#### PATIENT EDUCATION

Surgery

Baylor Medicine

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### **REPAIR OF DISTAL AORTIC ANEURYSMS & DISSECTIONS**

## DEPARTMENT OF SURGERY

#### What is an aorta?

The aorta is the largest blood vessel in your body. It runs from your heart down to your legs in a shape that resembles a candy cane and is responsible for delivering blood to your whole body.

#### What is a thoracoabdominal aneurysm?

An aneurysm refers to the ballooning or expansion of the aorta that causes aortic wall weakening The thoracoabdominal aorta starts after the curve of the cane and extends past the arteries that deliver blood to the stomach, intestines and kidneys. A thoracaoabdominal aneurysm is an aneurysm in this section of the aorta.

An aneurysm may continue to expand or remain unchanged over time but close monitoring is necessary. If the aortic wall continues to expand, it becomes weaker and risks tearing (called a dissection) or rupturing. If a dissection occurs, blood can flow out of the tube of the aorta into the wall of the aorta, making it expand or swell up. This is dangerous because it can block the flow of blood or cause the aorta to burst.

# Risk factors for developing a thoracoabdominal aneurysm or dissection

- Age and/or degenerative disease of the aortic wall
- Uncontrolled high blood pressure
- Long-term use of tobacco
- Inflammation or swelling of the aorta
- Infection
- Certain connective tissue disorders, such as Marfan synd Ehlers-Danlos syndrome or Loeys-Dietz syndrome
- Trauma

#### Symptoms

- No early signs: Often, there are no early symptoms, which makes it hard to detect.
- Pain or tenderness: Some people may feel pain or tenderness in the belly or back.
- Pulsing lump: You might notice a pulsing lump in your belly, especially if the aneurysm is large.
- **Tearing/dissection signs:** Sudden, intense "tearing" pain, sense of impending doom, nausea, vomiting, fast heart beat, dizziness and low blood pressure can lead quickly to rupture which is an emergency!



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#### **Immediately After Surgery**

After surgery, your anesthesiology and surgery team will accompany you to the Cardiovascular Critical Care (CVCC) unit.

#### **Breathing tube**

For your safety, your breathing tube will still be in place in your mouth when you wake up. This can be frightening, because you won't be able to speak, and it may feel uncomfortable. Try to relax, breathe normally and let the breathing machine (called a ventilator) do the work and breathe for you. Your doctor will have the tube removed as soon as you can breathe well on your own and you remain calm.

After the breathing tube is removed, you may feel groggy and disoriented. If you feel chilly or like your stomach is upset, ask your nurse to help you get comfortable. You will also receive pain medication to control your pain.

#### Lung Strength

Your lungs may be weak after surgery, so it's important to get them back in shape. To do this, you will need to take deep breaths and cough a lot.

You will also be given an incentive spirometer to help guide you to take deep breaths. This helps expand your lungs after surgery and prevents infection and fluid from building up in your lungs. You will also take this home with you and continue to use it after surgery. This device helps you in a very important part of your recovery and is your friend. It can help you go home faster!



- To use:
- 1. Put the mouthpiece in your mouth.
- 4. Slowly let the air out.
- 5. Do this ten times every hour.
- 3. Hold the breath for as long as you can.

2. Breathe in slowly and as deep as you can.

#### **Pain Management**

Your nurse will give you pain medication. You may also have a pain pump with a button that allows you to give yourself a dose of IV pain medication. If so, only YOU can use it, not your visitors or family. It is important for you to let your nurses know your pain level so that they can time your medications best. Some pain after surgery is expected.

#### Your Hospital Stay

After your stay in Cardiovascular Critical Care, you will move to another area for continued monitoring and recovery. The spinal cord drain will be removed before you leave the critical care unit. As soon as you're ready, a nurse will help you get up and walk, which can help prevent blood clots from forming in your legs and helps you regain strength. Your hospital stay, typically 7 to 10 days, will be personalized based on your procedure and progress. Your surgery team will keep you informed of your expected discharge as you recover. Your staples may be removed in the hospital if you are there long enough.

#### Recovery

It will take you approximately two to three months to fully recover from undergoing your aortic surgery. You should plan to be away from work, getting your full strength back, for approximately 12 weeks.

