Posterior Circulation Stroke a rare but serious complication of Bronchial Artery Embolization.

Presenter: Joseph Thachuthara-George, MD, Pulmonary Critical Care Fellowship, PGY-V
Local Mentor: Dr. Tara Barto.

Case Summary: 31-year-old Caucasian man with past medical history significant for cystic fibrosis related lung disease, pancreatic insufficiency and sinusitis, who presented with 2 episodes of large volume hemoptysis occurring 5 days apart. He did not have any signs or symptoms suggestive of infectious etiology. His vitals were stable and exam was significant only for crackles heard on lung auscultation. In view of his 2 episodes of large volume hemoptysis patient underwent right and left bronchial artery embolization by interventional radiology, following the procedure his hemoptysis got better initially and he was back to baseline after the procedure, however, in less than 24 hrs. after the procedure he had another episode of large amount of hemoptysis for which interventional radiology was re-consulted on an emergent basis and he was again taken to IR suite for angiogram and was found to have recanalization of left bronchial artery which was then re-embolized.

Following the patient's second bronchial artery embolization procedure, he had an episode of vomiting and was found to be somnolent but could easily be aroused. He was able to move all his extremities and followed commands. However he then later developed severe headache which was in midline where he felt like somebody is ripping the 2 sides of his brain apart. He had associated photophobia, phonophobia and diaphoresis. On further evaluation he was also found to have slurring of speech, blurry vision, vertigo and ataxia. Based on this new development of symptoms a CT brain was done which showed acute ischemic infarct in the left posterior inferior cerebellar artery territory with possible mild petechial hemorrhage. MRI brain also showed the same findings but also showed some mass effect. MRA of the head and neck was negative for any focal narrowing, aneurysmal dilatation, dissection or vascular malformation. His Trans Thoracic Echocardiogram showed no thrombus but did have a patent foramen ovale. However, the suspicion for a DVT was very low as patient was at low risk for DVT and his symptoms started immediately after the bronchial artery embolization, we did not pursue any DVT work up. Neurology was consulted; patient was moved to higher level of care for close observation and frequent neurologic exams. He was also started on low dose aspirin. He had significant improvement in his symptoms during the next 48 hrs and had only minimal symptoms at the time of discharge on day 4 after second embolization.

Discussion Points:

- Complications of bronchial artery embolization and its incidence. Complications include chest pain, dysphagia, thoracic aorta wall and bronchial wall necrosis, pulmonary infarction, bronchial fistula, ischemic colitis and neurologic complications

- Posterior circulation stroke as a complication of bronchial artery embolization and its outcome.

- Other neurologic complications of bronchial artery embolization.