I Could Eat a Horse

Is that on my diet?

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Esophageal Stent Uses

Stents are used in a variety of situations.

They are most common for stenting of an esophageal, GE junction or gastric cardia tumor, but can be used in other situations.

If a patient has a tumor in their lung, it can become so large that it impinges on their swallowing, and a stent may be useful to open up their esophagus.

A stent may also be utilized for temporary situations, as in covering a fistula between the esophagus and lung/mediastinum, or a surgical wound that is not healing well.

A patient with a benign stricture, possibly from acid reflux, may also benefit from a stent, as well as someone with a surgical anastomosis.

Temporary stents may be placed for a patient with an esophageal tumor who is experiencing difficulty swallowing, but will be receiving radiation or chemotherapy. The stent can then be removed once the tumor has shrunk.

Esophageal Cancer

Esophageal cancer is one of the most aggressive of tumors, with a 5 year survival rate of approximately 10%.

It is estimated that in 2015:

2,200 Canadians will be diagnosed with esophageal cancer.

2,100 Canadians will die from esophageal cancer.

1,700 men will be diagnosed with esophageal cancer and 1,600 will die from it.

500 women will be diagnosed with esophageal cancer and 460 will die from it.

Based on 2010 estimates:

About 1 in 116 Canadian men is expected to develop esophageal cancer during his lifetime and 1 in 106 will die from it.

About 1 in 348 Canadian women is expected to develop esophageal cancer during her lifetime and 1 in 324 will die from it.

The numbers are just a little grim.

Even more concerning, is that, while other cancer rates have fallen, thanks, in part, to better detection rates, better medications, and better efforts from many people to curb habits that contribute to cancer, esophageal cancer is on the rise.

In 1975, most cancers of the esophagus were of the squamous type (75%), and were located in the middle of the esophagus. It was thought that alcohol and tobacco contributed to this type of cancer, and those of Asian and African descent were more at risk, from genetic factors.

In 1975, adenocarcinomas of the esophagus accounted for 4:1,000,000 people. By 2001, those rates were 23:1,000,000, making it the fastest growing cancer in the US. This type is most often at the GE junction, and begins as Barrett's esophagus. It is possible that obesity contributes to this cancer.

Not only has adenocarcinoma outstripped squamous cell carcinomas of the esophagus numerically, but the total rates of esophageal cancers have risen.

We could talk about Barrett's esophagus, GERD, etc., but for this discussion, what I want to show with these numbers is that we will continue to place a lot of esophageal stents each year, and we have to educate patients about living with one.

Unfortunately.

What do these patient look like?

Most are male, often in their 50's and 60's, and frequently they have been very healthy up until now. This cancer is quiet, and the first inkling they have that something is not right, is when they have trouble swallowing.

We meet them in the endoscopy clinic c/o dysphagia, weight loss, and they may even tell you they had heartburn for years, but have not had it for a long time.

You may have looked after them for years. They may be a Barrett's patient that has had yearly screenings, and then had EMR.

The last thing you can do for these patients is to place an esophageal stent, so they can continue to eat for what time is left.

Unless, of, course, you forgot to give them a stent diet, and they come back for you to pull things out of that stent.

Four times in 10 days.

After you realize you have given them a stent diet 3 times.

And you're like:

Or after the 10th time in 4 weeks, and you're like:

Esophageal Stents

There are many companies that produce esophageal stents, and you probably have your favourites if you work in endoscopy.

The premise is much the same with all stents.

Stents are described as Self Expanding Metal Stents (SEMS) or Self Expanding Plastic Stents (SEPS)

They range from 8-15cm long, and expand to approx. 12-30 cm, depending on the manufacturer.

The first stents developed were uncovered. This means that the whole stent is made of a metal alloy, with no further material added.

They work very well, opening the esophagus, but once placed, the mass will grow into the stent, so the stent is not removable in any way. These stents do not tend to migrate very far.

