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Options for Jejunal Tubes

by Courey Elliot

Not quite a year ago we were faced with the need for a separate J-tube placement for direct feeds into the small intestine for my son. A jejunostomy was something I had staunchly opposed for the previous six months, so when a scan finally showed that there was an anatomical reason for the complications he had with the GJ-tube, we were told that it was no longer an option but a need. I felt defeated and laid my head down on the fluoroscopy table right there in interventional radiology and cried. I was absolutely terrified of doing a separate J-tube, and now, only a week later, he would have to have that and a revision of this G-tube. It was the stuff my nightmares were made of.

The Roux-en-Y Option

I had researched J-tubes, but had only come across information on the Roux-en-Y procedure. This is when they detach a part of the small intestine and reattach it lower down so that a blind pouch (a portion of the intestine that doesn't connect to intestine on both ends) and stoma are created in one arm of the "Y" shape. The other side of the "Y" attaches to the stomach via the duodenum. The bottom of the "Y" remains connected so that both portions of the "Y" can empty into the small intestine. A normal balloon or non-balloon G-button can be placed in the stoma and changed at home when appropriate.

There are quite a few downsides to this procedure. First of all, it is a major surgery. My fear with my son was that any rearranging of his intestine would lead to more issues with pseudo-obstructions, or that the intestine would just stop working all together. Secondly, the intestine can twist and cause an obstruction. This is true with any stoma in the intestine and is unavoidable. Another complication that our surgeon had talked about many times was the issue with bile leakage. Due to the chemical makeup of intestinal bile, it can cause major skin breakdown, which can in turn lead to infection. This is enough of an issue that he refused to do J-tubes in any situation where it was not absolutely necessary.

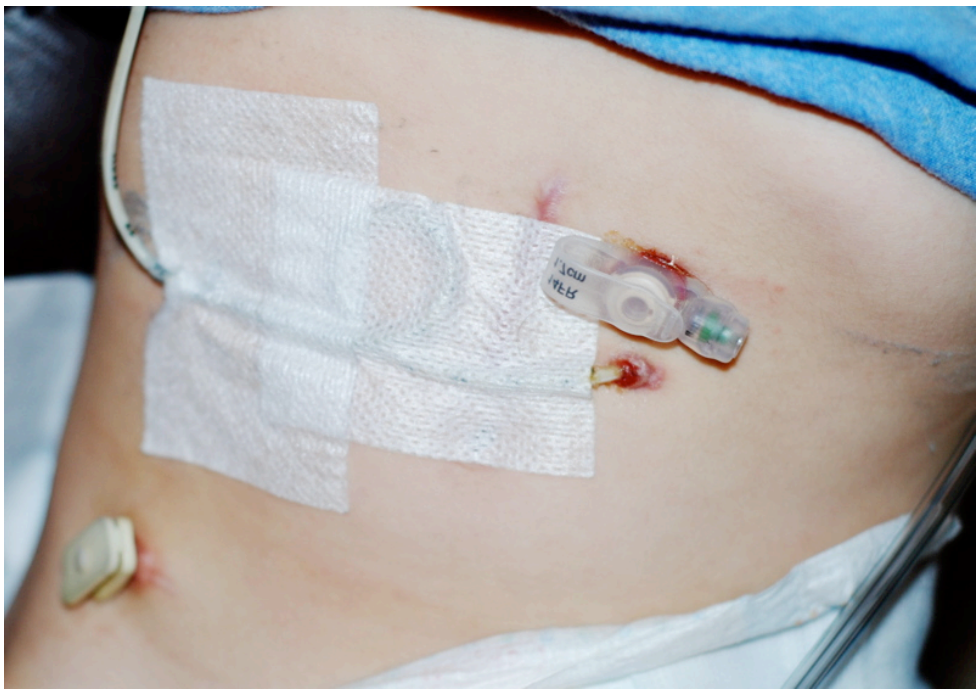
The PEJ Option

It is also possible to place a regular feeding tube or button straight into the jejunum. This is typically done using an endoscope and is often called a PEJ (percutaneous endoscopic jejunostomy). The procedure is very similar to a PEG (percutaneous endoscopic

gastrostomy), but the tube is placed straight into the jejunum instead of the stomach. While the procedure itself is much simpler, there are, however, downsides to this option. The major issue is that the balloon or bumper used to secure the feeding tube can obstruct the narrow jejunum, especially in small children, causing significant motility problems. In addition, in most cases the placement of the tube must be checked by X-ray because the tract is not fully stable. Leakage can also be a problem.

A Novel Straight J-Tube Option

The day of my son's surgeries arrived, and we were shocked to find out that instead of doing the Roux-en-Y, our surgeon was going to do a novel surgery that he had done several times with much better results than the more complicated procedure. He used an 8 French straight NG-tube and created a small stoma from his abdomen into his jejunum. He then stitched the tube inside his intestine for about an inch and a half so that a tract would be scarred into them. This way the intestines did not have to be cut and reattached and the procedure was much simpler in general. The tunnel or tract inside the intestine is created so that when the tube is inserted it always goes in the proper direction. This way the tube can be changed at home without the need to confirm proper placement with X-ray.



The downside to this procedure is that the tube must be taped in. Due to the fact that the tube enters the intestine that is being used (instead of a blind pouch), you cannot use a tube with a balloon to hold it in place or it can cause an obstruction. Having to tape the tube on to the skin could potentially be a large issue if the child had a severe tape allergy. We use hypafix tape to anchor the tube, and it is usually very gentle on the skin.

Aside from the necessity of taping, we have not encountered any real complications from our surgeon's unique approach to J-tube placement. I would say that rather than having complications, it only has annoyances. Changing tape every couple of days gets old, but I much prefer tape changing to chronic leakage or worsening motility issues.

The point of my story is to show that the Roux-en-Y and PEJ, while certainly the most common jejunostomy techniques, are not the only ones. There are other options to look into that may end up being less risky and more beneficial to your child.