

ev3 Axiom Coils

Michael Horowitz, M.D.
Pittsburgh, PA

Case #1

- A 40 year old female presenting with headache was discovered to have an unruptured left 5 mm superior hypophyseal aneurysm. Endovascular coil embolization was recommended. After treatment, the patient awoke neurologically intact and was discharged the following day.



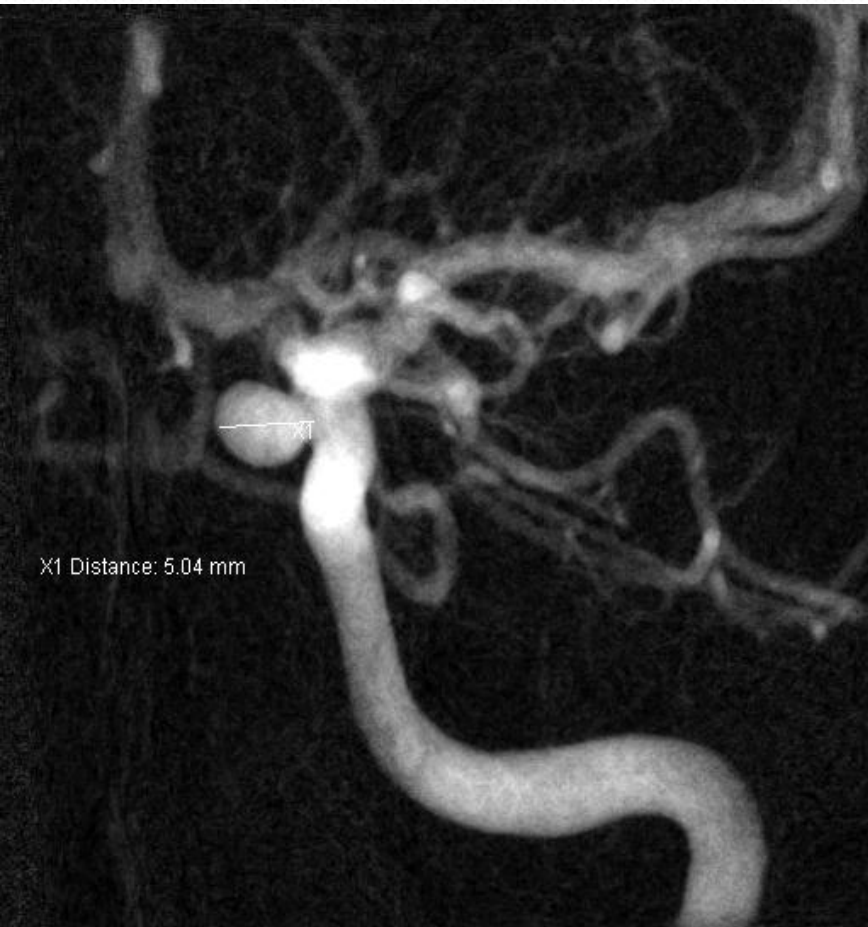
Case #1

- **Technique**

- Under general anesthesia, a 6F sheath was placed in the right common femoral artery. A 5F catheter was advanced into the left common carotid artery followed by placement of an exchange wire into the internal carotid artery using roadmap guidance. In the advent of stent utilization, the catheter and sheath were replaced by a 6F Shuttle catheter.
- The aneurysm was catheterized with an X-pedion 0.014" Guidewire (ev3) through a reshaped Echelon™ 10 Micro Catheter (Micro Therapeutics, Inc., Irvine, CA).
- The following 4 Axium™ Detachable Coils were then deployed, in order:
 - 1.) 3.0mm X 4cm 3-D
 - 2.) 2.0mm X 4cm Helix™ Soft Tension Safe™
 - 3.) 2.0mm X 4 cm Helix™ Soft Tension Safe™
 - 4.) 2.0mm X 4 cm Helix™ Soft Tension Safe™

