

SHORT COMMUNICATION

Changes in Serum Electrolyte Levels in Typhoid Fever Patients Attending Minna General Hospital

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Abstract

Typhoid fever is a systemic infection caused by the bacterium Salmonella enterica, subspecies enterica, serotype Typhi, which is mostly contracted through the ingestion of food or water contaminated by the faeces of an infected person. Serum sodium, potassium, chloride, and bicarbonate levels were determined in sixty patients with established typhoid fever attending General Hospital Minna, using Spectrophotometric method. The case studies included 15 adult-males, 15 adult-females, 15 male-children, and 15 female-children. The mean $\pm$ standard deviation of serum Na^+ , K^+ , Cl^- , and HCO_3^{2-} in the sixty patients were $116.11 \pm 20.65\text{mmol/L}$; $3.40 \pm 0.90\text{mmol/L}$; $87.13 \pm 16.34\text{mmol/L}$; and $24.10 \pm 5.54\text{ mmol/L}$ respectively. When compared with the controls and the laboratory reported normal values, 50% of the patients were found to be hyponatraemic, 51% were hypochloraemic, 36% were hypokalaemic, while 11% had metabolic acidosis. Results based on sex showed insignificant difference between males and females for all electrolytes determined ($p < 0.05$). An insignificant difference was also observed between children and adult patients for all parameters determined ($p < 0.05$). In addition, weak positive correlations were observed between cations and anions determined in this study. The results obtained in this study showed that electrolytes abnormalities existed in patients with established typhoid fever attending General Hospital Minna, Niger state, Nigeria

Keywords: Typhoid fever, *Salmonella enterica*, serotype typhi, hyponatraemia, hypochloraemia, hypokalaemia, metabolic acidosis.

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