

ADVANCES IN GERD

Current Developments in the Management of Acid-Related GI Disorders

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Esophageal Dilation as the Primary Treatment for Eosinophilic Esophagitis



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G&H What are the different phenotypes of eosinophilic esophagitis, and how are they typically treated?

DK It is challenging to identify the phenotypes of eosinophilic esophagitis. However, the vast majority of adults with this condition ($\geq 95\%$) present with dysphagia, implying they have at least some fibrosis and, more likely, esophageal stricture formation in the esophagus. These patients can be treated with maintenance therapy and esophageal dilation, but the strength and frequency of these treatments depend on the rate of progression to further stricture formation, which is difficult to predict. Dr Marc Rothenberg and his team, in addition to other laboratories, are working with genetic testing to determine which patients might be corticosteroid-responsive and which patients might not be, among other factors. Aside from that, there are no parameters to reliably assess the rate of progression in individual patients. As a result, we tend to treat most patients aggressively at this point.

G&H How is esophageal dilation performed?

DK Esophageal dilation can be performed with either a balloon or a Savary (Cook Medical) dilator. Balloon dilation is performed during endoscopy in which an endoscopically passed balloon is inflated in the area of esophageal narrowing to a diameter large enough to cause significant stretch but not rupture. Savary dilation

involves passing a long tube set at a fixed diameter through the area being treated in order to stretch that area to the specific diameter. Of note, there is a technique in which the balloon can be pulled up through the esophagus, closely imitating the Savary method. Both the balloon and the Savary dilators are useful; however, the tightness and length of the stricture determines which method should be used. If the stricture is short (1-2 cm), a balloon dilator is ideal, whereas a Savary dilator can be passed through a longer stretch of a narrowed esophagus.

G&H Have there been any head-to-head trials comparing the 2 types of dilation?

DK To date, no head-to-head comparison has been conducted to conclude that one method is better than the other. To a large degree, it is operator-dependent in terms of what the gastroenterologist feels most comfortable using, in addition to what type of stricture is present. Having said that, there are some caveats that pertain to any type of dilation. First, the procedure needs to be performed carefully because these patients present with a lot of scarring and fibrosis and theoretically have a higher risk for complications. Second, dilation should be a gradual procedure rather than an aggressive procedure. For example, if a patient has a very narrowed esophagus, he or she generally should not be dilated to a normal esophageal caliber in the first session. Oftentimes, several sessions will be needed to slowly dilate the patient to the needed diameter. Chest pain is very common after

a dilation, so patients who are undergoing esophageal dilation should be warned that they may feel some chest discomfort lasting anywhere from a couple of hours to a few days afterwards. Therefore, gastroenterologists should follow up with patients to ensure that no adverse event has occurred.

G&H What are the benefits of esophageal dilation for patients with eosinophilic esophagitis?

DK The primary benefit of dilation is the quickness with which it opens the esophagus. Patients who have severe symptoms and/or severe tightening of their esophagus can experience relief not only of their symptoms but of their complications within a matter of minutes as compared with medicine, which may take months to achieve. For patients at high risk for food impaction, which can be a threatening situation, performing dilation upfront can be very effective.

G&H What have studies shown regarding the safety and efficacy of this procedure?

DK Studies have shown that this procedure is both safe and effective. Patients can routinely achieve a 16- to 18-mm diameter in one to several sessions depending on how tight the initial stricture is. For some patients, dilation can be a primary therapy for eosinophilic esophagitis without the need for medical therapy. Large trials performed in tertiary centers have reported that the chance of perforation is less than 2%, again with the caveat that the procedure is performed slowly over several sessions.

G&H What are the predictors of clinical response?

DK The main predictors are the length and the narrowing involved in the stricture. Patients with a small-caliber esophagus, in which a large length if not the entire esophagus is narrowed and strictured, are more challenging to treat than patients with a focal, short, narrow, single stricture that is more easily dilated. However, some patients with severe stricturing disease have accommodated to their dysphagia—cutting food into small bites, chewing carefully, eating slowly, drinking a lot of fluids during their meals—so that they can manage quite well, even without a major dilation or reaching a critical esophageal diameter. In other words, the stricture does not have to be completely opened or opened to a large diameter size in order for some patients to feel significantly better.

G&H What adverse events or complications are associated with esophageal dilation? How can they be avoided?

DK Perforation can occur, although the risk is less than 2%. Of the few patients in whom a perforation occurs, the majority can be treated with conservative therapy, meaning that they can be watched in the hospital and given antibiotics. These perforations will close off on their own; very rarely will patients need surgery or stent placement. Chest discomfort is common after dilation. Both of these adverse events can be avoided by taking a gradual approach to reaching the desired diameter.

