

## Pregnant Patient Presents with Aortic Dissection

Emory Aortic Center Surgeons Work with Maternal-Fetal Medicine Team to Manage Case

In May 2018, doctors at Emory University Hospital Midtown saw a 33-year-old female who was 24 weeks pregnant with an acute type B aortic dissection. She had been transferred to Emory from Floyd Medical Center in Rome, Georgia. Her case was remarkable in that not only is it uncommon for women in their early thirties to suffer an acute aortic dissections, but her pregnancy also added a level of complexity that called for ongoing team-based diagnoses and coordinated care from both the Emory Aortic Center and the hospital's maternal-fetal medicine team.

### Evaluation and treatment

Although the patient had a history of morbid obesity and hypertension, she had no complications from the aortic injury. She had good organ perfusion, had not suffered a stroke, and her blood pressure was stable. The Aortic Center team's Bradley Leshnowar, MD, and Edward P. Chen, MD, evaluated her and offered her endovascular stent grafting to treat the dissection, but she declined, due to concerns about the use of fluoroscopy and its effects on her baby.

*Continued inside*



## *Aortic Dissection continued*

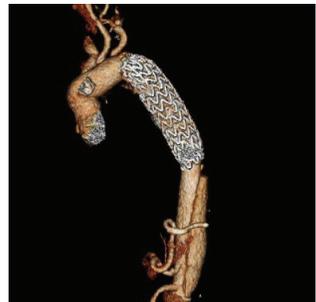
Instead, consulting with the maternal-fetal medicine team, Dr. Leshnower and Dr. Chen chose to treat her with bed rest and blood pressure control in the obstetrics unit. She was monitored in the hospital for two months, until the maternal-fetal medicine team, led by Dr. Iris Krishna with Dr. Leshnower monitoring the patient's blood pressure, successfully delivered a 2280 gm (2.28 kg) boy by C-section at 34 weeks. The baby was healthy, with an excellent Apgar score.

Before her discharge, another CT scan revealed the patient's aorta to be relatively stable, so she and the baby were sent home with plans to follow up sometime in the future for more imaging.

## **Type B to Type A Necessitates Emergency Surgery**

Nine days later, the patient developed sudden onset chest pain and returned to Emory University Hospital Midtown, where this time another CT scan revealed an acute type A dissection, which had propagated proximally into her ascending aorta across her arch, necessitating emergency surgery.

Drs. Chen and Leshnower replaced her ascending aorta and entire transverse arch and placed a stent graft in her descending aorta to stabilize the dissection flap, and the patient recovered and was released after only five days in the hospital. Seen recently at her six-month follow-up, she continues to do well, with a healthy baby. Follow-up CT imaging showed her aorta to be quite stable with excellent remodeling. The team foresees an excellent outcome for her.

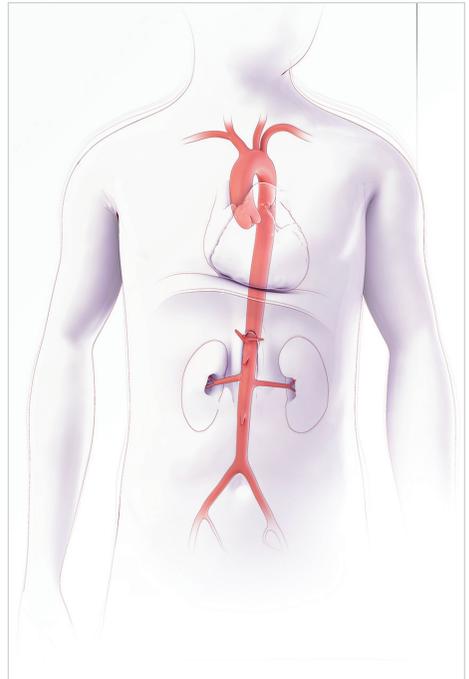


*Postoperative 3D volume aortic reconstruction demonstrating complete replacement of the ascending aorta, and transverse arch with individual reimplantation of the great vessels, with the addition of a frozen elephant trunk. The false lumen is obliterated along the length of the stent graft.*

## Emory Aortic Center's Capabilities and Culture of Collaboration

This case highlights Emory Aortic Center's expertise, with a multi-disciplinary team effort among cardiac surgery, vascular surgery, cardiology and radiology that is critical for achieving optimal outcomes for all aspects of aortic surgery, whether endovascular or open, with the unique ability to perform complex operations in elective or emergent settings across a broad spectrum of patients.

