

## Constipation in Children

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**K**hanna, *et al.*(1) in this issue stress the importance of being vigilant for the diagnoses of Hirschsprung disease, especially where there is a history of delayed passage of meconium and abdominal distension, and of anal anomalies and celiac disease. We reported in 1976 an incidence of newly diagnosed Hirschsprung disease of approximately 10% in a group of children referred from London and the South East of England to our tertiary centre for intractable constipation(2). Over subsequent years this percentage has dropped to near 0.1% as clinicians are considering this diagnosis earlier and with the advent of more reliable rectal biopsy and acetylcholinesterase histochemical staining.

An important question that is not answered in the paper is whether there is an increase in chronic constipation in children in India(1). There is an impression that there is a prevalence shift from childhood diarrheal disease to chronic constipation as countries throughout the world improve levels of hygiene and the availability and storage of fresh food. Our ancestors survived the risk of dying from diarrheal illness before the age of 5 years. We may have inherited a pattern of gastrointestinal motility that, with the environmental reduction of diarrheal disease, has led us to being at risk of producing delayed, hard and painful stools. This risk is likely to be compounded by our current cultural reduction in children's exercise (more computer based than street based play) and less dietary fiber.

Whatever the current cause, the remedy is clearly defined by Khanna, *et al.*(1), residual stool needs to be disimpacted and stool softness maintained with

ongoing medication. The role of fear and withholding is key to understanding the persistence of childhood constipation. In the past, children's fears were often compounded by the use of penetrative anal treatments with suppositories and enemas, especially when these were administered to frightened struggling children with force. However, the introduction of orally administered polyethylene glycol (PEG macrogol) solutions in ascending doses over several days is effective in those who can tolerate the volume of fluid required. Childhood constipation has been reviewed by the National Institute for Health and Clinical Excellence (NICE) in the United Kingdom recently(3). The evidence base for management of intractable cases is growing. We still lack evidence of whether introducing stimulant laxatives such as senna, sodium picosulfate or magnesium salts in addition to the stool softening laxatives improves the outcome. However, most pediatricians would recommend adding a stimulant laxative to the maintenance laxative regime if stool softeners alone are not preventing significant rectal fecal retention. As the PEG macrogol solutions are so effective in donating water to the stool in the distal bowel, the physical sign of palpating stool in the lower abdomen is much more difficult. I have been using ultrasound to detect residual soft stool in children particularly where the overflow fecal incontinence is persisting. Using this over the last 5 years on 4124 consultations, it was only impossible in my ordinary outpatient clinic in 6.9% because of poor cooperation (mainly in toddlers and children along the autistic spectrum). It has taught me that it is very easy to underestimate the degree of rectal loading with palpation alone and persisting retention, despite effective stool softening, is an indication for adding a stimulant laxative in

my practice. The ultrasound appearances can be scored which improves the accuracy of follow-up data(4).

We have evaluated the commonly used surgical intervention of vigorous anal dilatation under general anesthetic(5) and found no evidence that this provides additional benefit to the manual evacuation of retained feces under the same anesthetic together with the significant placebo benefit from the procedure. We compared internal anal sphincter myectomy with intra internal anal sphincteric botulinum injection(6) finding both procedures leading to benefits in most children although we are awaiting completion of a subsequent randomised control trial of botulinum toxin. Needle free botulinum toxin injection into the external sphincter looks encouraging in pilot studies(7). In intractable cases, antegrade continence enema (ACE) stoma may be necessary in providing a route for direct medication to the colon to produce effective emptying of the megarectum. However, great care must be taken that adequate medical treatment has really been taken with no benefit and that the child is psychologically ready for such a step.

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