WEBVTT Kind: captions Language: en

00:00:09.743 --> 00:00:13.646 - The aorta is the...really the major highway of blood flow.

00:00:15.015 --> 00:00:17.717 - The aorta is the biggest blood vessel in the body.

00:00:17.984 --> 00:00:21.554 It courses within our body, in our trunk and in our abdomen.

00:00:22.489 --> 00:00:24.858 It arises right out of the heart

00:00:24.858 --> 00:00:28.595 and takes a course where it starts towards the front of the chest.

00:00:28.928 --> 00:00:34.100 - The course is upwards and then sort of to the side and then downwards towards the feet,

00:00:34.834 --> 00:00:38.571 all the essential branches of the body emerge from the aorta.

00:00:38.571 --> 00:00:41.541 So you can think of it as really the major blood vessel

00:00:42.042 --> 00:00:44.210 supplying the organs of the body.

00:00:44.210 --> 00:00:47.347 - We often think about different organs in our body that are diseased.

00:00:47.447 --> 00:00:50.316 Someone has kidney disease, someone has liver disease,

00:00:50.316 --> 00:00:51.751 something wrong with the brain.

00:00:52.519 --> 00:00:55.155 But it's important to understand that all those organs

00:00:55.422 --> 00:00:59.492 need a rich and robust blood supply at all times to function.

00:00:59.492 --> 00:01:01.995 There are discrete diseases associated with the aorta

00:01:01.995 --> 00:01:05.131 that are important to carefully manage and treat.

00:01:05.899 --> 00:01:09.969 - Even a tiny bit of error in management can have devastating consequences.

00:01:12.405 --> 00:01:14.474 - Some conditions occur with age.

00:01:15.275 --> 00:01:18.211 The other type of disease are genetic and could be inherited

00:01:18.611 --> 00:01:21.648 and they tend to show up clinically at a younger age.

00:01:21.648 --> 00:01:25.185 A third type of conditions is any other condition in the body,

00:01:25.185 --> 00:01:28.221 such as inflammation or infection can affect the aorta,

00:01:28.221 --> 00:01:31.057 and the last type is trauma.

00:01:31.057 --> 00:01:34.127 So any injury to the aorta, such as in a car accident.

00:01:41.267 --> 00:01:44.170 - The aorta can harbor disease for a long time

00:01:44.170 --> 00:01:47.006 before it can cause any problems for the patient.

00:01:48.074 --> 00:01:52.378 - One of the most common diseases of the aorta that we treat is aortic aneurysm disease

00:01:53.113 --> 00:01:55.348 and often it's called a silent killer

00:01:55.348 --> 00:01:58.718 because by the time patients manifest symptoms from this,

00:01:58.718 --> 00:02:02.422 which most often happens to be either a tear in this wall of the aorta,

00:02:02.422 --> 00:02:05.625 what we call an aortic dissection, or rupture

00:02:05.625 --> 00:02:09.229 and if the aorta ruptures, most patients don't even make it to the hospital.

00:02:15.168 --> 00:02:19.572 - And these aneurysmal changes can happen at a variety of different locations in the aorta.

00:02:20.940 --> 00:02:23.109 - When we treat pathologies of the aorta,

00:02:23.109 --> 00:02:25.712 we cannot treat the entire aorta at the same time.

00:02:25.712 --> 00:02:28.047 So we treat it in segments.

00:02:36.422 --> 00:02:40.827 - Endovascular surgery changed the scenery for aortic disease.

00:02:41.594 --> 00:02:46.166 - As the technology evolves, we can deliver these minimally invasive techniques

00:02:47.267 --> 00:02:50.336 and there are branched and fenestrated technologies

00:02:50.336 --> 00:02:54.040 that can be deployed in the ascending aorta and the aortic arch

00:02:54.440 --> 00:02:57.677 that will make an area of the aorta that was previously deemed

00:02:57.777 --> 00:02:59.812 solely appropriate for open surgery,

00:02:59.812 --> 00:03:03.383 now accessible for minimally invasive stent graft technology.

00:03:05.185 --> 00:03:09.522 And there can also be hybrid approaches where we combine traditional open surgery

00:03:09.522 --> 00:03:12.091 with some of the newer techniques that are available.

00:03:17.997 --> 00:03:22.302 From a genetic standpoint, we are also building a database of patients

00:03:22.302 --> 00:03:25.138 and we're going to be doing correlative studies to see

00:03:25.138 --> 00:03:29.943 what all these mutations in these family members mean in terms of their outcomes,

00:03:29.943 --> 00:03:31.844 because I think that will be important.

00:03:32.111 --> 00:03:35.982 My lab is studying from a biomarker profile because we know

00:03:35.982 --> 00:03:39.886 that we don't have any blood test to screen for aortic aneurysm patients.

00:03:42.155 --> 00:03:45.191 - When someone in the family has suffered from aortic condition

00:03:45.391 --> 00:03:48.261 or some unknown lethal thoracic condition,

00:03:48.261 --> 00:03:51.531 many times we find that they have the relatives

00:03:51.531 --> 00:03:56.936 that actually do have a silent aortic disease or an aortic valve disease

00:03:57.203 --> 00:04:01.341 and it's very rewarding that you are able to help patients in this capacity

00:04:01.341 --> 00:04:04.377 because otherwise these patients would have never found out that they had a disease

00:04:04.711 --> 00:04:08.548 and the same time offer awareness and screening and surveillance

00:04:08.548 --> 00:04:11.084 for them and for the rest of the family members.