



# Newsletter

## Medical Nutrition Therapy—Management for Constipation and Fecal Incontinence

by Lam Wing Seung, Vanessa, Dietitian KWH

### Constipation

In Hong Kong, constipation is one of the most common gastrointestinal complaints, it is estimated about one million Hong Kong people suffering from chronic constipation. Some people may consider constipation is a trivial problem and tend to ignore, or try to self-medicate with laxative.

For most healthy people, constipation is often a symptom indicating something wrong with one's lifestyle, including unbalanced diet and lack of exercise. As such, it is thus preventable through adopting the following "bowel smoothing" eating habit:

- Have a well-balanced diet with enough fiber as need to bring 25-35g daily.
- Choose food that is high in fiber content, such as whole grain bread, cereals and other whole-grain products.
- Increase consumption of vegetables, legumes, fruits, nuts and edible seeds.
- Drink more fluids to at least 2L daily.

#### How to identify a "High Fiber" food?

To "Eat Smart", we need to increase our knowledge in reading nutrition information on the food products. On 1<sup>st</sup> July 2010, Nutrition Labeling scheme had launched by Centre for Food & Safety, The Government of Hong Kong Special Administrative Region. By choosing a high fiber food/drink, the dietary fiber content of the solid food should be equal or great than 6g per 100g and the liquid should be equal or great than 3g per 100ml, otherwise it cannot be claimed as "High Fiber". Remember to choose the products with high fiber content and thus it can be easier to achieve a high fiber diet in our daily life to improve the constipation symptoms.

### Fecal Incontinence

People with fecal incontinence are more likely to be depressed and anxious which subsequently affect their quality of life.

However, there are minimal guidelines for the dietary recommendation for management of fecal incontinence. In a common practice, there are some dietary tips would be helped.

#### • Watch What You Eat

Sometimes food causes fecal incontinence is very individualized, some food that are more common to cause diarrhea and fecal incontinence. It may include

- ⇒ Spicy food
- ⇒ Fatty and greasy food
- ⇒ Processed or smoked meat
- ⇒ Dairy products
- ⇒ Caffeine-containing beverages and alcohol

#### • Eat Smaller Meals

- ⇒ Small frequent meals throughout the day, rather than 3 larger ones, because large meals sometimes trigger bowel contractions

#### • Eat More Fiber

- ⇒ Aim at 25g or more fiber a day, especially increasing soluble fiber had been shown to improve fecal incontinence

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Self monitoring is very important to help to identify dietary and/or other factors contributing to fecal incontinence. Keep a food diary of what you eat for a week, and keep a fecal incontinence diary, sign and symptoms and any associated factors (e.g. daily obligations, stressors, poor sleep, medications), to help to identify dietary and/or other factors contributing to fecal incontinence.

To tackle the problem on constipation or fecal incontinence, definitely dietary modification is one of the solutions only. Multi-disciplinary approach, includes clinician, nurse specialist, physiotherapist and dietitian is definitely recommended for the holistic care.



## Nursing Management of Constipation in Children

by Kwok Choi Fung & Ng Wai Hing, Division of Paediatric Surgery, Department of Surgery, QEH

Our pediatric gastro-intestinal nurse-led clinic of department of surgery has been established since 2006, which provides a Bowel Management Program (BMP) to the children with bowel disorder. In the BMP, a serial of synergistic remedies for childhood constipation such as dietary advice, physical exercise, toilet training, medication therapy and enema therapy are included.

Functional chronic constipation is the most common defecation problem in children, which can be related to colonic hypomotility or functional outlet obstruction. They share common clinical symptoms but the treatments to them are very different. Hence, it is critical to distinguish between these two conditions for appropriate interventions.

How can we evaluate constipation? There are a number of tools for evaluation of any improvement in constipation including Bowel diary, constipation symptoms score, Bristol stool scale, transpubic USG rectum, defecography, anorectal manometry, and Sitzmarks Colonic Transit Study. Bowel diary is a chart for self-recording the frequency of defecation, the amount and consistency of stool, and the degree of fecal incontinence. Constipation symptom score is a scoring system by awarding points for four parameters regarding defecation.

The Bristol Stool Scale is a chart for illustration of seven categories of human feces. Transpubic USG rectum is used to assess any megarectum by measuring the diameter of rectum. Defecography is a radiological examination for identification of anismus by evaluating the change of rectum and anal canal during defecation. Anorectal manometry is a test for evaluation of constipation or fecal incontinence by measuring the functions of rectum and anal sphincter muscles.

