Gastroenteritis – how we can manage it better

The ‘GP Gastro Study’ addresses common misconceptions in the management of gastroenteritis in Ireland, writes Simon Morgan

GASTROENTERITIS IS A COMMON ILLNESS in Ireland. A population study from 2003 reported a frequency of 0.6 episodes per person per year, equivalent to 8,800 new episodes of gastroenteritis each day or 3.2 million episodes each year. Though usually a minor and self-limiting illness, gastroenteritis causes substantial morbidity and occasionally death in this country.

All-island study

In 2004, Safefood, the Food Safety Promotion Board, published the results of an all-island study of the clinical and public health management of gastroenteritis by Irish general practitioners. The study found that gastroenteritis is a common presentation in the primary care setting, accounting for almost one in every 20 consultations or an average of seven consultations weekly, for each GP in full-time practice. The research found that many aspects of GP management were consistent with best practice. However, it also identified a number of areas where practice could be improved, including relative over-prescription of antibiotics and infrequent notification to public health departments.

In response to the recommendations arising from this study, Safefood have funded a follow-up project, known as the ‘GP Gastro Study’. Two research fellows, one each in Northern Ireland and the Republic, have been employed to undertake the work.

One of the objectives of the project is the development of practice-based and training resources for use by GPs, GP registrars, medical students and other primary care practitioners. One of these resources is a list of tips in the assessment and management of acute gastroenteritis in pri-
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The Safefood study found that GPs were unlikely to ask
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The question ‘Could this be part of an otherwise unknown cluster of cases in a family, institution or community. The question ‘Could this be part of an outbreak?’ should always be considered by the GP.
Infection with a gastrointestinal pathogen is often the
result of ingestion of contaminated food or water, known as
food poisoning. Between 30%-50% of travellers to high-risk
destinations will develop ‘traveller’s diarrhoea’, most commonly from enterotoxigenic E coli. Many pathogens are zoonoses, occurring in the GI tracts of wild and domestic animals (particularly reptiles) and birds. These can be trans-
mitted by handling or petting animals. Pathogens are also
effectively passed from person-to-person by direct contact.
This is more likely in institutionalised settings, eg. nursing homes and childcare centres. Broad spectrum antibiotics can cause gastroenteritis as a result of C difficile toxin.
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others.

### Tips on the assessment and management of acute gastroenteritis

**DO**
- Ask about exposure history eg. childcare, farm animal contact, travel?
- Ask about risk of transmission to others, eg. food handler, caregiver?
- Write the clinical and exposure history and request specific tests when sending off stool specimens
- Notify acute gastroenteritis and suspected food poisoning to the local public health department
- Exclude patients from childcare, school or work until the diarrhoea has stopped
- Give basic advice on hygiene and handwashing

**DON’T**
- Forget other causes of diarrhoea and vomiting in children
- Exclude food poisoning just because there is no history of a recent ‘suspect’ meal
- Send more than one stool specimen unless you suspect parasitic infection
- Routinely stop feeding
- Routinely prescribe anti-diarrhoeal medication
- Routinely prescribe antibiotics

Table 1

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Mary care (see Table J). These practice tips are based on the findings of the Safefood study and other sources, and address some of the common misconceptions and malprac-
tice in the management of gastroenteritis in the Irish community.
Exposure history
Identification of a possible source of infection is central to the assessment of the patient with gastroenteritis. Therefore, an exposure (or epidemiological) history should always be taken alongside the clinical one. The patient might be part of an otherwise unknown cluster of cases in a family, institution or community. The question ‘Could this be part of an outbreak?’ should always be considered by the GP.

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Sending off stool specimens
Most episodes of gastroenteritis are short-lived and invest-
tigation is usually unnecessary. However, stool samples
should be requested when the patient is clinically unwell or immunocompromised, there is a positive exposure history or
they are at high risk of transmitting the infection to others.

Stool sampling can have a significant public health impact in situations where they might otherwise add little to clini-
cal management.

The Safefood study found that GPs were uncertain about routine laboratory practice in the testing of stool samples. In fact, ‘routine’ stool-testing varies significantly between laboratories around the country. It is important, therefore, that GPs become familiar with local laboratory practice and the circumstances for making special requests. In general, when requesting stool examination, a detailed history (clinical and epidemiological) and the specific investigations should be written on the request form. Alerting the laboratory to possible exposures, eg. travel, can help direct appropriate microbiological examination.

**Only one stool specimen**
Sampling of multiple faecal specimens from the patient
with gastroenteritis has not been shown to significantly
improve the yield of bacterial pathogens over that of single specimens. Most (90%-95%) recognised pathogenic bacteria will be isolated on the first specimen submitted to the laboratory. However, multiple stools at different times are necessary for suspected parasitic infection due to the vari-
able excretion of these organisms.

