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Title : The occurrence of hyponatraemia amongst patients with severe mental illness admitted at Solomon Stix Morewa Memorial Hospital, Johannesburg

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Abstract

Background

Morbidity in patients with severe mental illness is known to be higher than in the general population. Numerous factors contribute to this, including the propensity to have comorbid conditions and the effects of long-term treatment with psychotropics. Hyponatraemia is the most common electrolyte abnormality found in hospitalised patients. Patients with severe mental illness are vulnerable to the development of hyponatraemia due to psychogenic polydipsia, comorbid conditions and the long-term use of psychotropics.

Aim

To evaluate the occurrence of hyponatraemia in patients with severe mental illness that are admitted at Solomon Stix Morewa Memorial Hospital and to determine the associations between the hyponatraemia and the patients' demographic and clinical variables.

Objectives

To assess and quantify the occurrence of hyponatraemia in patients with severe mental illness. To establish the cases, grades of severity and the trends of hyponatraemia in the study sample. To make possible associations between the development of hyponatraemia and the various clinical profiles. To analyse the trends of sodium testing in the study participants.

Results

32% of the patients had hyponatraemia on admission to Solomon Stix Morewa Memorial Hospital, significantly higher than that of the general population. Female patients and patients on antihypertensive medications were more likely to have hyponatraemia. Other medical conditions such as hypertension, type 2 diabetes mellitus and chronic obstructive pulmonary disease were significant predictors for the development of hyponatraemia. Patients on combination antipsychotics (first- and second-generation antipsychotics) were also more likely to develop hyponatraemia than those not on combination antipsychotics.

Conclusion

Hyponatraemia was found in a significant proportion of the study participants. Patients with severe mental illness are more likely to have co-morbid illnesses that can be overlooked. The comorbid illnesses render the patients more likely to develop complications such as hyponatraemia that worsens their outcomes and mortality. More research is required to establish the role of combination antipsychotics as a possible cause of the development of hyponatraemia in psychiatric patients. Definitive monitoring guidelines are required in the long-term management of patients with severe mental illness. More recognition of hyponatraemia as a significant adverse effect of comorbid illness, psychiatric illness and chronic medication is required in patients with severe mental illness.