Sitzmarks Colonic Transit Study (SCTS) is an objective, simple and safe diagnostic test for guiding the decision of treatments to the constipated children based on the colonic transit time and the distribution of markers in the colon. Therefore, we will arrange SCTS to the constipated children who are between 4-18 years old, fulfill the Rome III criteria with complications like fissure, and have received conventional treatment such as toilet training over 6 months.

Sitzmarks is gelatin capsule containing 24 pre-cut radiopaque markers of 1mm x 4.5mm. There are three different capsules with three different shaped radiopaque markers namely "O", "double D", and "tri-chamber" markers. (Figure 1)



Fig. 1

Two weeks before and during the study, the constipated children are required to avoid laxatives, enemas or suppositories but no restriction for food and drink. Then, they need to take each of the Sitzmark capsules same time each day for three consecutive days. On day 4, an abdominal X-Ray or KUB will take place to determine the distribution as well as the number of markers retained in the three colonic segments i.e. right colon, left colon and rectosigmoid.

The total number of markers that remained in each segment of colon is equivalent to the transit time in hours. Transit time is considered abnormal if there are more than a total number of 50 markers retained in the colon and an X-Ray needs to be repeated on day 7. If total colonic transit time is more than 70 hours, then transit time more than 30 hours in any segment is also considered abnormal.

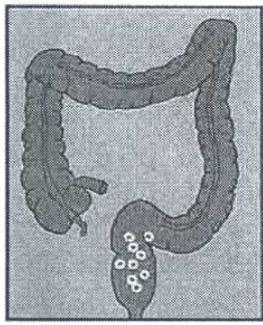
For example:

	<u>Rt. Colon</u>	<u>Lt. colon</u>	<u>Rectosigmoid</u>	<u>Colon</u>
4th day	12	14	14	40
7th day	0	0	2	2
Transit time	12 hrs	14 hrs	16 hrs	42 hrs

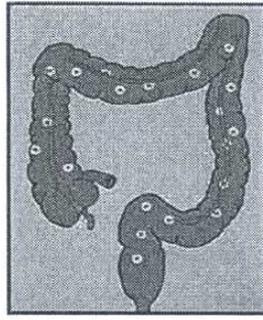


From the X-Ray film, differential diagnosis for either colonic hypomotility or functional outlet obstruction can be identified. In the case of colonic hypomotility, markers would be found scattered along the colon. If the markers are gathered in the rectosigmoid, it indicates that the children most likely suffer from functional outlet obstruction. (Figure 2)

Figure 2



Functional Outlet Obstruction



Colonic Hypomotility

According to different aetiology and severity of constipation, different modalities of treatment are offered to the patients.

For dietary advice, a high fiber with adequate fluid diet is introduced to the children in order to achieve their daily intake requirement and facilitate their bowel movement by softening the stool and expanding its volume. Children are encouraged to do physical exercise as it helps facilitate bowel movement by improving their muscle function. Any forms of exercise such as swimming or running are recommended for 30 minutes per day at least three times a week. Toilet or potty training is very important in bowel management because it can assist the children in recognition the signals of bowel movement and learning the proper technique of using the toilet or potty for defecation. (Figure 3)

Figure 3



Information Corner

“Yakult Light” is a fermented milk drink with a live probiotic strain of bacteria *Lactobacillus case* which is an effective probiotics for constipation. Probiotics are living beneficial micro-organisms like bacteria and some yeast that can improve intestinal microbial balance and enhance colonic peristalsis by lowering the pH in the colon associated with production of lactic, acetic and other acids. (Figure 4)

Figure 4



In medication therapy, different medications would be prescribed based on individual conditions. In our clinic, Lactulose, Metamucil and Forlax are the main medications for constipation, and Imodium and Metamucil are the common remedies for diarrhea. Enema therapy is reserved only for the children with severe constipation. According to the degree of constipation symptoms, different enema treatments such as fleet enema and high colonic enema may be prescribed.

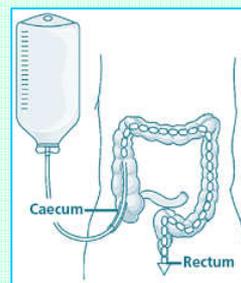
For the children with colonic hypomotility, Lactulose or Forlax are the commonly used laxatives. Lactulose is a traditional, synthetic sugar-based osmotic laxative and Forlax is a new age non-absorbable, non-metabolized and non sugar-based osmotic laxative. Both agents can effectively facilitate bowel movement by softening the stools and increasing their volume.

