DETECTION OF *VIBRIO CHOLERAE* O1 BY A SINGLE TUBE NESTED PCR USING TWO TARGET GENES

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Vibrio cholerae O1 is the ethiological agent of cholera, a diarrhoeal disease whose transmission occurs mainly through ingestion of contaminated water. The bacterium toxigenicity depends on the presence of phage CTX. Although the majority *V. cholerae* ambiental strains are non-toxigenic they can be infected by this phage becoming pathogenic. Besides diagnostic by culture spends time, it needs a great number of viable bacteria in the sample. Single tube nested PCR (STNPCR) using two target genes can detect even a small account of bacteria, toxigenic and non-toxigenic strains and also the still infectious viable but non-culturable state of *V. cholerae*. Once this technique does not need a previous DNA ontrol on it could improve the tests results which allows Public Health Service to ontrol the risk of a new outbreak even before the emergency of cases. This study objective was to detect *V. cholerae* O1 from liquid culture by STNPCR using two target genes. It was possible to identify *V. cholerae* O1 when only three UFC were present in the sample. Despite the significance statistical test was not done, since the amostral number was small, STNPCR showed the same pattern when five experiments were done. Thus STNPCR using two target genes demonstrated high sensitivity and good reprodutibility and could be used to cholera diagnostic and for water surveillance programme at endemic areas.

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