

Impact of the use of Multiplex PCR in the management of central nervous system infections

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Abstract

Introduction: The diagnostic and therapeutic urgency in front of central nervous system infections makes it necessary to seek a rapid and precise diagnostic tool.

Materials and Methods: This is a retrospective monocentric study conducted between March 2019 and January 2020, carried out at the Paediatric Emergency Department. We included all patients admitted for suspected meningitis or meningoencephalitis. Clinical, biological and microbiological data were collected to assess the impact of Multiplex PCR on management.

Results: Seventy-eight patients were included. The median age was 34 months [10-84]. Empirical antibiotic therapy was started in all patients and antiviral therapy in 21 patients (27%). In the cerebrospinal fluid study, 5 had a positive direct examination and seven had a positive bacterial culture. The multiplex polymerase chain reaction (PCR) study was performed in 48 patients (61.5%), of which 19 (39.5%) were positive (13 bacterial and 6 viral). This allowed the adaptation of treatments, the addition of antiviral for four and the cessation of antibiotic therapy in 24 patients (31%) reducing their length of stay in hospital.

Conclusion: Multiplex PCR can be a diagnostic tool that allows treatment to be adapted more rapidly than with conventional techniques.

Key words: PCR, Bacterial culture, nerve infections.

Biography:

M. El-bouz is a Faculty of Medicine and Pharmacy from the Pediatric Emergency Department at University Hassan II of Casablanca, Morocco.

Speaker Publications:

1. "Apprentissage, mémorisation, et généralisation de nouveaux noms chez l'enfant trisomique 21. Une comparaison avec l'enfant en développement normal. Learning and generalizing novel names by children with Down syndrome. A comparison with normally developing children"; *Psychologie Française.* / 2006 / 51(4):413-426.
2. "The Fragile-X Syndrome: What about the Deficit in the Pragmatic Component of Language?"; *Journal of Cognitive Education and Psychology* / 2002 / 2(3):244-265.

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