PROSPECTIVE CROSS-SECTIONAL STUDY ON THE CLINICAL PROFILE AND MYOCARDIAL FUNCTION OF SEVERELY AND MODERATELY MALNOURISHED CHILDREN 2 MONTHS TO 18 YEARS OLD IN PHILIPPINE CHILDREN’S MEDICAL CENTRE (PCMC)

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Background Malnutrition in children produces visceral protein loss and consequent cardiac atrophy. There are conflicting studies if this cardiac atrophy results in myocardial dysfunction.

This study aims to determine the prevalence of myocardial dysfunction and describe the demographic, clinical, electrolyte changes, electrocardiographic and structural and myocardial function in severely and moderately malnourished children.

Methods This is a prospective cross-sectional study conducted on severely and moderately malnourished children 2 months to 18 years old in Philippine Children’s Medical Centre. Serum potassium, magnesium, ionised calcium and phosphorus determination, 2D echocardiography and electrocardiogram (ECG) were done.

Results 73 subjects (43 moderately and 30 severely malnourished) were recruited. Majority had neurologic diseases (n=18, 25%), followed by tuberculosis (n=13, 18%). 2 had pneumonia, 2 had diarrhoea.

- Hypokalemia was found in 5/30 or 16% severely malnourished (Potassium 2.21–2.96 mmol/L) and 4/42 or 9% moderately malnourished (Potassium 2.5–2.89 mmol/L) (p > 0.05).
- Only one marasmic child had hypomagnesemia (0.5 mmol/L).
- Ionised calcium and phosphorus were normal. Both groups demonstrated prolonged QT interval, short and prolonged PR interval, prolonged QRS duration with no statistical significance.
- The most common ECG finding is short PR interval in moderately (n=29/42 or 69%) and severely malnourished (n=18/29 or 62%) subjects. (p > 0.05)

- The systolic and diastolic functions were normal in both the severely and moderately malnourished. Although the left ventricular mass (LVM) was low with no statistical significance between the two groups, the LVM index remained to be normal.

Conclusions Hypokalemia, hypomagnesemia and shortened PR interval are common in malnutrition. Hence, vigilant monitoring of electrolytes and ECG should be done in all malnourished children. Even if the left ventricular mass was reduced in malnutrition, the left ventricular mass index remained to be normal. No myocardial dysfunction was found in the moderately and severely malnourished children. This suggests a possible compensatory mechanism of a malnourished heart.

Background Hyperprolactinemia is the most common cause of galactorrhoea in women. Levosulpride an atypical neuroleptic and a prokinetic drug acting only on the D2 receptors can cause significant hyperprolactinemia which may be associated with galactorrhoea. However, it is often under- or misdiagnosed. Hence, we describe a case of drug induced hyperprolactinemia presenting with galactorrhoea.

Methods A 31 years old lady presented with complaints of menstrual irregularity and galactorrhoea since 18 months. She consulted an Endocrinologist in the USA who started her on Cabergoline 0.25 mg twice a week. However, galactorrhoea did not subside. MRI of the pituitary gland was unremarkable. Cabergoline dose was increased to 0.5 mg twice a week and then gradually to 2 mg per week. After few months of treatment, she was shifted to Bromocriptine in view of persistent galactorrhoea and hyperprolactinemia not responding to cabergoline. She presented to us in April 2017 with unabated symptoms and elevated serum prolactin (152 ng/ml). A review of drug history revealed intake of Esomeprazole (40 mg) and Levosulpride (75 mg) combination pill since January 2016 for dyspepsia. Levosulpride induced hyperprolactinemia was suspected and hence it was stopped.

Results After a week of stopping levosulpride serum prolactin level reduced to 13.48 ng/ml whereas galactorrhoea subsided completely. These findings confirmed levosulpride induced hyperprolactinemia.

Conclusions We have made significant advances in the field of medicine, but this case teaches us to never forget the basics of medicine – A detailed history and clinical examination. Careful drug history and awareness about levosulpride and its effect on serum prolactin levels would avoid unnecessary costly investigations and treatment.