**Notify about acute gastroenteritis**
Timely notification by GPs is the basis for effective communi-
cable disease surveillance, essential in the identification and control of outbreaks. Following recent amendments to the Health Act 1947, it is now a statutory obligation for GPs to notify all cases of acute infectious gastroenteritis (regardless of age) to the local department of public health.

However, Irish GPs were found to infrequently notify cases of gastroenteritis in the Safefood study. Indeed, only a tiny fraction of cases of acute infectious gastroenteritis in the Republic are reported to public health (1,917 cases in 2004). The reported barriers to notification for Irish GPs were consistent with those reported elsewhere, and included a perceived lack of benefit, unnecessary duplication with laboratory reporting, inadequate remuneration and time.

GPs do, however, play a critical role in the early detection and rapid response to outbreaks. In the case of suspected food poisoning, notification should occur in the absence of
laboratory confirmation when clinical suspicion is high. To enable prompt public health action, initial notification should be by telephone in those cases of particular concern, eg, a possible outbreak or case of VTEC.

Case definitions for all notifiable diseases were introduced in 2004 (see www.ndsc.ie/NotifiableDiseases/CaseDefinitions). The case definition for acute infectious gastroenteritis is:

- Probable: Acute onset of diarrhoea and/or vomiting with no known non-infectious cause
- Confirmed: If a laboratory diagnosis has been made, see definition for specific organism.

Rotavirus is not listed as a specific infection and should be reported under the category of acute infectious gastroenteritis.

Exclude patients

The GP has a vital public health role in preventing the person-to-person spread of gastroenteritis into the wider population. Exclusion from work, school and other institutional settings is a key element of this. Each case should be considered according to individual circumstances, but in general, all patients with acute gastroenteritis should be regarded as potentially infectious, and consequently excluded from school or work until resolution of symptoms and ideally for 48 hours afterwards. This is essential for those groups at high risk of transmission, including food-handlers, healthcare workers and carers. Negative stool specimens are not a requirement for clearance to return to work in most cases. Notable exceptions include VTEC and typhoid/paratyphoid.

Give basic advice on hygiene and handwashing

There are a number of other public health interventions that can help control person-to-person spread of gastroenteritis. Thorough handwashing with soap and water, and drying, is the most important factor in preventing the spread of gastroenteritis.15

Other enteric precautions consist of appropriate disposal of excretions and soiled materials, and decontamination of soiled items and surfaces. Patients with gastroenteritis should always be advised on basic hygiene and food safety practices.

Don't forget other causes

In children, acute gastroenteritis should be regarded as a diagnosis of exclusion, as vomiting and diarrhoea may be non-specific symptoms of serious illness like meningitis, pneumonia or surgical conditions.14 Consider an alternative diagnosis particularly when there is high fever, pallor, jaundice, abdominal pain with tenderness, severe abdominal pain, guarding and/or bile-stained vomiting.

Incubation periods in food poisoning

The Safefood study identified some misconceptions regarding foodborne illnesses, with many GPs wrongly thinking that gastrointestinal symptoms always commenced shortly after the ingestion of contaminated food. In fact, incubation periods for some foodborne organisms may be as long as many days or weeks, and therefore often not closely related to consumption of a ‘suspicious’ meal.

Feeding

Continuation, or early resumption, of feeding in acute gastroenteritis in children has been shown to reduce the severity and duration of the illness.12 Breastfeeding should definitely continue.20 In general, food should not be withheld for more than 24 hours and children should be offered solids if hungry. Post-acute gastroenteritis lactose intolerance is uncommon and the use of lactose-free preparations is rarely required.17

Anti-diarrhoeal medication

Based on evidence that the risks of adverse effects outweigh any limited benefit in reducing stool frequency, anti-diarrhoeal and anti-emetic drugs should not be used in children with gastroenteritis.18 Anti-diarrhoeal drugs are occasionally useful for symptomatic treatment in adults. However, they are contraindicated in cases of bloody diarrhoea because of the risk of precipitating severe colitis or toxic megacolon.19 Loperamide is the preferred choice if anti-diarrhoeal medication is being considered.8

Antibiotics

Antibiotics are not indicated for patients with uncomplicated diarrhoea.8 However, the Safefood survey revealed that about 10% of GPs prescribe antibiotics for over 10% of their patients with gastroenteritis, a significant over-prescription for an essentially self-limiting illness. Use of antibiotics has the potential for adverse health effects, and may contribute to community antimicrobial resistance. Antibiotics may be appropriate in patients with features indicative of invasive disease, eg, bloody diarrhoea, but in general, advice should be sought from a microbiologist in cases of concern.8

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References