Use of Amplidiag Bacterial GE assay (Mobidiag) in the diagnosis of bacterial diarrhoea

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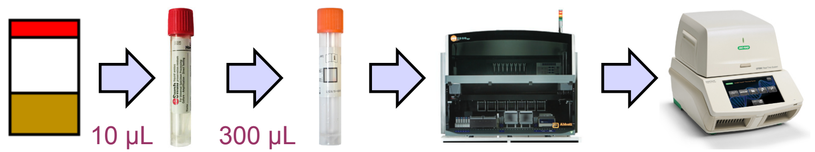
INTRODUCTION

The diagnosis of bacterial diarrhoea currently relies on cultures using selective media, a time-consuming approach whose sensitivity is still matter of debate, and time to result very long. Recently, several automated systems based on multiplex PCR assays have been developed to provide a rapid and comprehensive diagnosis. In this study, we assessed the Amplidiag Bacterial GE assay (Mobidiag) in the diagnosis of bacterial diarrhoea.

MATERIAL AND METHODS

100 consecutive stools collected between September and October 2015 in Lariboisière Hospital (Paris) for the diagnosis of infectious diarrhoea in adults, with a systematic screening of *Salmonella, Shigella* and *Campylobacter* by culture methods

43 frozen stools from children of Robert Debré Hospital (Paris), known to be positive for a large range of gastrointestinal pathogens covered by the kit

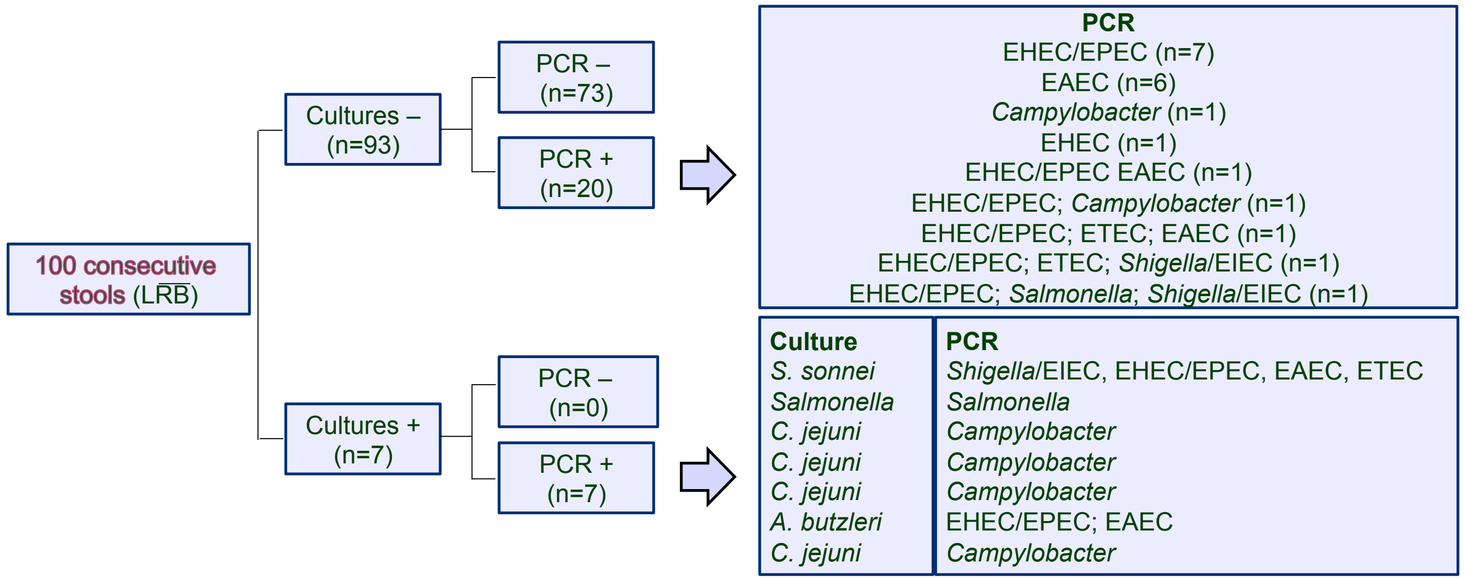


Stool sample | Dilution Eswab (Copan) | Dilution Multi-collect (Abbott) | DNA Extraction m2000 sp (Abbott) | Amplification CFX96 (Biorad)

Bacterial pathogens detected by Amplidiag Bacterial GE assay (Mobidiag)

Campylobacter	EHEC
Salmonella	ETEC
Shigella/EIEC	EAEC
Yersinia	EPEC

RESULTS



43 frozen stools (RDB)

Identification obtained by culture	Detection of the cultured pathogen by PCR	Added microorganism detected by PCR
Campylobacter (n=12)	12	6
Salmonella (n=20)	15	10
Shigella (n=10)	10	5
Yersinia (n=1)	1	0

CONCLUSION

Amplidiag Bacterial GE assay is **a rapid and reliable method** to screen usual bacteria involved in gastroenteritis. This approach is particularly of interest to select samples that require cultures or not. Noteworthy, the high rate of pathogenic *E. coli* needs further investigations to unravel the clinical significance of *E. coli* positive results.