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A STUDY OF CEREBROSPINAL FLUID – C-REACTIVE PROTEIN IN ACUTE BACTERIAL MENINGITIS AMONG PEDIATRIC AGE GROUP IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Worldwide, bacterial meningitis is a major cause of illness and mortality in children. After the onset of bacterial meningitis, C-reactive protein (CRP) rises rapidly for the first 24 to 48 hours before increasing significantly over time. The goal of the current investigation was to determine the relationship between bacterial meningitis in the paediatric age group and cerebrospinal fluid (CSF)-CRP.

KEYWORDS

Bacterial meningitis, C-reactive protein, Cerebrospinal fluid

METHOD

Meningitis was suspected in 120 kids, ranging in age from 1 month to 12 years, who were included in the study. At L3-L4, a lumbar puncture was conducted, and a maximum of 3 cc of CSF was collected in 4 sterile containers. One millilitre was sent for protein and sugar, five millilitres for CSF cytology and CSF-CRP, and one millilitre for gramme staining and CSF culture sensitivity.

RESULT

The prevalence of bacterial meningitis in institutions was 5.27%. The most prevalent symptoms were fever (93.26%) and altered sensorium (92.30%), and the most prevalent meningeal sign was neck rigidity (58.65%). The results of the neurologic evaluation revealed aberrant motor function (13.46%), abnormal cranial nerve findings (10.57%), and abnormal mental state (34.61%). CRP levels were 15.36 0.67 mg/l on average. The most prevalent isolated organism in CSF culture was pneumococcus (53.48%). The mortality rate for institutions was 13.76%. With a sensitivity of 82.69%, specificity of 84.21%, positive predictive value of 96.62%, and negative predictive value of 47.05%, CSF-CRP was positive in 104 (82.69%) of the culture-positive cases.

CONCLUSION

CRP levels in CSF offers a moderate sensitivity and specificity as well as high positive predictive value. This indicates that CSF-CRP is a better marker in differentiating bacterial meningitis and it can serve as a useful screening test for bacterial meningitis.

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