the last 25 years. Nevertheless, at least 1.8 million preventable deaths occur each year in young children with gastroenteritis in developing communities where ORT is not available. 

Despite proven efficacy, ORT is under-utilised in developing and developed communities. Possible reasons for this include the pressure to prescribe medications; the perception that ORT is not a ‘drug’ and iv fluids are superior; and that ORT does not stop diarrhoea. Above all, is lack of understanding of the physiology underpinning diarrhoea and the rational for ORT. In the USA, direct health costs resulting from failure to use ORT are over $1 billion per year. The challenge is to persuade carers and clinicians of the benefits and safety of ORT and ensure this remarkable therapy is available to all children.

References


Inflammatory bowel disease in children

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The incidence of inflammatory bowel disease (IBD), particularly Crohn’s disease (CD), in children appears to be increasing. About 20% of patients with IBD present before the age of 19, and thus a significant burden of this illness falls on adolescents and young adults. Paediatricians and adult gastroenterologists must be increasingly aware of the management priorities of these young people with potentially disabling chronic intestinal disease. Children with such complex chronic disorders should have easy access to a multidisciplinary team that includes paediatric dietitan,
psychologist, IBD nurse specialist and paediatric gastroenterologist. Diagnosis to standard criteria is important. Optimal care involves close liaison with local service providers, experienced adult colorectal surgeons, radiologists and adult gastroenterologists. The latter are fundamental in striving for a seamless transition of care from adolescence into young adulthood.

Despite the huge advances in the understanding of disease pathogenesis and the development of new classes of intervention, the long-term, side-effect-free maintenance of disease remission remains a distant aim. Dramatic improvements in achieving a remission from active disease followed the introduction of sulphasalazine and corticosteroids in the 1950s and 1960s. In addition, over the last 30 years, a steroid-free, nutritional option for inducing disease remission has been repeatedly demonstrated in children with CD. It has become clear that the use of exclusive, whole protein liquid diets (exclusive enteral nutrition) is at least as effective as corticosteroid therapy in achieving a remission in children with CD. Aside from some newer derivatives/formulations of sulphasalazine and topically released corticosteroids, there has been little other change in agents able to induce remission in mild to moderate IBD.

Since its introduction in the 1950s, azathioprine has gradually become the cornerstone of maintenance therapy in both moderate to severe CD and ulcerative colitis in adults and children. Almost 2 in 3 children with CD are likely to receive this drug at some time. There is now, however, also some evidence that methotrexate has a role in maintaining remission in adults with severe CD.

Remarkable changes in IBD management have occurred in the last decade. With the arrival of potent new classes of biological therapies has come a need to review established treatment philosophies. The classic new biological therapy during this time has been infliximab, a chimeric anti-TNFα monoclonal antibody. This has proven effective both in inducing and maintaining disease remission in children and adults with severe, active CD.

Although large studies were initially completed only in adult patients, clinical trials have been, and are continuing to be done in children. One of the drivers for these studies has been the potential use of growth-sparing maintenance therapies during the pubertal growth spurt. In addition, quality of life has become central in the management of adolescent sufferers.

Inevitably the arrival of infliximab has been followed by the development of biological therapies directed at almost all parts of the inflammatory cascade that results in mucosal destruction. The term ‘mucosal healing’ has become more widely accepted as marker of treatment success and also as a measure of maintenance agent efficacy. There have also been attempts to understand whether aggressive intervention very early in the disease process might modify its natural history. The data needed to confirm whether the risks of a ‘top-down’ approach warrant its widespread use over the conventional ‘step-up’ approach are still outstanding. Although there is tantalising anecdotal evidence suggesting the early use of biological agents may ameliorate the course of the disease, larger, longer-term studies are essential before adopting this radical new philosophy. Clinicians are still unable to confidently predict those patients whose clinical course might warrant early, more aggressive intervention (perhaps even with surgery). Until such a time, we have a responsibility to spare those patients, who can be successfully managed conventionally, the early exposure to potent agents with limited long-term safety data.

Potential risks of malignancy are almost impossible to quantify in small populations of young patients. Paediatricians must therefore be all the more informed about the potential benefits of novel agents over their well-tried and tested conventional predecessors. Intervention with potent immunological agents such as infliximab should be just as appropriate in children as it is in adults if their only alternative is a very poor quality of life and/or permanently disfiguring surgery. In my own practice infliximab is still reserved only for children meeting the recommended National Institute for Health and Clinical Excellence criteria for patients over 17 years of age, i.e. those with severe disease not amenable to surgical treatment or other conventional therapies such as azathioprine.

Complementary and alternative therapies are used by adult and child IBD sufferers alike, and physicians must continue to be aware of this while a cure remains elusive. Although there are some potentially promising interventions, much of the evidence remains poor and largely anecdotal.

Children being diagnosed with IBD today have a huge range of treatment options at their disposal. The challenge for all involved in the care of these young people is to carefully assess these options, explain their relative merits, and then tailor them to each individual’s specific needs.

References