



UKE Paper of the Month August 2016

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The Development of Irritable Bowel Syndrome: A Prospective Community-Based Cohort Study

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ABSTRACT:

Objective: It remains controversial whether psychosocial burden is an independent predictor of irritable bowel syndrome (IBS) or occurs concurrently as an epiphenomenon. Here we prospectively examine the individual contribution of psychosocial risk factors, demographic factors, somatic symptoms, and gastrointestinal infection within a non-clinical, IBS-free population before infection occurred.

Design: A prospective community-based cohort study including a consecutive sample of healthy participants with an elevated risk of developing gastrointestinal infection during long distance travel was conducted. Potential predictive factors were investigated using validated self-report scales pre-travel, one week after return, and seven months post-travel. IBS was assessed using the ROME-III Diagnostic Questionnaire.

Results: Of the 1964 eligible long-distance travelers, 1464 responded at follow-up directly after their journey, and 1190 participants completed the study seven months post-journey. Fifty-three percent of study completers were female, mean age was 39.9 (SD=15.7) years. The mean travel duration was 40.8 (SD=52.7) days, and 43.3% (95% CI=40.4 to 46.1%) of participants experienced at least moderate infectious traveler's diarrhea. The incidence of newly developed IBS seven months post-travel was 7.2% (95%CI= 5.8 to 8.6%). In multivariate analyses, female gender, vulnerability to diarrhea under stress, baseline somatic symptom burden, baseline illness anxiety, diarrhea within the four months pre-travel, and traveler's diarrhea during the journey significantly predicted IBS post-travel.

Conclusion: This study indicates that gastrointestinal infection as well as predisposing factors such as female gender, vulnerability to diarrhea under stress, illness anxiety, and somatic symptom burden predict the development of IBS. The results indicate the necessity of simultaneously addressing both somatic and psychological needs in patients with IBS as early as possible.

STATEMENT:

This study investigates predictors of the development of Irritable Bowel Syndrome (IBS) in a unique, community-based sample. The interdisciplinary team of authors overcame many of the limitations of previous studies by investigating a large cohort of healthy individuals at risk of developing gastrointestinal infections before being infected and in doing so, have realistic measurements of premorbid risk factors of IBS development. Results of the carefully designed multivariate data analyses provide evidence for a biopsychosocial model of IBS-development: acute gastrointestinal infection, female gender, vulnerability to diarrhea under stress, previous diarrhea, subjective somatic symptom burden, and illness anxiety were identified as independent predisposing factors for IBS development. Based on these results, it is now unambiguously clear that both psychological and somatic components of the disease must be addressed in treatment, prevention, and education strategies.



BACKGROUND:

This work was conducted at the Institute of Psychosomatic Medicine and Psychotherapy in cooperation with the Department of Gastroenterology and Infectious Diseases, the Department of Medical Biometry and Epidemiology, and the Israelitic Hospital in Hamburg. The study was supported by a DFG research grant, dedicated to Bernd Löwe, Ansgar W. Lohse, Viola Andresen, and Matthias Rose (LO 766 / 6-1). Bernd Löwe holds the professorship for Psychosomatic Medicine and Psychotherapy at the UKE since 2007. The authors have strong research interests in the multifactorial development of post-infectious irritable bowel syndrome and other post-infectious gastrointestinal diseases.