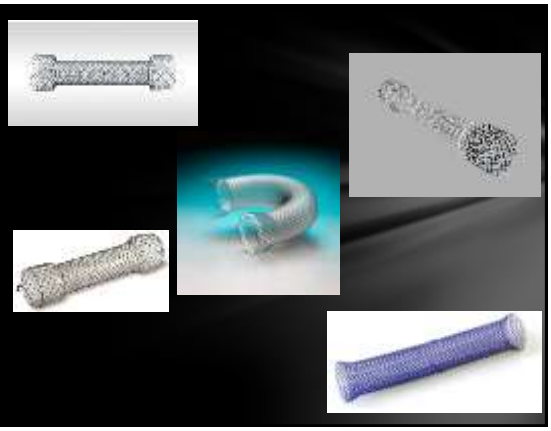
There are permanent stent that are partially covered, leaving both ends uncovered. This lessens the chance that the mass grows into the whole stent, but still leaves the uncovered ends to anchor the stent in the esophagus. Many of these stents use nitinol in their construction. These stents can migrate, especially if they have been placed in, or close to the GE junction.

"Nitinol is a trade name taken from the alloys composing it—nickel (Ni) and titanium (Ti)—and the scientific group that discovered it—the Naval Ordnance Laboratory (NOL). A team from the NOL discovered the alloy while searching for materials that could be used in tools for dismantling magnetic mines."

It allows the stent to keep its shape, and has superelasticity, so it can be placed in an introducer, and, once placed, will expand to the proper shape within 24-48 hours.

Temporary stents are designed to be removed in the future. Those are usually fully covered, and have a string, or an alternate way to remove them. The covering is a durable polymer. They are designed for both benign and malignant conditions, including fistulas, or a post-op wound that is not healing well, or even for a patient who is beginning chemo, or radiation. When using these stents, one must keep in mind that the incidence of migration is higher, because there is nothing anchor it in place, except for the radial force. The advantage is that they are easily removable, as there is no ingrowth.

In the last couple of years, biodegradable stents have been developed, and are used in situations that require less than three months stenting. The manufacturer hopes to use them in place of repeat balloon dilatation for achalasia, peptic, anastomotic, and caustic strictures.



Why can't we just give them tube feeds? Wouldn't it be more efficient?

On the surface, tube feeds require a minor procedure to insert, and since most times a stent is just short-term therapy, why wouldn't it be just as effective?

Calories are easily counted, so weight is controlled, or loss is preventable.

For the palliative patients, no further measures would be necessary, and for those whom the stent was no longer necessary, and it was removed, the tube feed is just as easily removed during the same procedure.

How many times over the last few days have you sat/stood with people, and communicated over food or drinks?

Much of our life is connected with food, whether big family gatherings, or going to Tim's for coffee with friends.

From birth, food is associated with pleasure and contentment.

How many of us crave certain foods to build our moods?

Certainly, if anyone deserves chocolate, it must be those whose lifespan is now on a timeframe.

Our food choices tells a lot about us.

It strengthens relationships when we eat together.

Preparing food for someone is often thought of as romantic.

The context in which food is eaten affects us much more than we might imagine. This includes the time of day, who is around us and where we are, the color of the plates, the lighting, and the music in the background.

People are influenced by those around us who are eating. If they are eating well, we want to eat well. For example, those of you who have been invited out to dinner this week, if no one else had ordered dessert, would you have ordered it?

Food is all around us. You can't read a magazine, watch TV, be on the computer, go to the store, without being reminded of food. Just when you are fasting for something, that is when all the commercials come on for food. Imagine being palliative, with months left to live, and not being able to enjoy the taste of food.

Nutrition is important to those fighting to survive. Without adequate calories, it is much harder to keep going. Some are just biding time until the stent can be removed, and they just want to feel normal. For those whose time is limited, they need to enjoy what is left. For families, its time to create memories for later.

How can we manage that, but not have to go back time after time to fish things out of our stent?

Esophageal Stent Diet

How many of your facilities have a stent diet?

Ours is not official, but we stole The Queen Elizabeth Hospital's one from our conference a few years ago in Charlottetown.

There are a multitude of diets on the net, but I have just compiled all the information into one.

General Guidelines for an Esophageal Stent

Your stent has been placed to make it easier for you to swallow.

It is a hollow tube made out of a combination of metal and plastic that will expand over the next 24-48 hours, to open up your esophagus.

