Reviewer’s report

Title: High number of diarrhoeal co-infections in travellers to Benin, West Africa

Version: 2 Date: 2 October 2013

Reviewer: Thomas Löscher

Reviewer’s report:

In this study, samples from the first or second stool passed after returning home were investigated in 45 Finnish travelers of a group travel to Benin, West Africa, with a multiplex RT-PCR assay for major bacterial enteropathogens. In 39 of 45 travellers having had traveler’s diarrhea (TD) during their stay, bacterial pathogens were detected with enteropathogenic Escherichia coli being most common (30 travelers), followed by enteroaggregative E. coli (EAEC, 23), enterotoxigenic E. coli (ETEC, 22), Shigella or enteroinvasive E. coli (EIEC; 7), enterohaemorrhagic E. coli (EHEC, 2), and Salmonella (1). In 31 (79%) of the TD cases two or more bacterial pathogens were identified. Yersinia, Campylobacter, and Vibrio cholerae were not detected. It is conclude that PCR diagnostics reveal in most patients a multitude of pathogens, and that the role of each pathogen should be re-evaluated.

Although there are few data using modern PCR diagnostics in travelers returning from a West African destination with or without a history of TD there are considerable limitations with this study:

The number of travelers investigated is rather small (45), only bacterial pathogens have been investigated, and samples have not been collected at the time of TD but only after return and after a variable interval between TD episodes and return (intervals not indicated). Therefore, the (often multiple) bacterial pathogens found in the stool may not represent the etiological agents of a previous TD episode but rather a change of the intestinal bacterial flora when travelling from a low to a high incidence area for diarrheal disease. This has already been shown in other investigations for EAEC, EPEC, ETEC, and salmonella. To adjust for such an effect, an adequate control group of travelers without TD episode(s) should have been included. However, only 6 travelers without TD had been investigated (and showed similar frequencies of various E. coli pathotypes).

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I declare that I have no competing interests