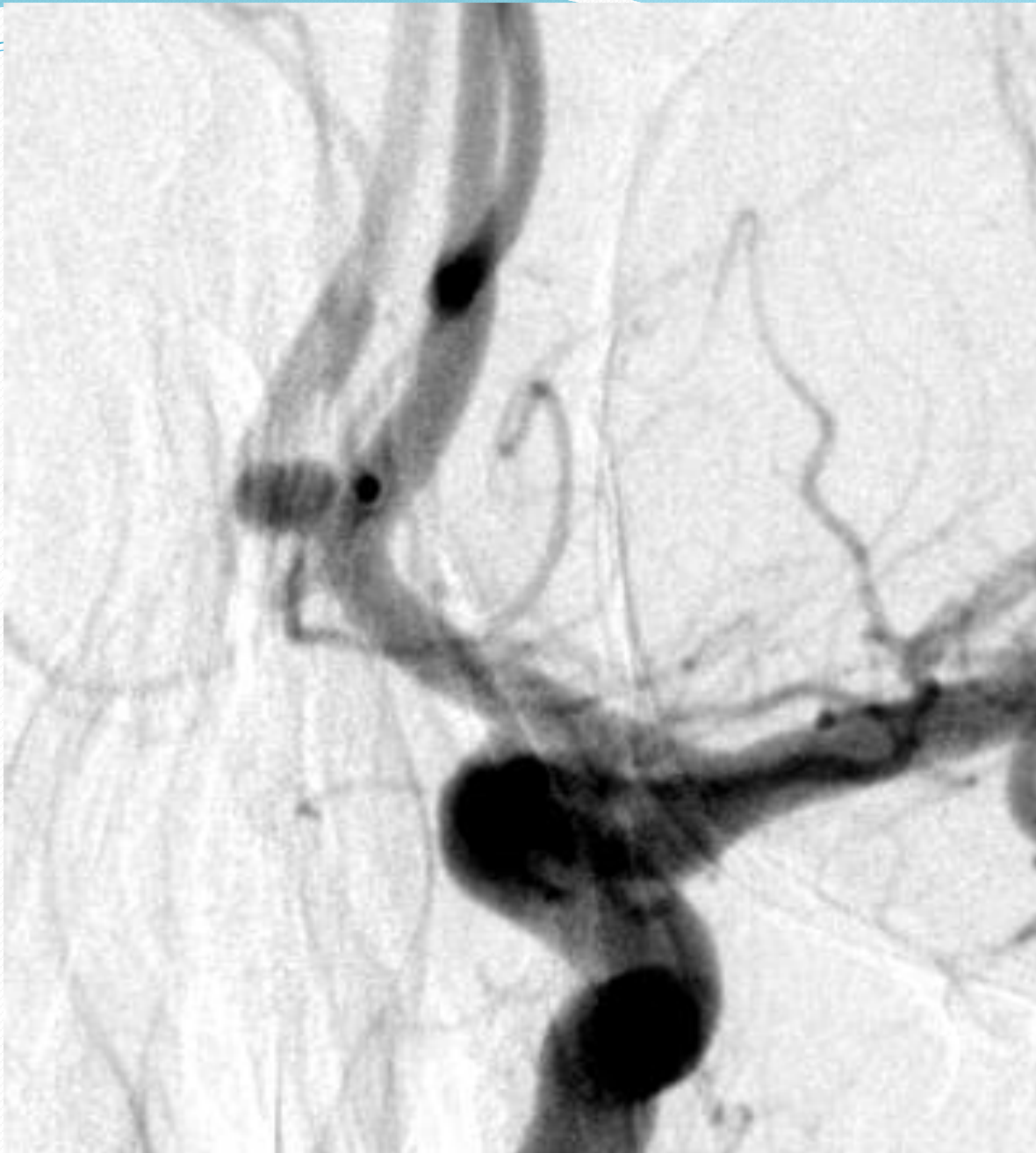
Case #1

- **Angiographic Assessment Post Embolization**
 - At the end of the procedure the aneurysm no longer opacified and no arterial stenosis was noted.