You can expect to have some soreness in your chest for a couple of days as that tube expands. A mild pain reliever like Acetaminophen can be used, but try to avoid ASA, Ibuprofen, Naproxen, or other pain relievers that can cause bleeding.

For the first 24 hours, you should only have liquids to drink as your stent begins to expand. Once you are more confident with this, try smooth foods for a couple of days. After that, begin to try new foods, and different textures. You will soon figure out which textures are easiest for you to manage, and which foods to stay away from. Each person is different, and will find what is best for them.

The key is to eat foods that are moist, have a soft consistency, and are easy to swallow. Avoid foods that are dry/crumbly, unless they have been softened with liquid.

Add lots of sauces, and gravy to foods, to add flavour, and make swallowing easier.

Drink lots of fluids with your meals.

Chew your food thoroughly: twice as much as you usually would.

Take small bites, and eat slowly.

If you wear dentures, make sure they fit well.

As you eat, sit upright, and stay upright for ½-1 hour after eating, to make sure things go down.

After meals, have a fizzy drink, or a warm drink, to help clear things from your stent.

It is helpful to sip fizzy drinks or warm drinks during the day, to keep things clear.

If you have a hard time drinking fluids during a meal because you feel full faster, try drinking fluids between meals so you do not get dehydrated.

Eating 5-6 small meals during the day gets you the nutrition you need, without the feeling of being too full. It is better to snack frequently, instead of trying to eat 3 big meals a day.

Do not eat within an hour of bedtime/naptime.

This is not the time to try to eat low fat/ low carbs.

You are looking to eat foods that have lots of calories, fat, protein, vitamins and minerals.

Cook meats slowly to tenderize.

You should still try to follow Canada's Food Guide, as you choose meals with a great variety of tastes, and choices.

Do not drink liquids that are extreme in temperatures.

If you find a lump in your food that you have difficulty chewing, do not hesitate to spit it out. Better to be rude at the table, than to try to get something down that may stick.

If you take medication, avoid large pills, or coated tablets that may become stuck.

Ask your pharmacist which pills can be crushed, and if there is a liquid alternative for your medications.

If your pills can be crushed, take them with applesauce, or ice cream.

If you have Something Stuck

Don't panic. It is not blocking your airway, but your esophagus.

Stop eating.

Walk around.

Have a fizzy drink to try to dislodge/dissolve it.

Try the last two a couple of times if the first try does not work.

If this does not dislodge the obstruction within 1-2 hours, come to the emergency room.

If losing weight, or not getting enough nutrition

Add 2-4 tablespoons of dried milk powder to 500 ml full fat milk.

Used enriched milk in sauces, puddings, soups, etc.

Add full fat milk, cheese, yogurt, evaporated milk in recipes.

Add butter, cheese, gravy, or sauces to foods to increase calories (try with potatoes, vegetables, and eggs).

Add milk, honey, sugar to hot cereal for increased calories and flavour.

Drink Boost, Ensure, Instant Breakfast (use whole milk) straight, or use it with ice cream or sherbet to make a shake.

For those with lactose intolerance, there are alternate products: Boost Breeze, Ensure Clear. These will make a nice shake if added to lactose free sherbet, or sorbet.

If you are still losing weight, ask to be consulted to a dietician.

Milk and Milk Products

YES

- Whole milk
- Yogurt
- Custard
- Ice Cream/sherbet
- Shredded/ soft/ melted cheese
- Cottage/Ricotta cheese
- Cream cheese
- Cream cheese spread

NO

- Ice cream/sherbet with chunks of fruit or nuts
- Hard cheeses

Meat and Meat Alternatives

YES

- Soft eggs
- Tofu
- Casseroles
- Moist fish
- Strained baby meat
- Bite size/ground meat with gravy/sauce
- Tuna salad
- Stew
- Meat sauce
- Egg salad
- Omelets
- Quiche
- Soufflé
- Pates
- Fish cakes with sauce
- Shepherd's pie
- Chili with fine meat pieces

NO

- Dry or tough chicken or red meat
- Peanut Butter
- Hot dogs
- Fish with bones
- Nuts
- Seeds
- Hard boiled egg
- Battered fish
- Fish fingers
- Fried eggs
- Bacon
- Sausages