G&H Does the dilation method affect the rate or risk of adverse events?

DK Some of the data show that Savary dilation may be slightly riskier than balloon dilation, but it is important to remember that Savary dilators are often used for the more complicated strictures, which are already at a higher risk for perforation and other adverse events. Thus, I am not convinced that one method is safer than another. What is more important is that the gastroenterologist feels comfortable with whichever method he or she chooses to use.

G&H How common is the need for subsequent esophageal dilation?

DK The need for subsequent dilation in the lifetime of an individual with eosinophilic esophagitis is extremely common depending on the amount of medical therapy the patient receives. We know that the relapse rate of eosinophilic esophagitis once it has been effectively treated medically is nearly 100%, and it largely relies on the baseline length and narrowing of the stricture. Patients who present with a small-caliber esophagus are much more likely to need multiple dilations, whereas patients with minimal strictures are less likely to need multiple dilations. Follow-up dilation is also common in patients with eosinophilic esophagitis, including in those who receive medical therapy, as the benefit of initially effective therapy may be attenuated over time.

G&H Does a dietary-based therapy reduce the need for any follow-up dilation?

DK We believe so. There are more data showing corticosteroid therapy reducing the need for subsequent dilation. Presumably, diet therapy should have the same effect because it achieves approximately the same rate of healing and resolution of eosinophilic esophagitis as

does corticosteroid therapy. Thus, the type of medical therapy is not as important as whether it accomplishes histologic remission.

G&H Can dilation therapy be used in the pediatric setting?

DK Dilation therapy can be used in pediatric patients, although it is not used as often as it is in adults. Once patients reach teenage years, and the later teenage years in particular, the onset of dysphagia and fibrosis is much more common. Dilation in that age category is very safe.

G&H What are the long-term outcomes with dilation therapy?

DK I am not aware of any studies that have evaluated the use of dilation alone over a 10- or 20-year period. However, dilation can cause the esophageal tissue to tear, leading to more scarring. As such, a concern is whether dilation therapy will exacerbate strictures long term. This is especially concerning in young patients with eosinophilic esophagitis, who, after 20 to 30 dilations, have a higher chance of experiencing an adverse event.

G&H In whom should esophageal dilation be avoided?

DK Patients who are taking anticoagulation medication or are a poor operative risk for some reason should not undergo esophageal dilation. Patients who had a prior perforation can be redilated if needed but with even more caution. In general, there are very few contraindications to dilation, particularly if a patient needs it, as the only other option to relieve symptoms is medical therapy.

G&H What are the priorities of research?

DK The top priority is to develop a therapy that is easy to take. At present, although corticosteroid therapies are effective, the formulations in which patients take them are difficult. There are also careful instructions for taking these medications, such as having to abstain from foods and fluids for 30 minutes after taking the medications and taking them twice a day. Once a medicine is increased from once to twice a day, the compliance rate goes down. In addition, certain corticosteroid therapies are not insured because they are not approved by the US Food and Drug Administration, making them very expensive. These are all hurdles to improving medication in this field. Importantly, there are several corticosteroid preparations that are easier to take that are in development, one of which has already been approved

in Europe. A second priority is understanding the role of maintenance therapy and the dose and duration that can keep esophageal eosinophilic inflammation under control. Long-term outcomes such as osteoporosis and adrenal insufficiency require further research.

Making diet easier is an important part of therapy, and makes the most intuitive sense. If a patient avoids a specific food antigen, his or her disease goes away. However, because patients have to avoid common foods, diet therapy can be difficult to follow. There are some emerging data showing that patients probably need to avoid fewer types of foods than previously thought, with one abstract showing that 40% of children resolved their symptoms just by avoiding milk products. Whether this pertains to adults is uncertain, and further studies are needed.

Another area being explored is the use of certain biologics that target specific inflammatory pathways in eosinophilic esophagitis, similar to inflammatory bowel disease therapies. Some of the early results are encouraging, but whether patients should use a biologic for a disease that, at least as far as we know, does not predispose to cancer is controversial.

Lastly, understanding the cause of this disease is important, as the pathways will provide further insight into other innovative therapies that could be devised. Additional work on identifying phenotypes to predict rapid vs slow progressors will help determine which patients require aggressive treatment and maintenance therapies vs those who require as-needed therapy. The most important emphasis for clinicians is to recognize that eosinophilic esophagitis is a chronic disease that merits chronic treatment and follow-up.

Dr Katzka serves on the advisory board for Shire and Celgene.

Suggested Reading

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