In the cases of functional outlet obstruction, further investigations like anorectal manometry, defecography, paradoxical external sphincter electromyography (EMG) are required to differentiate anismus from anal achalasia. Anismus is failure of relaxation or paradoxically contraction of the external anal sphincter and puborectalis muscle during defecation. Anal achalasia is a condition in which the internal anal sphincter fails to relax during defecation.

Biofeedback therapy and Botox injection are the respective treatments for the children with anismus and anal achalasia. In biofeedback therapy, the children would learn to relax their pelvic floor muscles, recognize the sensation of defecation, and strain more effectively with the contraction of abdominal wall muscles. Children who are diagnosed with anal achalasia would receive botulinum toxin (Botox) injection for relaxation of the internal anal sphincter.

If the constipated children do not respond to the treatments mentioned above, they may benefit from Malone antegrade continence enema (MACE). MACE is a procedure to create a conduit between the skin of the abdomen and the large intestine so that the children can empty their bowels more effectively by inserting a catheter into the conduit and then irrigating their bowels with normal saline or/and fleet enema in an antegrade fashion. This modality can enhance the privacy and independence of the children. (Figure 5)

Figure 5



MACE

In conclusion, BMP is an organized process for the management of children with chronic constipation by implementing multiple interventions according to their individual bowel conditions through a multi-disciplinary approach including pediatric surgeons, dietitians, physiotherapists, radiotherapists, and specialty nurses. It aims to achieve social continence, prevent psychological, emotional and social problems, and improve quality of life of the children.



# Peri-operative Counseling and Nursing Care of Benign Prostatic Hyperplasia (BPH) Patients

By Ng Sau Loi, APN, Department of Surgery, QMH

## (I) Introduction

Benign prostatic hyperplasia (BPH) is a common urological condition in the aging male. At least 50% of men over age 50 have some degree of prostatic enlargement (Beetsra & Gabrielson, 1992; Black & Matassarini-Jacobs, 1997). Symptoms of BPH include weak stream, intermittency, hesitancy, terminal dribbling, urinary frequency, urgency, nocturia and urge incontinence. In a community based survey on men's health in 2003, 16% of Hong Kong males aged 40 to 79 years had moderate-to-severe of these symptoms (Sun et al, 2005).

Although the cause of BPH is unknown, it is thought that advancing age, functioning testicles, and androgen production contribute to the development of it. When the prostate enlarges (Diagram 1) to the point of symptomatic urinary outflow obstruction, men start to strain during urination in order to overcome the obstruction. Over time, straining to urinate causes the detrusor muscle of the bladder to thicken and diverticula may form in the bladder. When the detrusor muscle can no longer generate sufficient pressure to overcome the urethral obstruction, the bladder fails and retains urine. (Ignatavicius, Workman & Mishler, 1995).

Consequently, patients may require emergency insertion of urethral catheter in hospital due to development of acute retention of urine. Transurethral Resection of the Prostate (TURP) is still the gold standard treatment of choice for moderate and severe BPH. (AUA Guidelines on BPH, 2007; EAU Guidelines on BPH, 2010). Patients usually admit to the hospital one day before the operation and require staying in hospital for 1-2 days after surgery. During their hospitalization, nurses play a crucial role in preventing the potential postoperative complications by providing intensive peri-operative counseling and education.

## (II) Peri-operative Counseling

The goals of surgical intervention are to relieve the symptoms and improve the quality of the client's life by allowing him to retain urinary control. Preoperative counseling on patients for surgery on complications (Hospital Authority Fact Sheet for TURP): retrograde ejaculation (60-70%), urinary incontinence (<1%), urethral stricture (~ 3%), impotence (~ 5%), unable to void (5-10%), TURP syndrome (2-6%), haemorrhage and may need to repeat operation in 5 years, with verbal and written information provided as well. Inform patient and his partner that the operation will result in loss of fertility (Fillingham & Douglas, 1997).

Throughout the process of counseling, nurses provide positive encouragement and in-depth psychological support to both patients and their significant others in order to alleviate preoperative stress.

