Acute gastroenteritis (AGE) is one of the most common diseases in children, and the second leading cause of morbidity and mortality worldwide. All children are expected to experience AGE in the first 3 years of life. The attack rate ranges from 0.5 to 1.9 illnesses per person annually in high-income countries, and is higher in the first 2 to 3 years of life (2.5 illnesses per child per year to even 5 illnesses in those attending day care centers) (1). In most European countries AGE is usually a mild disease, but it is still associated with a large number of hospital admissions and a not negligible number of deaths (2).

Europe encompasses a large number of wealthy and less wealthy countries that differ in tradition, culture, and health care systems. New options in terms of diagnosis, nutritional interventions, drugs, and now vaccines, are becoming available and may affect the severity and duration of symptoms as well as reduce the infection rate. Clinical practice guidelines are one of the tools that help the practitioner keep up to date and identify the best practices.

A number of guidelines for the management of children with AGE are available (3–5). Nevertheless, there appears to be considerable clinical variation in the management of AGE across Europe (6). This may reflect a degree of uncertainty as to which treatments are most useful, who would benefit from treatment and which treatments will result in cost-effective health gain. Furthermore, there is often a gap between the research identifying an effective clinical practice and its widespread adoption.

In this scenario, the European Society for Paediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) and the European Society for Paediatric Infectious Diseases (ESPID) joined forces to develop 2 parallel recommendations/guideline papers, 1 devoted to the clinical management of the otherwise healthy child with AGE and the other to rotavirus vaccination.

SCOPE OF THE GUIDELINES

These clinical management guidelines were developed to assist practitioners (eg, primary care physicians, pediatricians, family physicians) at all levels of health care in Europe, while recognizing that each patient is unique. The contents of the document may be subject to local adaptation in individual countries in relation to differences in the organization of health care systems, local values, and preferences (including costs), and may also assist local policymakers to reach decisions based on local cost-effectiveness analysis.
Development of these guidelines started with the identification of clinical questions that defined the relevant population, type of intervention, comparison, and outcomes. Following discussions, the Working Group agreed on a list of clinical problems relevant to the management of acute infectious diarrhoea, and defined 1 question for each recommendation or set of recommendations. The clinical questions were grouped into the following categories: definition of diarrhoea and epidemiology, risk factors for severe and/or persistent disease, clinical evaluation and disease severity, diagnostic workup, indications for a medical visit and for hospital admission, rehydration, nutritional management, drugs and other therapies, and prevention.

SYSTEMATIC REVIEW

The evidence review procedures included section-specific targeted searches as well as formal systematic reviews on selected topics. The authors of each section of the guidelines conducted computerised literature searches to identify relevant documents. The section-specific searches, the bibliographic databases, search terms, and selection procedures varied by topic. The data were presented as tables of evidence. Details of the section-specific searches and the tables of evidence are reported in the guidelines (see Supplement to this issue of the Journal).

STRENGTH OF EVIDENCE AND GRADE OF RECOMMENDATIONS

The strength of evidence in these guidelines was assigned according to Muir Gray (7) and the grades of recommendation according to Cook et al (8). Recommendations were formulated, graded, and consensus-agreed after discussion during panel meetings of the Working Group. Any disagreement was resolved by discussion until consensus was reached. The draft of the guidelines was circulated to each Working Group member for review and further comments. All critical feedback was discussed and changes were incorporated as necessary.

EXTERNAL REVIEW

The preliminary conclusions and draft recommendations were presented at the 2007 annual meetings of ESPGHAN and ESPID, and the feedback obtained, where appropriate, was incorporated in the document. A prefinal version of the document was sent for external review to experts in AGE to verify the completeness of the literature review and to ensure clinical sensibility, and to potential users who assessed its usefulness. The suggestions received were discussed and eventually incorporated in the final document. Finally, the guidelines were approved by the councils of ESPGHAN and ESPID.

KEY POINTS

The reader is referred to the full-length document for the complete list of recommendations and statements resulting from the systematic review of the literature (see Supplement to this issue of the Journal). The main conclusions and recommendations emerging from this project are listed below:

1. Acute gastroenteritis is an extremely common problem in childhood, particularly in the first 3 years of life. In Europe, it is usually, although not always, a mild disease, and death is an exceptional outcome. However, gastroenteritis is associated with a substantial number of hospitalisations and high costs.
2. The severity of gastroenteritis is related to aetiology rather than to age, and rotavirus is responsible for the most severe cases.
3. Dehydration is the main clinical feature of acute gastroenteritis and generally reflects disease severity. Weight loss, prolonged capillary refill time, skin turgor, and abnormal respiratory pattern are the best individual clinical signs of dehydration.
4. Hospitalisation should be reserved for children in need of procedures that can only be carried out in hospital, such as intravenous rehydration.
5. Microbiological investigations are generally not needed.
6. Rehydration is the key treatment and should be applied as soon as possible. Reduced osmolality oral rehydration solution should be used, and it should be offered ad libitum.
7. Regular feeding should not be interrupted and should be carried on following initial rehydration. Regular milk (lactose-containing) formulas are appropriate in the vast majority of cases.
8. Drugs are generally not necessary; however, selected probiotics may reduce the duration and intensity of symptoms. Other drugs may be effective but require further investigations.
9. Antibiotic therapy is not needed in most cases of AGE and may induce a carrier status in case of Salmonella infection. Antibiotic treatment is effective mainly in shigellosis and in the early stage of Campylobacter infection.
10. Prevention with antirotavirus vaccination is recommended for all European children and is expected to consistently reduce the burden of gastroenteritis and to prevent most of the severe cases in the most susceptible age groups.

CONCLUSIONS

The development of guidelines is only the first step of a complex process that includes disseminating the
information, evaluating efficacy and applicability, and testing the validity of guidelines. These guidelines are in their first stage and need to be validated in their natural setting—Europe. They may help to reduce the enormous burden and consequences of gastroenteritis and may offer an interesting model of how to face a common childhood disease at a continental level.

Conflicts of Interest of the Working Group

Prof Ashkenazi has received grant support from MedImmune, Wyeth, Bema, Pfizer, GlaxoSmithKline, Merck Sharp & Dohme, Sanofi-Aventis, Teva, and Viropharma and speaker honoraria from Merck Sharp & Dohme. Prof Guarino is a member of the Italian Rotavirus Advocacy Committee; members of his group have received travel grants to attend meetings from companies active in the field of gastroenterology; he has received research grants from Milupa, Dicofarm, and GlaxoSmithKline. Dr Hoekstra is a member of the Sanofi Pasteur MSD Intussusception case assessment committee. Prof Szajewska received lecture fees from Nestlé Poland, Nutricia Poland, Numico, Mead Johnson Nutritionals Poland, Mead Johnson International, Biocodex France, Danone Poland, Cotex, Merck, Biomed Lublin, Biomed Kraków, and GlaxoSmithKline; she received research grants or donations from Dicofarm Italy, Nutricia Research Foundation, and Biomed Lublin, and has been sponsored by Nestlé Poland, Danone, and GlaxoSmithKline to attend meetings. Drs Albano, Gendrel, and Shamir have no conflicts to declare.

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