Vitamin B₁₂ deficiency

(JULY 2015)

TO THE EDITOR: In the article "An unusual cause of vitamin B_{12} and iron deficiency," the diagnosis of vitamin B_{12} deficiency was made only by a vitamin B_{12} level of 108 pg/mL.

According to Harrison's Principles of Internal Medicine, 18th edition, page 870, the diagnosis of vitamin B₁₂ deficiency requires measurement of methylmalonic acid. Either this test was not performed on the 76-year-old woman described in the article, or the result was not entered. Without a methylmalonic acid level, the title of this article seems incorrect, or the article itself is incomplete by not including this level. The correct diagnosis of anemia due to an intestinal tapeworm was made by capsule endoscopy. She received appropriate therapy and her anemia cleared quickly.

If there is an updated concept for diagnosing vitamin B_{12} deficiency, I'm open to learning about it.

KENNETH R. PHILLIPS, MS, MD, FCCP Apponaug Diagnostics and Therapeutics Warwick, RI

■ REFERENCE

 Maithel S, Duong AK, Zhang J, Nguyen DL. An unusual cause of vitamin B₁₂ and iron deficiency. Cleve Clin J Med 2015: 82:406–408

doi:10.3949/ccjm.83c.01001

IN REPLY: We thank Dr. Phillips for his inquiry.

In general, serum vitamin B₁₂ concentrations very greatly, and we asknowledge.

trations vary greatly, and we acknowledge that serum vitamin B_{12} may be normal in up to 5% of patients with documented B_{12} deficiency. In a prospective study of 1,599 patients, Matchar et al² demonstrated that a single vitamin B_{12} level less than 200 pg/mL

had a specificity greater than 95% at predicting vitamin B_{12} deficiency.² We acknowledge that additional metabolite testing is necessary in equivocal cases in which the vitamin B_{12} level is between 200 and 300 pg/mL, which is often considered to be the normal range, but the patient has symptoms of vitamin B_{12} deficiency such as dementia and unexplained macrocytosis, and neurologic symptoms.³

Based on the patient's symptoms of neuropathy and fatigue in conjunction with a vitamin B_{12} level well below 200 pg/mL, we believe that the diagnosis can be made. ^{2,3} Nonetheless, although we did not mention it in our article, we did indeed send for a methylmalonic acid measurement at the time of the initial evaluation, and the level was elevated at 396 nmol/L (normal 87–318 nmol/L), further confirming her vitamin B_{12} deficiency.

DOUGLAS L. NGUYEN, MD Assistant Clinical Professor of Medicine University of California, Irvine

SHELLY MAITHEL University of California, Irvine

ALEX K. DUONG University of California, Irvine

JONATHAN ZHANG, MD University of California, Irvine

■ REFERENCES

- Naurath HJ, Joosten E, Riezler R, Stabler SP, Allen RH, Lindenbaum J. Effects of vitamin B12, folate, and vitamin B6 supplements in elderly people with normal serum vitamin concentrations. Lancet 1995; 346:85–89.
- Matchar DB, McCrory DC, Millington DS, Feussner JR.
 Performance of the serum cobalamin assay for diagnosis
 of cobalamin deficiency. Am J Med Sci 1994; 308:276–
 283.
- Stabler SP. Clinical practice. Vitamin B12 deficiency. N Eng J Med 2013; 368:149–160.

doi:10.3949/ccjm.83c.01002

LETTERS TO THE EDITOR

Preoperative testing

(OCTOBER 2015)

1-Minute Consult and the accompanying editorial on preoperative testing. I have long requested from my local hospitals the rationale for the long list of tests that used to be mandated for any surgery. I could not even get the courtesy of a reply from the department of anesthesia. For a while, in addition to the complete blood cell count and chemistry panel, one hospital demanded a urinalysis for cataract surgery.

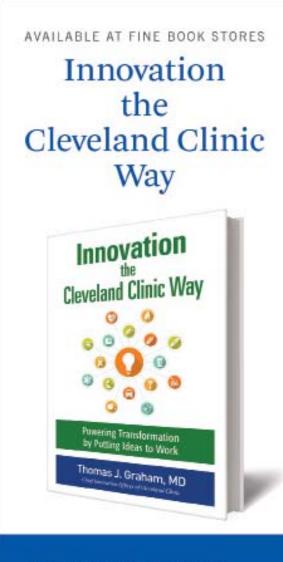
Finally, without any explanation, the testing is now no longer mandated for cataract surgery but is still required for surgery such as the meniscus repair that was referenced.

These are not tests I want to order, but I am forced to order them or the surgery won't be done. Certainly, in a diabetic patient or a patient treated with a complex regimen for hypertension, tests may be needed.

Thank you for the opportunity to comment.

CYNTHIA POINT, MD San Francisco, CA

doi:10.3949/ccjm.83c.01003



Innovation is a key asset in business and healthcare. Learn how you and your organization can put ideas to work.

This book tells you how to ignite missiondriven innovation, boost the culture and infrastructure of innovation, recruit and retain brilliant innovators and much more.

By Thomas J. Graham, MD

For details, visit clevelandclinic.org/ClevelandClinicWay.

