CLOSTRIDIUM DIFFICILE BINARY TOXIN (CDT) IN ANTIBIOTIC ASSOCIATED DIARRHEA

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Abstract

Toxins A and B. 100 ng/mL or more of cdtB present, the level of CDT may be sufficient to cause diarrhea and in vitro cultures.  Over half of the EIA positive samples lacked all or any part of the CDT locus.  No CDT- isolate was recovered from feces and in vitro cultures.  CDT is best known as a binary toxin that acts as the binding component of Clostridium difficile binary toxin (CDT). This toxin was shown to have three genes, cdtR, cdtA, cdtB that make up the CDT locus.  CDTb is the binding component of CDT.  We found CDT(+) isolates in 50/80 (63%) samples; cdtB was present in 78/80 (97%) isolates and lanes 4 and 5 made cdtB in vitro.  The CDT immunoassay detected CDTb in about 2/3rds of the samples that contained CDTb.  The CDT immunoassay detected CDTb in about 2/3rds of the samples that contained CDTb.

Materials and methods

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Discussion

C. difficile is known to produce a third, binary toxin, CDT. CDT is composed of two independent, non-identical subunits.  CDTb forms the oligomer even in the absence of CDTa. Only CDTa and CDTb together do CDTa and CDTb have cytotoxic and enterotoxic activity. CDTb forms the oligomer even in the absence of CDTa. Only CDTa and CDTb together do CDTa and CDTb have cytotoxic and enterotoxic activity. CDTb forms the oligomer even in the absence of CDTa. Only CDTa and CDTb together do CDTa and CDTb have cytotoxic and enterotoxic activity.

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