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A PREDICTOR OF THE DEVELOPMENT OF GASTROINTESTINAL SYSTEM DYSFUNCTION IN EARLY-AGED CHILDREN

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Relevance of the topic

Functional gastrointestinal disorders (FGID) are common conditions among children and are characterised by recurring GI symptoms that are not attributable to structural or biochemical abnormalities or as a comorbidity of organic disease. FGID may be caused by various factors, such as disturbances in gut motility, visceral hypersensitivity, mucosal and immune function, gut microbiota, and central nervous system processing. FGID in children lead to a significant symptom burden with associated psychological distress, reduced quality of life, school absenteeism, greater health care expenditure, and missed work for parents. Furthermore, FGID in childhood is also linked to the progression of the disorder into adulthood, such that 25% of children who present with recurrent abdominal pain may subsequently develop irritable bowel syndrome (IBS) as a children.

The diagnosis of FGID may be made using the Rome criteria, which are symptom-based guidelines developed using scientific evidence and clinical experience. The most recent iteration is Rome IV, which has paediatric versions available for toddlers (up to four years of age) and children and adolescents (aged four to eighteen years).

The aim of this scientific work was to assess the rates of FGID reported among the two age groups using the Rome IV criteria, focusing on cohorts from the general population with no underlying organic disease or presenting GI symptoms in order to provide a benchmark for comparative studies.

Materials and methods

Data were extracted from retrieved records and entered in to a spreadsheet to record study details, cohort descriptives, and all data reporting overall FGID as well as results for each Rome IV category, where available. Missing data are presented as ‘not reported’. If papers presented data on different age cohorts, these were presented and assessed separately according to the age group. If papers included a case control

study, only data for the control group were presented and assessed. Summary statistics were used to provide an overall and category prevalence estimate of FGID among the cohorts with data presented in tables and box plots. In the age group of children up to four years, FGID category data were divided in to the age ranges of infant (0–12 months) and toddler (13–48 months) where possible.

Results

The characteristics of each included study were examined alongside general cohort information. For those papers reporting from the same country, it was confirmed that each cohort was specific to that research with no reporting overlap between studies. Five (25%) studies recruited participants from healthcare clinics, five (25%) from well-baby/child clinics, five (25%) recruited in schools, one (5%) via an internet survey, and four (20%) did not state this information. The Rome IV assessments were completed by a number of groups: 2 (10%) researchers, 1 (5%) physicians, 13 (65%) by family members, with 4 (20%) studies providing insufficient information.

Conclusions

This review provides an overview of the reported incidence of FGID using the Rome IV criteria among children. It has enabled a direct comparison with similar reviews using the Rome III criteria and highlighted the reasons for variations in the data. In providing an overall incidence of FGID among the general population, this review may be used as a benchmark of normative data for future cohorts utilising the Rome IV criteria in the general population, as well as comparative data for those with comorbid disease.

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