

Utility of the multistix 10 SG® reagent strips in the diagnosis of peritonitis in peritoneal dialysis [Utilidad de las tiras reactivas multistix 10 SG® en el diagnóstico de peritonitis en diálisis peritoneal]

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Introduction: Peritoneal infection is a common complication in peritoneal dialysis, which determined a significant morbidity and mortality. Usually the diagnosis is established by clinical signs and symptoms, cloudy effluent and positive culture. Sometimes the symptoms are not evident, the leukocyte count may not be available and culture takes several days. On the other hand it is known that early antibiotic therapy increases effectiveness and promotes the resolution of the episodes of peritoneal infection. Objective: Study the diagnostic capacity of Siemens Multistix 10 SG® reagent strips in determining peritonitis in patients on peritoneal dialysis. Methods: A prospective observational study was carried out. Samples of peritoneal fluid effluent from prevalent patients on peritoneal dialysis were analyzed for six months. It was taken as the criterion of peritonitis, the presence of more than 100 leukocytes (L)/ ?l and over 50% of these polymorphs. Samples of peritoneal fluid effluent were obtained after two-hours minimum stays and minimum volume of 1500 cc. All samples were analyzed using Siemens Multistix 10 SG® reagent strips for 2 minutes, scoring the observer the result according to the chromatic scale (value 0 = 0-15 L / ?l; value 1 = 16-70 L / ?l; value 2 = 71-125 L / ?l; and value 3 = 126-500 L / ?l) and compared to those sent to the hospital

laboratory for manual leukocyte count. Other clinical and epidemiological variables were collected. Results: 111 samples of peritoneal dialysis were analyzed. Peritoneal infection were detected in 28 samples (25.2%). No significant differences between infected and uninfected by reason of age, sex, diabetes or number of previous peritonitis were observed. 68% of infected patients reported suffering from pain. In those infected samples, 73% presented cloudy fluid. In relation to the result of Multistix and considering infection a value greater than 1, we found a sensitivity of 100% and a specificity of 95.2%. If the cut point is taken in the value 2 we found a sensitivity of 96.4% and a specificity of 100%. Conclusions: The use Siemens Multistix 10 SG® reagent strips as a diagnostic test for the detection of peritoneal infection has excellent validity and could replace the manual leukocyte count. © 2015, Sociedad Espanola de Enfermeria Nefrologica. All rights reserved.

Diagnostic test

Multistix

Peritoneal dialysis

Peritonitis

Reagent strips