Fruits

YES

- All juices
- Canned fruit (except pineapples)
- Peeled fruit: bananas, pears, peaches
- Stewed fruits
- Applesauce
- Strained baby fruits
- Melons (without seeds)
- Strawberries
- Fruit smoothies (strain seeds, and skins)
- Kiwi (no skin)

NO

- Pineapple
- Stringy fruit
- Fresh fruit with skin or membranes (plums, peaches, oranges, grapefruit, lemons, limes, apricots)
- Dried fruit
- Berries with seeds
- Crisp fruit
- Grapes
- Mango
- Apples

Vegetables

YES

- Strained baby vegetables
- Well cooked, or pureed vegetables
- Make sure fork-tender
- Vegetable juices
- Mashed turnip
- French fries (tender, not crunchy)
- Mashed carrots
- Mashed cauliflower
- Pureed/strained soups made from vegetables (broccoli, spinach, peas etc)
- Canned baked beans

NO

- Raw vegetables
- Lettuce/greens
- Spinach
- Corn
- Green/yellow beans
- Celery
- Peas
- Broccoli

Bread and Grains

YES

- Cooked cereal
- Mashed/boiled potatoes
- Sweet potatoes
- Yams
- Baked potatoes (no skin)
- Soft, moist rice
- Noodles
- Macaroni
- Spaghetti with ground meat sauce
- Canned spaghetti
- Cinnamon rolls
- Potato salad
- Barley
- Quinoa
- Couscous
- Muffins (no nuts or seeds)
- Stuffing
- Pasta salad
- Toast
- Crackers/bread in soup
- Pancakes/waffles with butter and syrup
- Dry cereal, softened with milk

Bread and Grains

NO

- Fresh bread
- Rolls with crust
- Dry cereal
- Potato chips
- Popcorn
- Dry crackers
- Croutons
- Granola
- Muesli
- Pretzels
- Potato skins
- Multigrain breads

Fats

YES

Butter
Margarine
Mayonnaise
Salad dressing
Gravy
Cream

NO

Deep fried, crispy foods

Desserts

YES

Chocolate bars (no fruit, nuts or chunks)
Soft cookie
Sherbet/sorbet/ice cream
cheesecake
Italian Ice
Jello
Puddings
Mousse
Custard
Moist cakes
Popsicles
Cheesies
Soft pie (cream pies)
Crème caramel
Fudge (no nuts)

NO

Dry cookies
Pie crust
Dry desserts
Desserts with nuts, chunks, coconut, or skins
Toffee
Sticky desserts
Pickles

Miscellaneous

YES

Cheese sauce
White sauce
BBQ sauce
Alfredo sauce
Tomato sauce
Syrup
Honey
Jelly
Seedless jam
Ketchup
Mustard
Relish

Pureed soup
Strained cream soups
Broth
Soup with small pieces of soft vegetables or meat, noodles, grains
Bouillon

Beverages

YES

Coffee
Tea
Hot chocolate (make with milk)
Sports drinks
Lemonade
Iced Tea
Juices
Milk
Carbonated drinks
Smoothies (strained)
Shakes
Enriched drinks

Possible Problems

Acid reflux: increase the head of your bed. Use foam wedge between mattress and box spring, or more than one pillow.

eat in an upright position

take acid medication ½ hour prior to breakfast

Pain: usually lasts only until the stent expands, approx 72 hours. May take over the counter medication that does not increase bleeding time.

Contact you MD if coughing/vomiting blood, black tarry stools, trouble swallowing, weight loss, dehydration, or if eating leads to coughing.

This is one of your final opportunities to make a difference in some of your patient's lives. They are under a lot of stress, and you can help them to enjoy time with family and friends, for the next few months, or years. Taking time to carefully go over the diet prior to sedation will decrease their fear, and give them a measure of control, when they feel things are spiraling out of control. It's all about comfort, and safety.

For those whom this is a temporary measure, remind them of that, and tell them this is to keep them from difficulty until it can be removed.

The odds are, someday, the one needing a stent will be a familiar face to you, and you will want them to be well informed.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