Additionally, it emphasizes the center's collaborative mindset, where experts from different areas – Maternal and Fetal Medicine, Neonatology and Gynecology – worked with the center's cardiac surgeons and cardiologists to manage this particular patient, monitoring both her unborn baby and her blood pressure – balancing needs of both mother and baby, ensuring a safe delivery, and ultimately, a remodeled aorta and full recovery.



To make a referral or consult with one of our Emory Aortic Center specialists, call our physician referral line at **404-778-5050**.

# Setting the Standard: Emory Aortic Center

Physicians of the Emory Aortic Center have established an international reputation for excellence in treating aortic dissections with medical management, TEVAR, open surgery or hybrid procedures.

**Volume:** 100 aortic dissections treated annually, including more type A dissections than any other Georgia medical center and 12 to 15 rare, complex type B dissections.

**Complexity:** “We take on the hardest cases,” Dr. Leshnowar affirms, citing the case presented here.

**Team Approach:** Unparalleled, combined experience of a cardiothoracic and vascular surgeon, enabling optimal intervention and repair of the entire thoracic and abdominal aorta.

**Low Morbidity and Mortality:** In-hospital and one-year mortality rates were 3.9 percent and 5.8 percent, respectively, following TEVAR for complicated acute type B aortic dissection (according to a study from January 2012 to December 2015). These results are consistent with the results of other high-volume aortic centers across the country.

**Long-Term Surveillance:** The Emory Aortic Center does lifetime surveillance of a patient’s aorta to monitor the development of aneurysms.

**Regional Referral Center for the Southeast:** Patients travel to Emory from across Georgia, Tennessee, South Carolina, Florida, Alabama and Mississippi.

**Clinical Trials:** As Atlanta’s only academic medical center, Emory is positioned to test the latest stent grafts and techniques for aortic dissection.

**Publications and Presentations:** Emory’s physicians have published studies on aortic dissection in numerous peer-reviewed journals and presented their findings at national and international conferences.

# Emory Aortic Center

The Emory Aortic Center offers comprehensive care for the full range of aortic diseases and conditions.

The center brings together the experience, expertise and passion of Emory's cardiac and vascular surgeons, who collaborate to provide the most appropriate care for the specific needs and anatomy of each patient we see.

We emphasize an integrated, collaborative team approach that extends to you, as the referring physician, to deliver the most appropriate treatment for your patient.

## OUR TEAM

### Cardiothoracic Surgeons

Edward P. Chen, MD

Brent Keeling, MD

Bradley Leshnower, MD

### Vascular Surgeons

Olamide Alabi, MD

Michael Clark, MD

Yazan Duwayri, MD

Guillermo Escobar, MD

Peter H'Doubler, Jr., MD

William Jordan, Jr., MD

Charles Lewinstein, MD

Joseph Zarge, MD

To transfer a patient to Emory Healthcare for aortic emergencies, call our transfer service at **404-778-4930**.

To refer a patient to an Emory Aortic Center physician, please call our physician consult line at **404-778-5050**.

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Decatur, Georgia 30030

**Emory Heart & Vascular Center Transfer Service**  
**404-778-4930**

**Emory Physician Consult Line**  
**404-778-5050**

**Emory HealthConnection<sup>SM</sup>**  
**404-778-7777 (Patients)**

**[emoryhealthcare.org/rightdirection](https://emoryhealthcare.org/rightdirection)**