Case #2

- A 53 year old female presented as a Hunt and Hess grade 5 SAH. She improved to a grade 4 after placement of an external ventricular drain. Arteriography delineated a 3.4 mm left anterior communicating artery aneurysm. Endovascular coil embolization was recommended. After treatment, no further neurological deterioration was noted. She was subsequently transferred back to the neurological ICU for further care.



Case #2

- **Technique**

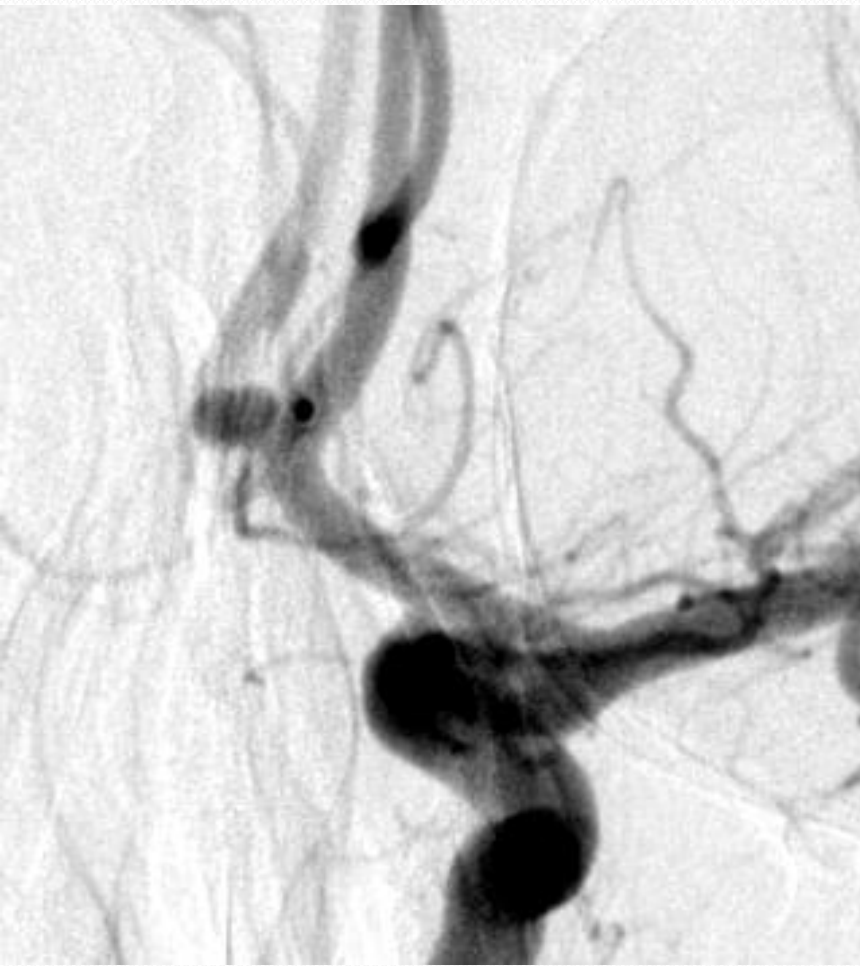
- Under general anesthesia, a 6F sheath was placed in the right common femoral artery. A 5F catheter was advanced into the left common carotid artery followed by placement of an exchange wire into the internal carotid artery using roadmap guidance.
- The aneurysm was catheterized using an Echelon™ 10 Micro Catheter (ev3) and an X-pedion™ 0.014" Guidewire (ev3).

