Functional Constipation in Children

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Background:
Constipation is responsible for 3% of visits to a pediatrician and 25% of consultations with a gastroenterologist. It is defined by a constellation of signs and symptoms which include: the infrequent passage of stool, difficulty in passing stool, stool that are either large and hard or in small pieces, abdominal pain, palpable stool in the abdomen, stool in the rectal vault, or faecal soiling in the underwear. Children frequently have a poor appetite and have been shown to have a lower calorie and fiber intake, lower Body Mass Index and more frequent anorexia than non-constipated children. Affected children may also show slow growth gains. (Picture 1)

Depending on the age of the child, there is several differential diagnosis of constipation. For children below 6 months of age, the clinician should consider the following: congenital mega colon, imperforate anus with fistula, anteriorly placed anus, hypothyroidism, infantile botulism. Around the age of toilet training, symptoms may be related to functional constipation, Hirschsprung’s Disease, pseudo-obstruction. Constipation can be directly related to medication use, especially cough medicines containing codeine, anti-convulsants, anti-cholinergic agents or diuretics. Intake of heavy metals, chemotherapeutics, or iron can also contribute to constipation.

In some children, the urge to defaecate is voluntarily suppressed and toileting refused, even though a strong call to stool is evident. This is often associated with the memory or expectation of pain at defaecation. Pain is likely to have been associated with the discomfort of passing a large or hard stool with the presence of an anal fissure. Anxiety or irrational fears associated with the toilet can also trigger refusal to empty the bowel. During stool withholding the external anal sphincter is recruited at faecal urge, thus preventing stool passage. Faeces are retained in the rectum, become harder and drier and gradually the rectum accommodates larger volumes before distension is perceived. The signs of withholding in an infant include extension of the body, contraction of the glutei and crying, whilst in a toddler squatting, crossing of the legs, stiffening of the body and holding onto furniture may also be seen. Older children may pass small amounts of stool but exhibit active reluctance. In many cases children are
unable to communicate a memory of pain at stool, although parents may recall such an event.

Some children have blunted or absent rectal sensitivity, possibly compounded by a lack of pelvic floor support that aids rectal funneling and subsequent rectal evacuation. A lack of daily routine, acceptable toilets or adequate privacy can also blunt a child’s ability to perceive the call to stool.

Constipation may also be a result of gut dysmotility. Stools may be slow to transit in any part of the gut, a region of mega or redundant bowel may be present, or there may be evidence of retrograde, or even absent, rectal contractions. Stool consistency in constipation is generally assumed to be hard and dry, but in fact it may also be soft and unformed and thus difficult to perceive and fully evacuate.

Management of functional constipation:

The definitive therapy for non-organic constipation must be preceded by rectal emptying of impacted stool and the maintenance of regular soft stools in order to eliminate fear of pain with defaecation. Only during a pain free period can reliable bowel habit patterns be established and chronically distended bowel musculature be rehabilitated and resume effective peristalsis.

Parental Education

Successful management hinges on sound parental education and understanding of both the underlying factors and treatment goals. The family must reinforce the regimen of toilet habits and become aware of the type and frequency of stool passed. Encouraging the child to visit the toilet 30-40 minutes after a major meal, and to sit with adequate foot support and attempt defaecation, is as important as dietary and hydration changes. Increasing the fiber content in a child’s diet is a useful additional measure once bowel regularity has been achieved. In many cases a child will require stool softeners, enemas or suppositories for a prolonged period of time.

Toileting Posture

Correction of toileting posture to ensure comfortable buttocck support, thoracic and lumbar spine extension, hip abduction and appropriate foot support that permits 90 degrees of hip / knee flexion is crucial. Learning to increase intra-abdominal pressure by using abdominal muscles other than Rectus Abdinoris, whilst at the same time releasing the anal sphincter, can facilitate defaecation. It is preferable for a child to learn effective recruitment and relaxation of pelvic floor structure as a means of attempting defaecation or completing rectal emptying, than to simply sit on the toilet and wait. Biofeedback training is also a treatment modality for dysfunctional defaecation. (Picture 2)

Surgical Intervention

Surgery is indicated in patients who have therapy-resistant, i.e. intractable constipation or faecal incontinence due to organic diseases. Procedure such as the Antegrade Continence Enema procedure
(ACE) is a permanent surgical solution that facilitate the administration of antegrade continence enemas, allowing the child to become clean and free of stool retention. (Picture 3 & 4)

**Conclusion:**

Functional constipation is a challenge to the clinician, but with comprehensive assessment and systematic intervention, children can achieve well-being and independence and be helped toward optimal socialization.

**Bibliography:**

Childhood functional gastrointestinal disorders, 45 (Suppl II); II60-II68


Vera Loening-Baucke (1996). Encopresis and soiling. Pediatric Clinics of North America 43(1); 279-298
### Conference Information

**15-18 March 2006**
6th National Australian Wound Management Association Conference - Matrix of Wound Care National Convention Centre, Canberra, Australia
Web: www.awma.com.au

**24-28 June**
38th Wound Ostomy Continence Nurses Society (WOCN) Conference Minneapolis, Minnesota, USA.
Web: www.wocn.org

**31 August - 2 September 2006**
The 9th European Pressure Ulcer Advisory Council (EPUAP) Open Meeting Berlin, Germany
Web: http://www.epuap.org

**6-8 April 2006**
American Professional Wound Care Association (APWCA) 2005 National Clinical Conference Philadelphia, Pennsylvania, USA
Web: www.apwca.org

**2-6 July 2006**
WCET 16th Biennial Congress Hong Kong Convention & Exhibition Centre, Hong Kong
Web: www.WCET2006.com.hk
Invitation from Hong Kong Enterostomal Therapists Association

Dear Colleagues,

It is a great pleasure for the Hong Kong Enterostomal Therapists Association to host the 16th WCET Biennial Congress in the Hong Kong Convention and Exhibition Centre from 2–6 July, 2006.

During the congress, world renowned enterostomal therapists and overseas experts will be present to share with us their insights and expertise in the management of stomas, wounds and incontinence problems. The scientific programme includes state-of-the-art lectures, plenary sessions, free paper sessions, panel discussions, advanced technology applications, and video demonstrations. Topics that will be covered include areas in research, clinical management, and nursing education. This is no doubt a golden opportunity for us to exchange views with international experts, empowerment of our ET specialty, and strengthening the specialty nursing care in Hong Kong.

With its comprehensive programme and vibrant venue, the 16th WCET Biennial Congress will be an enjoyable and unforgettable event.

We sincerely invite you to join us in this exciting event. The success of the programme depends on your participation. I look forward to seeing you all in the congress.

LEE Wai Kuen
Chairperson
Hong Kong Enterostomal Therapists Association
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*The program is subject to change without prior notice.*
Crossword

Last Issue : Answer

Across
4  small tree-climbing animal with a bushy tail and red or grey fur (8)
5  musical instrument like a large violin, held between the knees by a seated player (5)
6  a term to describe health care providers cannot provide necessary and appropriate care to their patients (10)

Down
1  an adjunctive therapy in wound care for increasing collagen elasticity (10)
2  a nature’s way of cleansing the wound by using body’s own enzymes (9)
3  a wound product composed of soft, non-woven fibers with absorptive power (9)

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