti-Motility Drugs			
Diastop	kaolin	No proven use	Diverts attention from ORS. Gives false impression of improvement by thickening stools.
Deshalom	kaolin	No proven use	
Rophelgan	Promethiazine	No proven use	Drowsiness, sedation, extrapyramidal crisis which resembles convulsions. Poor appetite, child difficult to assess accurately
Cof"N" cold	Chlorpheniramide	No proven use	Drowsiness, sedation, extrapyramidal crisis, dizziness, headache, constipation, blurring of vision, dry nose, mouth and throat, irritability, confusion, hallucination
Babyrex	Chlorpheniramine	No proven use	
Panda cold	Paracetamol Chlorpheniramide pseudoephidrine		Pseudoephidrine can cause nausea, vomiting, dizziness, headache, difficulty sleeping.
Colipan	Hyoscine bromide	Nil	Paralyses the intestine. Abdominal distension which may embarrass breathing
Maxiquine	Chloroquin + Paracetamol + Promethiazine	No proven use in diarrhoea. Chloroquine not recommended for malaria	Promethiazine effect, see above. Chloroquin no longer effective for malaria. Recently banned by NAFDAC
Amodiaquin	Amodiaquin	Not recommended alone for malaria. No use in diarrhoea	

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