

mortality

- No specific algorithm derived from literature consensus exists, however, swift identification of the problem followed by institution of neuroprotective strategies are paramount (1)
- Utilization of early hyperbaric oxygen therapy (HBOT) for the treatment of CAE has been utilized to reduce risk of mortality and neurologic sequelae from the event (2)

### Case Presentation:

- 65 year-old African American male with severe multi-vessel coronary artery disease, with history of sickle cell trait underwent scheduled three vessel CABG
- Preoperative transthoracic echocardiogram showed an ejection fraction of 52-59%, with no valvulopathy, and bilateral carotid ultrasound was normal
- Due to the patient's history of sickle cell trait, the surgeon's plan was to perform the CABG without cooling the patient
- Upon initiation of cardiopulmonary bypass (CPB), small amounts of air were noted in the left atrium and left ventricle on transesophageal echocardiogram
- After halting the initiation of cardiopulmonary bypass, the surgeon noted air coming out of the arterial cannula in the ascending aorta
- The cardiopulmonary bypass circuit, aorta, and heart were expeditiously cleared of air

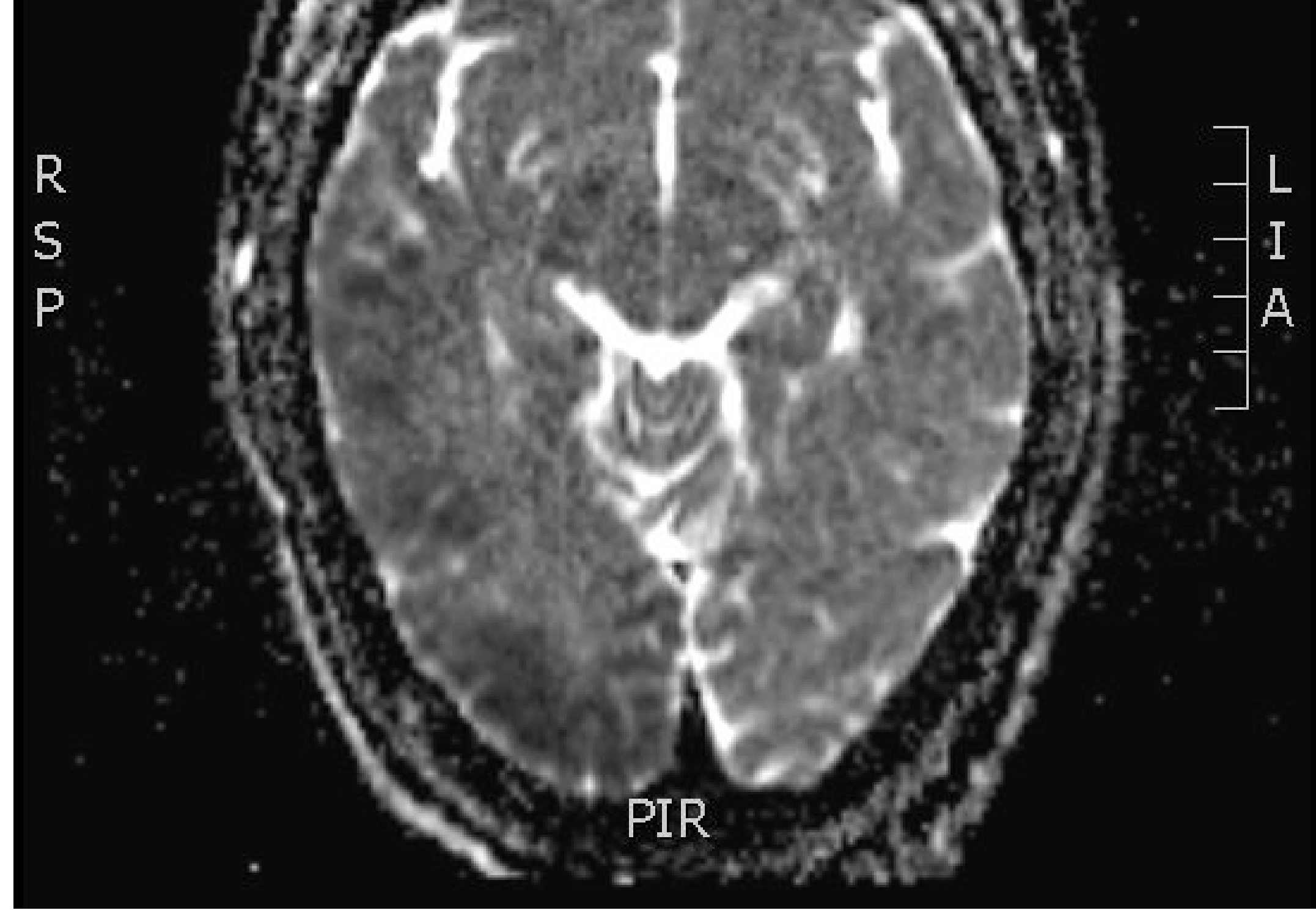


Figure 1: MRI depicting right cerebral hemisphere stroke

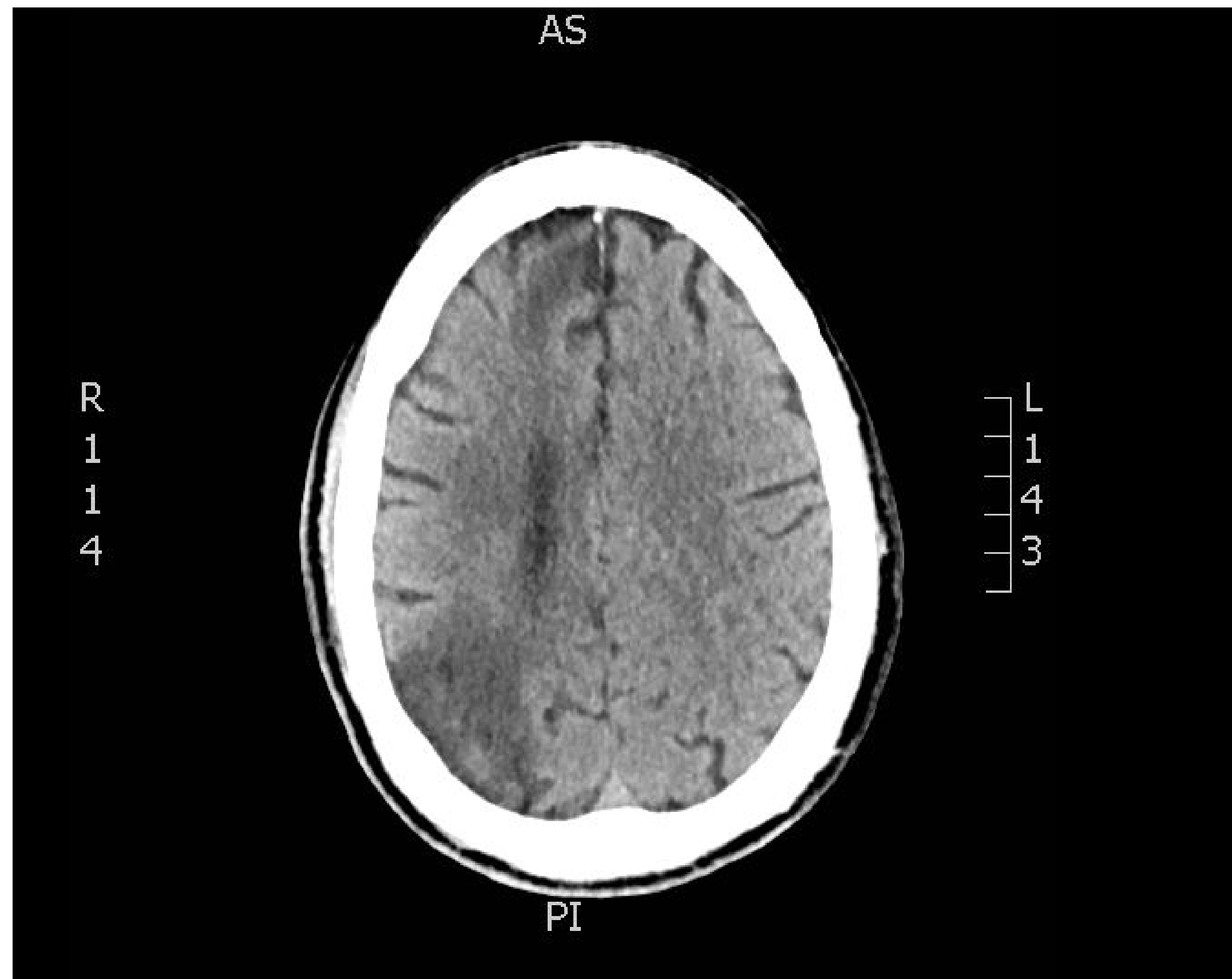


Figure 2: CT Scan depicting right sided stroke

- there are limited treatment of CAE
- The timing of performing neuro prior to initiation the capability of
- This specific patient after the discovery retrograde cerebral patients with side perform CPB p crisis, which itself

### Patient Management

- In discussion with proceed with the cell trait; the remainder
- Postoperatively, the likelihood of CAE
- Additional HBOT
- Initial CT scan postoperative day discontinuous term
- The patient was neurologic deficits

References:  
Quintero, O. L., et al. "Successful Management of Massive Air Embolism During Cardiac Surgery." *Perfusion* 2015; 30(1): 1-6.  
LeGuen, M., et al. "Intraoperative Cerebral Air Embolism During Cardiac Surgery." *Perfusion* 2015; 30(1): 1-6.  
Guy, T. S., et al. "Retrograde Cerebral Perfusion and Delayed Hypoxia-Induced Neurological Deficits." *Perfusion* 2015; 30(1): 1-6.