Abstract

Background: Gram negative bacterial infections continue to cause mortality due to unavailability of new methods for rapid diagnosis and appropriate treatment.

Objective: To evaluate and compare blood culture results with endotoxin measurements in diagnosis of gram negative bacterial infections.

Methods: This research was conducted on 100 hospitalized patients with clinical signs and symptoms compatible with septicemia. Blood cultures and endotoxin measurements (limulus amebocyte lysate, LAL test) were carried out on blood samples of all patients.

Findings: Blood cultures were positive in 16(16%) patients. Sensitivity and specificity of blood cultures were 18% and 100%, respectively. LAL tests were positive in 20(20%) patients. Sensitivity and specificity of LAL test were 100% and 96% respectively.

Conclusion: LAL test as a diagnostic assay for gram negative bacterial infections is more sensitive than blood culture. In addition, it takes only a few minutes to be performed, comparing blood culture that takes days.

Keywords: Limulus Amebocyte Lysate, Blood Culture, Gram Negative Bacteria