

Undergraduate Education and Dietetic Internship

Workup of delirium on hospitalist medicine units at Vancouver General Hospital: How frequently are we investigating and treating thiamine or vitamin B12 deficiency as a potential cause?

C. Kaufman¹, P. Naylor¹, K. Stafford¹, E. Cabrera², C. Ng², T. Simons², A. Browes¹, H. Vass¹
¹University of British Columbia, Vancouver, BC ²Vancouver Coastal Health, Vancouver, BC

Introduction: Delirium is an acute disturbance of consciousness with reduced ability to focus, sustain, or shift attention. It is associated with prolonged hospital stays, increased mortality rates, and cognitive dysfunction post-delirium. Thiamine and vitamin B12 deficiencies are potential etiologies of delirium. Despite well-established roles in cognitive function, the extent to which these micronutrients are being investigated as part of a delirium workup and treatment plan for hospitalist medicine patients at Vancouver General Hospital (VGH) is unknown.

Objectives: To determine: 1) the prevalence of delirium as identified by physicians across the three hospitalist medicine units at VGH, and of those: 2) the number of patients who received thiamine supplementation; and, 3) the number of patients who received vitamin B12 supplementation and/or laboratory investigations of serum vitamin B12 levels.

Methods: A retrospective chart review of 199 patients admitted to VGH hospitalist medicine units (L7A, L7C, L8A) from January 1 to 31, 2019 was conducted. Descriptive statistics were used to analyze data. **Results:** 82 patients (41.6%) presented with delirium. Among these patients, 19.5% (n=16) received thiamine supplementation, of which 25% (n=4) were for treatment of alcohol withdrawal and 75% (n=12) had no documented reason. 9.8% (n=8) of patients with delirium received vitamin B12 supplementation, of which 12.5% (n=1) was for delirium workup. 56.1% (n=46) underwent investigations of serum vitamin B12 levels.

Conclusion: This study indicates that despite a high prevalence of delirium within VGH hospitalist medicine wards, delirium workups do not routinely investigate thiamine or vitamin B12 deficiencies as potential causes.

Significance: This study suggests the connection between nutritional deficiencies and delirium may be under-recognized during workup and treatment plans for delirium. Dietitians may play a key role in advocating for awareness on this topic, and identifying and treating nutritional deficiencies related to delirium.