Combined Curative Treatment of Large Brain AVMs

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- 52 year old female

PMH:

- Known right Frontal AVM diagnosed in Nov 2010 after bleeding (France)
- Good recovery. Conservatively managed
- Received a diagnosis of Proliferative Angiopathy
- Breast Cancer, diagnosed in June 2013. post right lumpectomy and radiotherapy
2011

- Seizures
- She had history of on/off left face, arm and leg numbness
- Seeing at our clinic at TWH Toronto.
- She was GCS 15 with no motor or sensory deficits

- She was discussed in the AVM conference and the plan was to continue to follow clinically and with imaging.
Follow up imaging
Follow up imaging
• In Feb 2013, She presented with sudden onset of headache and mild left sided weakness
• Repeat CT and angiogram were done
Angiogram+/- E - 3 days later
Evolution

• Severe headaches
• Seizures
• Diagnosis: AVM with intranidal fistulas and perinidal angiogenesis
• Patient could potentially benefit from staged embolization and possible surgical resection.
• First embolization
  - Targeting the anterior and the deep ACA feeders (Onyx)
  - Procedure was uneventful
- Second embolization
  - Targeting the anterior and the deep ACA feeders (Onyx)
  - Procedure was uneventful
Evolution
- Third embolization – April 2016
  - Targeting the fistulous component supplied by the ACA (Glue)
  - Procedure was uneventful
  - Patient was discharged home POD#3
Final treatment strategy
Treatment strategy
• The patient was positioned and the neuronavigation was registered.
• The plan for the craniotomy was to leave bone on the anterior and posterior venous pouches till the end of the case
• During the craniotomy, significant bleeding was encountered that was thought to from the anterior and the posterior venous pouches.

• The bone flap was then removed and 2 pieces of muscles were sutured to the dura to patch the venous pouches.
Per operative control angiogram
Hybrid room
Thanks for your attention

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