## (III) Postoperative Care

Postoperative nursing interventions involve hourly assessing the urinary catheter for patency and significant blood loss due to persistent gross haematuria. Bladder irrigation (Diagram 2) will be started after operation and continued in ward till the return fluid is slightly haematuria to clear. Aseptic technique should be maintained whenever manual irrigation is needed for any blood clots impeded the catheter. When calculating urine output, subtract the total amount of irrigation solution infused from the total of urine output emptied from the collecting bag and record in the bladder irrigation chart (Diagram 3). Discomfort after TURP is often associated with bladder distension, irritation from the catheter or irrigation solution, or bladder spasm. Minimizing catheter manipulation by well-secured of urethral catheter in a closed drainage system and promoting rest can help to maintain patient comfort (Wilson, 1997; Gray, 1998).

The most serious TURP associated complication is known as TURP syndrome. It occurs in about 2% of TURP patients, usually within the first 24 hours (Wilson, 1997; Gray, 1998). Abnormal vascular absorption of irrigation fluid during surgery causes severe dilutional hyponatremia and hypervolemia. TURP syndrome included dramatic increase in blood pressure, bradycardia, tachypnea, confusion and agitation (Schick, 1991). The risk of TURP syndrome can be minimized by maintaining the patency of urethral catheter, appropriate adjustment of the rate of irrigation, hanging the irrigation solution (0.9% NaCl solution) bags no higher than 2-3 feet above the level of the patient's bladder and limiting resection time to fewer than 60 minutes (Schick, 1991).

The urinary catheter is usually removed when the return fluid is gradually cleared up. Once the catheter is removed, the patient is encouraged to drink 2000 ml of fluids daily unless contraindicated in order to relieve initial dysuria and resolve haematuria. If patient can void after removing of the catheter with no or minimal residual urine (< 50 ml), he will be discharged with follow-up. A flow rate will be repeated on follow-up.

## (IV) Discharge Education

Specific discharge instruction will be given by nurses focusing on adequate fluid intake, well-balanced diet, avoid strenuous activities, heavy lifting, avoid constipation and refrain from sexual intercourse for 4 weeks upon discharge in order to prevent secondary haemorrhage postoperatively. Patient is also reminded to seek medical advice if (1) fever; (2) retention of urine; (3) foul smelling of urine or turbid urine; (4) heavy bleeding or clots in the urine.



Diagram 1



Diagram 2



Diagram 3

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## Picks for Members and All

### 1) 41st Annual Meeting of the International Continence Society (ICS) 29 Aug—2 Sept 2011 at Glasgow, UK

The HKCS will sponsor **max 5 members** (with at least 2 recent consecutive years of membership) to attend this meeting. Each sponsor will be **HK\$8,000** for passive participation or **HK\$10,000** for active participation (i.e. having a paper accepted for presentation). Application form can be downloaded at [www.hkcs.hk/Activities/2011/HKCS-Sponsorship ICS 2011.doc](http://www.hkcs.hk/Activities/2011/HKCS-Sponsorship%20ICS%202011.doc)

Please note that the **deadline** for abstract submission is **1 April 2011**

**Deadline** of application of sponsorship is **30 June 2011**

### 2) Renewal of your membership

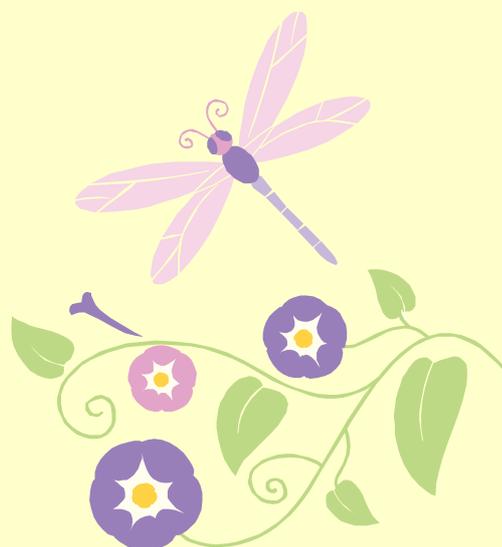
Please remember to renew your membership if not yet done. Forms can be downloaded at [www.hkcs.hk](http://www.hkcs.hk)

### 3) Constipation Awareness Month : 便秘齊關注

To be organized in July 2011

### 4) ASM 2011: Management of Female Incontinence

Detail for items 3 & 4 to be announced later



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