

Family Education Sheet

Left Aortic Arch with Aberrant Right Subclavian Artery



Boston Children's Hospital

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This family education sheet describes a left aortic arch with an aberrant right subclavian artery. It also explains how it's treated.

Key points

- Many children never have symptoms or need to have surgery.
- Swallowing symptoms are the most common but many children also have respiratory symptoms.

What is it?

- A left aortic arch with an aberrant right subclavian artery is a type of incomplete vascular ring.
- The aortic arch is left-sided and the right subclavian artery typically passes behind the airway (breathing tube) and esophagus (swallowing tube).
- The aberrant right subclavian artery can compress (push down on) the esophagus (swallowing tube) causing a "speed bump" for liquids and solids during swallowing (see Figure 1).
- People with vascular rings can also have a condition called tracheomalacia, which means that the airway collapses when breathing.

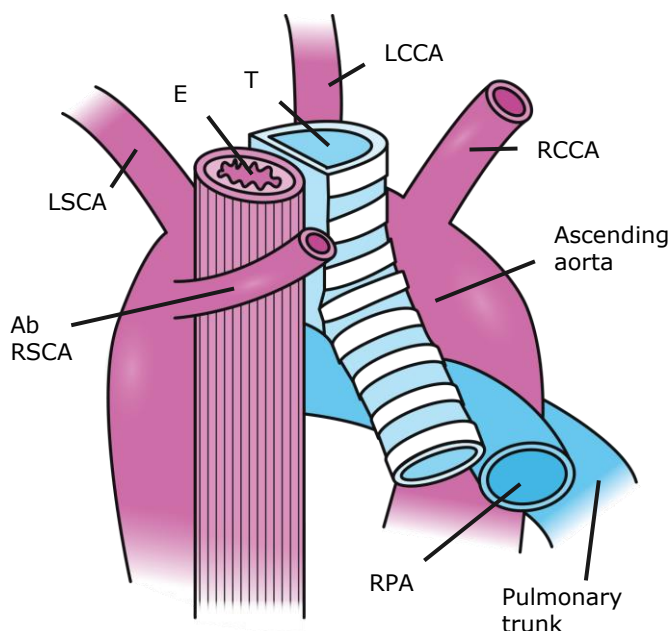


Figure 1.

Figure 1 Key: Esophagus (E), trachea (T), left subclavian artery (LSCA), left common carotid artery (LCCA), Right brachiocephalic artery (Ab RSCA), right common carotid artery (RCCA), Right pulmonary artery (RPA)

What causes it?

- A vascular ring is formed during a baby's development in the womb.
- The aorta develops from vessels that are formed very early in pregnancy.
- A vascular ring occurs when these vessels form abnormally.

Is it related with a genetic diagnosis?

- Vascular rings can be related to genetic syndromes such as 22q11.2 (DiGeorge syndrome). This is less common for this kind of vascular ring compared to other vascular rings.
- You can talk about genetic testing options with your child's cardiologist.

How is it treated?

- Many children don't need surgery.
- The decision to proceed with surgery depends on the severity of symptoms and certain tests.
- Surgery usually involves a right thoracotomy and relocation of the right subclavian artery to the right common carotid artery.
- Your child may also need other airway and esophageal procedures, such as a tracheopexy and esophageal mobilization. If they're needed, these procedures would be done at the time of surgery.

What are the symptoms?

- Many children never have symptoms. Others start to have symptoms as an infant, child or adult.
- Swallowing symptoms are more common and can include gagging, choking or coughing when eating or drinking, problems with food getting stuck or pain when swallowing, and/or aspiration (liquids going into the breathing tube when drinking).
- Dysphagia lusoria is a term to describe the symptom of having a hard time swallowing related to this anatomy.

- Some children may change their diets to avoid these symptoms by taking a long time to chew food, cutting food in small pieces or taking frequent sips of liquid between bites of food.
- Respiratory symptoms are less common, but may include a chronic croupy or “barking” cough, noisy/junky breathing, frequent respiratory tract infections, “blue spells” or shortness of breath with activities.

What is the Vascular Ring and Airway Program?

- We are a multidisciplinary program that supports children with vascular rings, related vascular compression anomalies and tracheal anomalies.
- Children with these conditions are complex and need to see multiple specialists to get comprehensive care.
- Medical and surgical specialists on our team include cardiac and general surgeons, gastroenterologists, pulmonologists, otolaryngologists, speech pathologists, cardiologists and nutritionists.

When should I contact the Vascular Ring and Airway Program about my child?

You can contact our team at any time to get recommendations for monitoring your child’s symptoms, testing, medical treatment or surgery.

Contact us

The Vascular Ring and Airway Program

(617) 919-5377, Paulina Bongay, Case Coordinator

[Second Opinion Portal at Boston Children’s](#)

This Family Education Sheet is available in Spanish and Arabic.