Prevalence of Hypokalaemia in Outpatients

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INTRODUCTION

• Prevalence of hypokalaemia has been reported only in inpatients, especially in several medical specialities, including an intensive-care unit or units managing specific patients with trauma, stroke, or infectious diseases. Prevalence of hypokalaemia might be widely different among medical specialities. Also prevalence of hypokalaemia in an outpatient basis has been unknown.
• This study was done in order to clarify which medical specialities have higher incidence of hypokalaemia.

METHODS

• All the laboratory results performed in our hospital from Jan 1 2007 to Dec 31 2008 were retrieved (132,564 patients; M:F = 66,539:66,026). Serum potassium was measured in 80,082 patients. Data belonging to "outpatients" were then selected and analyzed as a whole hospital and per each speciality.
• Calculation: The numbers of patients were counted for every 3-month period, in total of 8 periods in 2 years. In patients with multiple potassium measurement, the lowest value during each 3-month period was employed.
• Specialities where the number of patients with potassium measurement was less than 500 over the 2 years were excluded from individual prevalence study but were collected and shown as "miscellaneous." "Miscellaneous" includes: dermatology, oral surgery, anesthesia, radiology and Atomic bombs survivors clinic.
• Hypokalaemia was defined as serum potassium level less than 3.5 mEq/L.

CONCLUSIONS

• Prevalence of hypokalaemia differed widely among medical specialities, between 0.98-13.68%.
• Specialities accompanied with anti-cancer chemotherapy, diuretics use, gastrointestinal potassium loss or dialysis therapy seem to have higher prevalence.
• However, it was surprising to find specialities such as brain surgery and rheumatology had unexpectedly higher prevalence of hypokalaemia.
• Contrarily endocrinology and neurology, which had prevalence of only 2.77% and 4.26% respectively when analyzed at less than 3.5 mEq/L, were ranked as ones with the highest prevalence at less than 2.5 mEq/L.

References