Spot urine test: To monitor dietary sodium compliance in liver disease patients?

August 12 2009

Most patients with ascites caused by liver cirrhosis are treated with diuretics in addition to dietary sodium restriction. This creates a negative nitrogen balance and promotes mobilization of ascites. Lack of response can be secondary to noncompliance to salt restriction. The standard test to monitor compliance has been assessment of 24-h urinary sodium excretion. This can be difficult because it requires 24 h of urine collection by the patient.

A research article to be published on August 7, 2009 in the World Journal of Gastroenterology addresses this question. Study designed by Dr. El-Bokl and performed by Dr. Senousy and colleagues evaluated using spot urine Na/K ratio as an alternative. Forty patients with liver cirrhosis and ascites were admitted to Ain Shams University Hospital in Cairo, Egypt. The spot urine tests were compared to the standard 24-h urine collection test.

Results showed adequate accuracy for the spot urine test. Also, it had adequate sensitivity and specificity in identifying patients that were not compliant to the diet. Previous studies have been published as abstracts and showed similar results, however, the study performed by Dr. Senousy is considered to be the first full publication that explains the method of the study and research details.

Dietary sodium restriction is an important aspect in the treatment of ascites. Noncompliance can be misinterpreted as diuretic resistance, which can lead to unnecessary higher diuretic doses, or even using other
forms of treatment like aspiration of ascitic fluid. The authors state that the new test is more practical compared to urine collection and it allows identification of patients that are noncompliant, for whom the next step should be diet education rather than increasing diuretic dose.


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