Abstract: Objective:
Meningitis due to Escherichia coli and streptococci.agalactiae(B) is a common infectious disease among infants and children that can be fatal in the absence of correct and rapid diagnosis and treatment. The conventional methods of diagnosis based on culture and serology is of low sensitivity and time consuming. The objective of this study was to compare the performance of the culture, PCR and Nested PCR methods for diagnosis of meningitis caused by Escherichia coli and streptococci.agalactiae(B).

Materials & methods:
A total of 106 CSF samples were collected from infant patients suspected of having meningitis, and cultured on blood agar and chocolate agar media. The rest of CSF was centrifuged and the pellets were used for DNA extraction by phenol-chloroform method. The extracted DNA was entered in a PCR reaction containing specific primers for Escherichia coli and streptococci.agalactiae(B). The PCR products from negative samples were reamplified with internal primers in a nested PCR reaction. The PCR and Nested-PCR products were electrophoresed on a 1% agarose gel.

Results:
From 106 samples were evaluated, 0 samples were by PCR and nested PCR method for streptococci.agalactiae(B). 8 samples were positive by PCR and 10 samples were positive by nested PCR method for Escherichia coli.

Discussion:
Since the sequence of 16srRNA gene has limited variation and has identical sequence in all prokaryotes, it can be an efficient aim for PCR, and distinguishing meningitides bacterial from among the other kinds of meningitis.

Conclusions and results:
The results of this study indicated that among the culture, PCR and
meningitis. the Nested-PCR method showed higher sensitivity followed by
PCR and Culture.

Keywords:
Bacterial meningitis, Escherichia coli, streptococci.agalactiae(B), PCR, Nested-PCR

Presentation: Poster