#### **Continued Recovery at Home**

When it's time to go home, your care team will review all the medications that you'll need to keep taking at home. If there is anything you don't understand, please don't hesitate to ask questions so that you have all the instructions you need before going home. You will also receive discharge paperwork with specific instructions to follow. Please read through all of this.

#### **Evaluation**

- A CT test is the most common test ordered and shows the size and location of the aneurysm and/or dissection
- A special type of MRI called a magnetic resonance angiography (MRA) may also be used to look at the aneurysms and other blood vessels
- Your surgeon will choose the best method for imaging your aorta

#### **Surgical Repair**

During your surgery, the diseased portion of your aorta will be replaced with a flexible tube or graft made of Dacron. Additionally, depending on the condition of other connecting arteries, it is possible you may also require additional smaller grafts to replace blood vessels that come out of the aorta.



#### **During Surgery**

- You will be given general anesthesia, so you will be asleep and pain-free.
- Through an IV, you will be receiving fluids and other medicines like antibiotics during the surgery.
- After you are completely asleep, a breathing tube will be put into your windpipe through your mouth to help you breathe.
- A unique risk of this surgery is leg paralysis. To help prevent this from happening, a thin drain will be inserted into the fluid around your spinal cord by the anesthesiologist after you are asleep.
- You will also have a catheter placed in your bladder to drain your urine. This will be removed once you are awake and moving around comfortably.
- The surgeon will make an incision starting on the left side of your back and coming around your left side to your abdomen.
- Next, the surgeon will find the part of the aorta that has the aneurysm and expose it properly.
- In some cases, your blood may be bypassed around the aneurysm, connecting the areas above and below the aneurysms, to reroute blood away from the aneurysm site during the repair.
- The surgeon will use a synthetic tube called a Dacron graft to replace the aneurysm. This graft is precisely fitted to match the size of your remaining aorta.
- In some cases, you may also require additional smaller grafts to replace vessels that supply blood to other organs.
- The graft is carefully sewn into place, reconnecting the aorta and ensuring proper blood flow.
- If a temporary bypass was created, it will be carefully removed so that the blood flows through the repaired aorta.
- The surgeon will use wires and suture to bring the ribs back together.
- Finally, the incision is closed with stitches that go underneath the skin as well as staples on top of the skin.

#### **Follow-up Visits**

Make an appointment to follow up with your primary care physician (PCP) within one week of your discharge. They need to see how you are recovering, check your incision site and manage your medications appropriately. If you have stitches or staples that still need removal, our surgery team will collaborate with you to identify the most appropriate clinic based on your location for this follow-up procedure, which typically takes place about two weeks after surgery.

#### Activity

- Walk as much as comfort allows. It's a great way to regain strength and help prevent blood clots in your legs. Walking for 15-20 minutes, three to four times per day is a great start.
- Do not lift anything! If you need to pick up something that is even a little heavy (like a gallon of milk), ask someone to get it for you.
- Do not drive until your doctor tells you that it's safe to do so. However, you can ride as a passenger in a car at any time. Avoid outdoor bicycling or motorcycle riding for six weeks after surgery. This is the recommended time period to allow your incision to properly heal. If you are traveling a long distance as a passenger, get out of the car at least every two hours, stretch and walk for a few minutes.

#### Bathing

- To help prevent an infection, keep your incision overall clean and dry.
- It's safe to shower and get the incision wet with running water once you're comfortable standing. Use antibacterial soap (Dial or a similar soap works well) and avoid the use of perfumed lotions or soaps. Pat dry gently.
- Do not soak the incision underwater for the first few weeks.
- Do not go swimming or take baths until your doctor says it's okay.

#### Call your surgery team immediately if you have:

- A fever of 101°F or higher
- Pain that does not get better with medication
- Sudden, severe shortness of breath, or chest pain
- A fast or irregular heartbeat that does not go away
- Pain, redness, or swelling in one or both legs
- Nausea, or if you can't keep food down
- Drainage from your incision
- Swelling in your hands, ankles, or stomach

If you experience anything unusual or something just feels wrong, don't be afraid to call.

#### Call 911, or go to Baylor St. Luke's Medical Center, if you experience the following:

- Chest pain
- Shortness of breath
- Rapid, irregular heartbeat
- Changes in your speech, difficulty concentrating, or weakness on one side of your body.



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