OSCE

Candidate information

A mother has brought her 9 month old baby to ED after a seizure. Little Mali has had two days of vomiting and diarrhoea and had been off solids. His mother had been giving him fluids only as a result.

The child weighs 8kg, and his obs are as follows:

SBP 90

RR 40

T 35 C

HR 120

Mali had been seen at a peripheral hospital and an iSTAT blood sample taken (available in room). He was then sent to your hospital for management.

Please discuss the possible causes of the seizure with Mali's mother and explain the management required.

Domain	**%**
Medical expertise	40
Prioritisation and decision making	20
Communication	
Teamwork and collaboration	
Leadership and management	
Health advocacy	40
Scholarship and teaching	
Professionalism	

Paediatric hypernatremia

Actor (mother) information

You have brought your 9 month old boy Mali to ED after he had a seizure. He has suffered two days of vomiting/diarrhoea, and stopped taking solids. As a result, you have only given him fluids in the form of condensed milk and crushed vitamin tablets (as per your culture). You originally took him to a peripheral hospital, and have a set of iSTAT bloods from there to show the doctor.

You would like to know the possible causes of his seizure, and how he will be managed. You are not distressed.

Mali is currently stable and being looked after in the Paeds Resuscitation bay.

Marking:

	Mark
Correctly identifies hypernatremia and likely cause	2
Appropriate management re fluids – not too rapid	2
Education of mother regarding management of gastro	1
States need for admission	1
Gives at least two differential diagnosis	2
Explains cause of seizure to mother in lay person language	1
Approach to mother – non judgemental, etc.	1

Dx: hypernatremia with hypochloraemic acidosis

DDx: gastroenteritis, intussusception, malabsorption secondary to condensed milk

Hypernatremic dehydration, ie greater loss of free water than sodium, often when pts with gastro are treated with salt rich solutions. Can cause irritability, lethargy, seizures.

Aim to replace lost free water so serum sodium doesn't fall more than 10-15 meq/L per day. More rapid decrease causes cerebral oedema. Fluid bolus if perfusion is not optimal.

Then switch to ½ NS + D 5% - rehydrate over 48-72 hours. Frequent monitoring of serum sodium.

iSTAT bloods (venous)

Na 160

K 3.6

Cl 60

Bicarb 2