Many people with anorectal malformations (ARM) and Hirschsprung disease (HD) struggle with constipation, as most of you are aware and live with on a daily basis. In an ideal world, constipation could be managed with only diet and no medication would be required. While this may be possible for some people, for others medications or enemas are the only way to manage constipation. In this article, I will review the medications available to treat constipation and group them according to how they work. As always, please consult your (your child’s) physician prior to starting or altering treatment regimens. Also when purchasing these products over the counter, read the labels carefully as many of the brand names are applied to different medications (i.e. Ex-Lax that is senna and Ex-Lax that is docusate)

Stimulant laxatives
The two major drugs under this category are senna and bisacodyl:

Senna (Ex-Lax®, Senokot®, Dr Caldwell Laxative®, Black draught) is a stimulant laxative derived from leaves of the senna plant; the active ingredients are sennosides. Sennosides work by irritating the lining of the colon, which causes contraction of the colon and promotes emptying. Onset of action is typically 6-12 hours but varies from patient to patient, as does the dose required to produce an effect. Senna is available in pills, liquid form, enema, and chewable chocolate squares. Be careful when buying the drug and read the label carefully as it is available in multiple dosage strengths ranging from 8.6 to 25 mg.

Bisacodyl (Dulcolax®, Correctol®) is a stimulant laxative that works by stimulating the enteric (gut) nerves to cause contraction of the colon. It does not act on the small intestine. Bisacodyl also increases fluid and salt secretion into the colon. The onset of action, like senna, is variable and is typically 10-12 hours when given by mouth. When given as a rectal suppository it acts in 15-60 minutes and by rectal enema about 5-20 minutes. Bisacodyl is available as a pill (it cannot be crushed due to enteric coating to prevent stomach irritation), rectal suppository, and rectal enema. No liquid or chewable forms of bisacodyl are currently available in the US.

Stool softeners
Many drugs from this category are used to treat constipation, the most common one being polyethylene glycol 3350 – more commonly known as MiraLax®. Despite its name, MiraLax® is not a “laxative” in the sense that it does not stimulate colonic contraction. It acts as an osmotic agent that draws fluid into the colon to soften stool and increase the number of bowel movements. Like most medications, the dose required varies from person to person and needs to be titrated to create a soft but not watery stool. MiraLax® can be used in ARM and
HD patients but be aware that making the stool too soft or runny can actually be counterproductive since sensing loose stool can be more difficult and fecal accidents may occur.

Other drugs in this category that work in a similar fashion to MiraLax® by drawing water into the colon and producing a softer stool include magnesium hydroxide (Milk of Magnesia®), magnesium citrate, and Lactulose (Constulose®, Enulose®). These are available in a liquid/syrup form which may make them attractive to use in children. Magnesium citrate contains a concentrated amount of elemental magnesium and consultation with your (your child’s) physician should be sought prior to using this product. Docusate (Colace®, Dulcolax stool softener®, Ex-Lax stool softener®, Enemeez®) also acts a stool softener by encouraging the mixture of water and dietary fat in the stool. The onset of action is typically one to three days (when given by mouth) so is not useful in acute constipation episodes but more as a preventative medication. It is available in pill and enema form.

**Fiber supplements**
Supplementation of dietary fiber is frequently used as adjunct treatment of constipation, particularly in people who have low intake of natural fiber in the diet. Some frequently used fiber supplements in the US include psyllium products (Metamucil®) and methylcellulose (CitruCel®). Psyllium and methylcellulose contain soluble and insoluble fibers that absorb water in the colon to create a bulkier stool and also has laxative effects that causes the stool to move more quickly through the colon. Fiber supplements should be introduced slowly as sudden increase in fiber intake can cause gas, bloating, and abdominal discomfort.

Pectin can also be used as a bulking agent and also for patients with loose stools. Pectin is a plant derived polysaccharide that is water soluble and forms a thick, gelatinous product when combined with food and liquid. It can be mixed in foods, which makes it attractive for use in children who cannot swallow pills or will not drink a fiber supplement.

**Recent MiraLax® controversy**
As many patients and parents are aware, there is a current class action law suit related to complications experienced in children taking MiraLax®. These complications have been described as tremors, tics, obsessive-compulsive behaviors, and other neurologic and psychiatric problems. The Children’s Hospital of Philadelphia (CHOP) is currently conducting an FDA sponsored study on the use of MiraLax® in children although the details of this study and findings have not been made public at this time. From our experience with this drug, we have not seen this side effect or heard that any of our patients has experienced these types of symptoms. While MiraLax® is not a medication that we recommend routinely, we do have a large number of patients that have used it or use it as an adjunct to other therapies. As a final comment on this matter, while CHOP has not released any data, all research studies are designed with safety measures in place to stop studies early if there are findings during interim data analysis to suggest that patients in one group versus another are experiencing harm. Given that the study has apparently been in progress since 2014 and has not been halted, it is likely that no significant patient safety issues have been encountered.

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