

Folate Screening Pattern at the Psychiatric Inpatient Unit at HMC, Qatar-Quality Improvement Project

Background and Purpose

Current studies have emphasized the importance of Folate and its crucial role in basic metabolic processes including methylation, synthesis of DNA and complex cellular interactions, where its deficiency may lead to impaired monoamine metabolism, contributing to a myriad of neuropsychiatric disorders. These have been explored in different studies by Bottiglieri T et al. [1] in patients with depression and dementia [1-3]. Accumulating evidence shows a link between low folate levels and depression. A study in Finland of middle-aged men found that individuals with low dietary folate intake were more prone to present with depressive symptoms [4], and in another study with members from the US population detected low folate levels in its depressed subjects [5]. In another study, the Sacramento Area Latino Study on Aging (SALSA), Marisa et al. [6] found an association between low folate and depression in their subjects.

In a case control study with subjects clinically diagnosed with dementia of Alzheimer type as well as histologically confirmed AD, found their subjects to have high total homocysteine level and lower folate and B12 levels than controls [7]. The involvement of low levels of Folate and B12 in individuals with AD was inferred in a population based study conducted in Sweden [8].

Earlier studies linked low folate levels with treatment resistant depression. In a 4 week, double-blind clinical trial, with a sample of 55 outpatients with fluoxetine resistant MDD, found that low levels of Folate are associated with poorer treatment response [9]. Moreover, adjuvant folate supplementation in addition to standard therapy has been shown a couple of studies including, 2 randomized, double-blind, parallel-sequential trials, to improve clinical response rates in folate deficient patients with SSRI resistant depression [10-12].

Research Article

Volume 5 Issue 5 - 2016

Adel S Zaraa*, Lolwa F Kamal, Mahmoud Aborabeh and Mahmoud Midany

Department of Psychiatry, Qatar

***Corresponding author:** Adel Zaraa, Adel Zaraa, Professor of Clinical Psychiatry, University OUCOM, Ohio, USA, WCMC, HMC, ED, Po Box 3050, Doha, Qatar, Tel: 9743347277; Email: drzaraa@gmail.com

Received: March 20, 2016 | **Published:** March 22, 2016

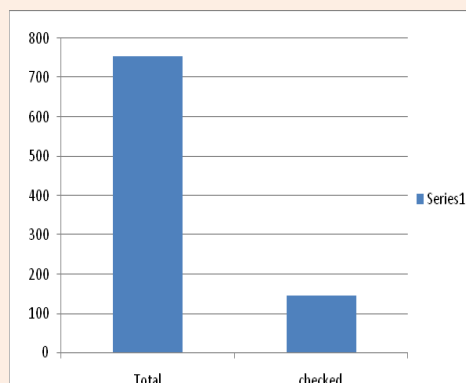
We sought in this project to assess the number of patients that are routinely screened for folate deficiency among patients admitted to the psychiatric hospital in Doha, Qatar.

Methods

Admission records, including baseline demographic characteristics, and initial laboratory workup were reviewed for consecutive patients admitted to the Hamad Psychiatry Hospital in Qatar months in 2013, as a Quality Improvement Project.

Results

Overall, 754 patient records were reviewed, of which females were 153 patients and 601 males. The data revealed that only 19.5% (147/754) of patients had folic acid levels ordered on admission (Graph 1).



Graph 1: Folate Screening.

Folate level was done in 147 patients out of 754 patients reviewed. 19.50%

Conclusion

Growing evidence supports the addition of supplemental folate as an augmentation strategy in treatment refractory depression. It's vital to identifying patients with folate deficiency through routine laboratory evaluation.

References

1. Bottiglieri T, Laundry M, Crellin R, Toone BK, Carney MW, et al. (2000) Homocysteine, Folate, Methylation, and Monoamine Metabolism in Depression. *J Neurol Neurosurg Psychiatry* 69(2): 228-232.
2. Bottiglieri T, Hyland K, Laundry M, Godfrey P, Carney MW, et al. (1992) Folate deficiency, bipterin and monoamine metabolism in depression. *Psychol Med* 22(4): 871-876.
3. Bottiglieri T (1996) Folate, vitamin B12, and neuropsychiatric disorders. *Nutr Rev* 54(12): 382-390.
4. Tolmunen T, Voutilainen S, Hintikka J, Rissanen T, Tanskanen A, et al. (2003) Dietary folate and depressive symptoms are associated in middle-aged Finnish men. *J Nutr* 133(10): 3233-3236.
5. Morris MS, Fava M, Jacques PF, Selhub J, Rosenberg IH (2003) Depression and folate status in the US Population. *Psychother Psychosom* 72(2): 80-87.
6. Ramos MI, Allen LH, Haan MN, Green R, Miller JW (2004) Plasma folate concentrations are associated with depressive symptoms in elderly Latina women despite folic acid fortification. *Am J Clin Nutr* 80(4): 1024-1028.
7. Clarke R, Smith AD, Jobst KA, Refsum H, Sutton L, et al. (1998) Folate, vitamin B12, and serum total homocysteine levels in confirmed Alzheimer disease. *Arch Neurol* 55(11): 1449-1455.
8. Wang HX, Wahlin A, Basun H, Fastbom J, Winblad B, et al. (2001) Vitamin B(12) and folate in relation to the development of Alzheimer's disease. *Neurology* 56(9): 1188-1194.
9. Papakostas GI, Petersen T, Mischoulon D, Ryan JL, Nierenberg AA, et al. (2004) Serum folate, vitamin B12, and homocysteine in major depressive disorder, Part 1: predictors of clinical response in fluoxetine-resistant depression. *J Clin Psychiatry* 65(8): 1090-1095.
10. Alpert JE, Mischoulon D, Rubenstein GE, Bottonari K, Nierenberg AA, et al. (2002) Folinic acid (Leucovorin) as an adjunctive treatment for SSRI-refractory depression. *Ann Clin Psychiatry* 14(1): 33-38.
11. Coppen A, Bailey J (2000) Enhancement of the antidepressant action of fluoxetine by folic acid: a randomised, placebo controlled trial. *J Affect Disord* 60(2): 121-130.
12. Papakostas GI, Shelton RC, Zajecka JM, Etemad B, Rickels K, et al. (2012) L-methylfolate as adjunctive therapy for SSRI-resistant major depression: results of two randomized, double-blind, parallel-sequential trials. *Am J Psychiatry* 169(12): 1267-1274.