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Original Article

Frequency and Antimicrobial Susceptibility of *Haemophilus influenzae* Type b Isolated from Children Suspected to Meningitis

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Abstract:

Background: *Haemophilus influenzae* type b (Hib) has emerged as the predominant cause of meningitis in developing countries wherever it has been studied using good microbiologic procedures, but data regarding frequency, antimicrobial susceptibility and preferable method for detection of *Haemophilus influenzae* type b isolated from Iranian patients were scarce.

Methods: One thousand and eight hundred suspicious CSF samples were received from Children Medical Center Hospital in Tehran, periodically. All samples were cultured on conventional and selective media for *Haemophilus influenzae* type b detection. PCR performed for samples were Hib negative in culture. The susceptibility of the isolates to different antimicrobial agents was determined using the disk diffusion method.

Results: Overall, 6.7% (n= 121) of specimens had positive culture. 15.7% (n= 19) of isolates were diagnosed as *Haemophilus influenzae* type b with both culture and Antiserum test. PCR assay detected 10 isolates of *H. influenzae* type b in samples weren't detected in culture. *H. influenzae* type b isolates were resistance to ampicillin (42.1%), chloramphenicol (36.8%), and co-trimoxazole (52.6%), respectively. The range of antimicrobial susceptibility to cephalosporins was from 52.6% for cephalothin to 57.8% for ceftriaxone, ceftazidime, cefixime and ceftizoxime. Multidrug resistances were observed in 31.5% of *H. influenzae* type b isolates.

Conclusion: Although we found high frequency of resistance to the first line drugs for *H. influenzae* type b in Iran, but the frequency of this organism among children meningitis was lower than many Asian and European countries. PCR assay was more sensitive in detection of *H. influenzae* than culture method.

Keywords:

Haemophilus influenzae . Meningitis . Antimicrobial sus-ceptibility . Iran

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