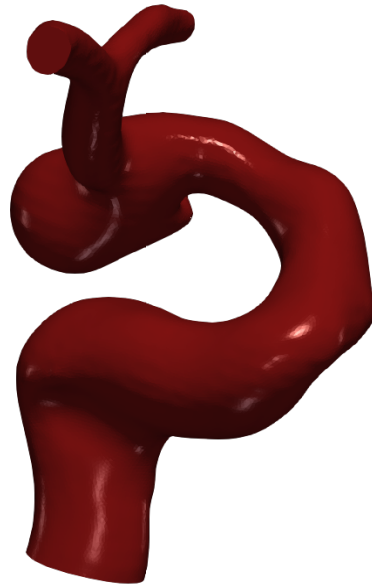


Vascular Model Repository

Specifications Document



0215_H_CERE_CA

Legacy Name: ANR012_Growing

Model added: 21 Jul 2023

Species	Human
Anatomy	Cerebral
Disease	Cerebral Aneurysm
Procedure	None

Clinical Significance and Background

Cerebral

The cerebral arteries are involved in providing blood to the brain and the spine. They provide about 20% of the blood to the brain while the carotid arteries provide the other 80%. The two vertebral arteries start at the subclavian arteries near the collarbone and run up the left and right sides of the spinal column in the neck. At the base of the skull, the two vertebral arteries then merge into one artery called the basilar artery which is the main supply of blood to the brain stem and also supplies blood to the brain itself through the Circle of Willis.

Cerebral Aneurysm

A cerebral aneurysm, also known as a brain aneurysm, is a weakened or thin spot on an artery in the brain that bulges and fills with blood. If left untreated, it can rupture, leading to a hemorrhage, potentially causing serious health issues such as hemorrhagic stroke, brain damage, coma, or even death. While some small aneurysms may not cause immediate problems, they have the potential to rupture and cause bleeding within the brain or surrounding areas. Symptoms of an unruptured aneurysm may include pain behind the eye, numbness, weakness, vision changes, and more. When an aneurysm ruptures, it presents with a sudden and severe headache, double vision, nausea, stiff neck, and other alarming symptoms. Immediate medical attention is crucial if any of these symptoms occur.

Cerebral aneurysms can be classified into three types: saccular, fusiform, and mycotic. The saccular aneurysm is the most common form and is typically found on arteries at the base of the brain. They can be categorized by size as small (less than 11 mm), large (11-25 mm), or giant (greater than 25 mm).

Clinical Data

General Patient Data

Age (yrs)	66
Sex	Female

Specific Patient Data

Aneurysm Location	Posterior Communicating Artery
-------------------	--------------------------------

Diabetes Mellitus	No
Hypertension	Yes
Hyperlipidemia	Yes
Smoking	Yes
Family History of Cerebral Aneurysm	No

Notes

Categorized as a growing aneurysm (increased in size by at least 1mm in two or more dimensions between checkups). Aneurysm located in the posterior communicating artery. Paired with stable aneurysm 0216_H_CERE_CA. See below for information on the image data.

Image Type: VTI

Image Source: Stanford Health database

Publications

There are no publications associated with the featured model.

License

Copyright (c) Stanford University, the Regents of the University of California, Open Source Medical Software Corporation, and other parties.

All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this data to use the data for research and development purposes subject to the following conditions:

The above copyright notice and the README-COPYRIGHT file shall be included in all copies of any portion of this data. Whenever reasonable and possible in publications and presentations when this data is used in whole or part, please include an acknowledgement similar to the following:

"The data used herein was provided in whole or in part with Federal funds from the National Library of Medicine under Grant No. R01LM013120, and the National Heart, Lung, and Blood Institute, National Institutes of Health, Department of Health and Human Services, under Contract No. HHSN268201100035C"

AND/OR

N.M. Wilson, A.K. Ortiz, and A.B. Johnson, "The Vascular Model Repository: A Public Resource of Medical Imaging Data and Blood Flow Simulation Results," J. Med. Devices 7(4), 040923 (Dec 05, 2013) doi:10.1115/1.4025983.

AND/OR

Reference the official website for this data: www.vascularmodel.com

THE DATA IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE DATA OR THE USE OR OTHER DEALINGS IN THE DATA.