

Applicability of alternative methods in monitoring the microbiological quality of treated water for dialysis

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Abstract

Dialysis has been widely used in the treatment of patients with chronic kidney diseases and is considered a global public health issue. This treatment, which has changed the prognosis and quality of patients life can lead to complications that are often fatal. Taking into account the large volume of water to which the patient are exposed during the hemodialysis section, it is of fundamental importance that its quality is guaranteed. However, despite conventional microbiological methods (such as plate method, membrane filtration and multiple tubes by the NMP process) be simple, efficient and have a low cost, they have some limitations such as low selectivity of the culture medium, variability of the biological response and late results in the detection of microorganisms, compromising the time to determine preventive measures in order to reduce patients' injuries.

In an attempt to minimize these limitations, alternative microbiological methods have been developed to provide a higher level of quality to the tests, greater sensitivity and faster results, allowing corrective actions to be taken early. For this reason, there is a need for validation of alternative tests that favor the monitoring of treated water for dialysis in real time to promote and prevent injuries to patients submitted to this procedure. In this context, a case study will be addressed about the validation and applicability of a kinetic method of *Limulus Amebocyte Lysate Test*, the *Portable Test System (PTS®)* in a dialysis unit.

Biography:

Pharmacist with experience in the areas of nanotechnology and microbiology. Conducted master's and specialization in microbiological quality control both in the area of applicability of alternative methods in monitoring the microbiological quality of treated water for dialysis. Currently is PhD student in Pharmaceutical Sciences – UNESP, addressing in her thesis the development of nanotechnological formulations for a fungal disease.

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Citation: Gabriela Correa Carvalho, Applicability of alternative methods in monitoring the microbiological quality of treated water for dialysis; *Global Nephrologists Meeting*; January 18, 2021