LETTER TO THE EDITOR

On “Mushroom Gastrostomy” (Semin Intervent Radiol 2005;22:61–63)

1. What are the actual tubes (brand name and type) you use, including their size? Who makes the pull and push types? Who makes the T-fastener?
2. Do you use any push type? When?
3. Does the nasogastric tube that was placed to inflate the stomach get in the way of passing the guidewire up the esophagus (or perhaps it helps as a target)?
4. Do you ever have trouble pulling the tapered dilator tip out the abdominal wall? It seems that pulling would dilate less effectively than pushing, as we usually do with dilators.

Michael Maiman, M.D.¹
St. Rose Hospital
Hayward, California
nebula74@comcast.net

Editor's Response

1. I should start this by saying that I “have nothing to disclose.” I am not a paid consultant for any of the following companies. These are just my personal preferences. I have used several different tubes and prefer the following: I use the 20F Removable Pull Peg made by Boston Scientific and T-fasteners made by Cook. There are two kits for the mushroom tubes. One is an “over-the-wire” kit with a very long curved, tapered dilator that is pushed from the mouth over a very long exchange length wire down the esophagus and out of the stomach. Personally, I don't like this method, although other I know of several interventional radiologists who use this kit and like it. I use a “snare” kit, where a snare is used to pull the tube from the mouth down the esophagus and out of the stomach. I have tried both kits and simply prefer the latter because I find it easier to use.
2. At my hospital, we use push gastrostomy tubes for patients with *obstructive* head and neck cancer or esophageal cancer. We usually review a computed tomography image to see whether the patient has any type of obstructive tumor. If so, we do not use the mushroom tubes. That being said, most of our patients with head and neck cancer *do not* have obstructive tumor and do receive mushroom tubes. Additionally, we place mushroom tubes in nearly all intubated patients. The push gastrostomy tube we most commonly use is the 18 F Microvasive replacement balloon from Boston Scientific. In very sick patients, I occasionally use a pigtail gastrostomy (e.g., Mallinckrodt tube from Cook) because these are very simple and atraumatic to place. The disadvantage of this tube is that it becomes clogged more easily than larger bore tubes and tends to fall out more often than the mushroom tubes. Thus, these need to be changed regularly. Mushroom tubes can be left in for months to years. I have had patients with the same tube for 2–3 years. That is never the case with balloon or pigtail gastrostomy tubes—most of these need to be replaced every 2–3 months or so. Incidentally, some physicians have the mistaken impression that it takes much longer to place mushroom tubes compared with push tubes. I can routinely place a mushroom tube in less than 15 minutes in the vast majority of patients. Also, if catheterizing the esophagus proves difficult for whatever reason, you can simply convert the procedure to a push gastrostomy at any time.
3. The nasogastric tube serves as a nice target—it is not necessary to remove it until you pull the gastrostomy tube from the mouth to the stomach (the nasogastric tube can also be left in if necessary). Remember to puncture the stomach in the midbody slightly to the left gastroesophageal junction—this allows catheterization of the esophagus if it is “wrapped around behind” the midbody of the stomach.
4. Pulling actually dilates *much* better than pushing in this procedure because the stomach and abdominal wall does not push away from you. Serial dilatation is unnecessary. One caveat is that you should make the skin incision at least 5–7 mm in length so that the

Venous Insufficiency; Editors in Chief, Brian Funaki, M.D., Peter R. Mueller, M.D.; Guest Editor, R. Torrance Andrews, M.D. *Seminars in Interventional Radiology*, volume 22, number 3, 2005. Address for correspondence and reprint requests: Michael Maiman, M.D., St. Rose Hospital, 27200 Calaroga Avenue, Hayward, CA 94545-4383. ¹St. Rose Hospital, Hayward, California. Copyright © 2005 by Thieme Medical Publishers, Inc., 333 Seventh Avenue, New York, NY 10001, USA. Tel: +1(212) 584-4662. 0739-9529,p;2005,22,03,248,249,ftx,en;sir00322x.

tube is not under tension (in my experience, tension on the wound increases risk of infection). One huge advantage of the mushroom gastrostomy tube is that the dilator exactly matches the size of the tube, which usually prevents any leakage around the tube. This is in contrast to larger bore balloon push gastrostomy

tubes that require a peel-away sheath ~ 4 F larger than the tube itself for insertion.

Thanks for the interest.

Brian Funaki, M.D.
Editor in Chief