Case #2

- The following 2 Axium™ Detachable Coils were then deployed, in order:
 - 1.) 2.0mm X 4cm 3D
 - 2.) 2.0mm X 2cm Helix™ Soft Tension Safe™

Case #2

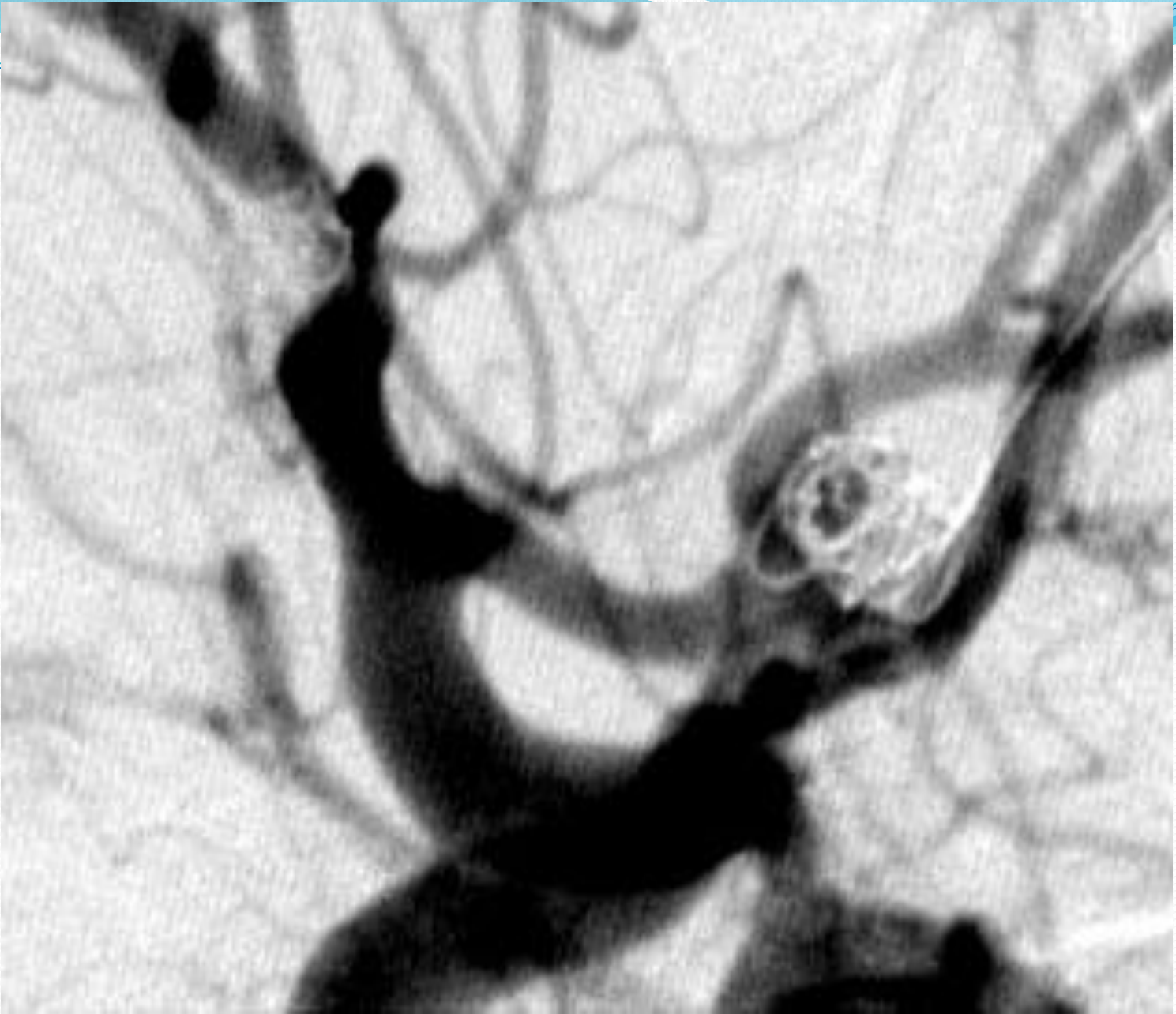
- **Angiographic Assessment Post Embolization**
 - At the end of the procedure the aneurysm no longer opacified and no arterial stenosis was noted



Aneurysm Coiling Re-treatment Using ev3 Axium™ Detachable Coils

Case #3

- A 67 year old female with multiple treated aneurysms was noted to have residual filling of a previously coiled ruptured anterior communicating artery aneurysm. Repeat treatment was recommended. After treatment, the patient awoke neurologically intact and was discharged the following day.



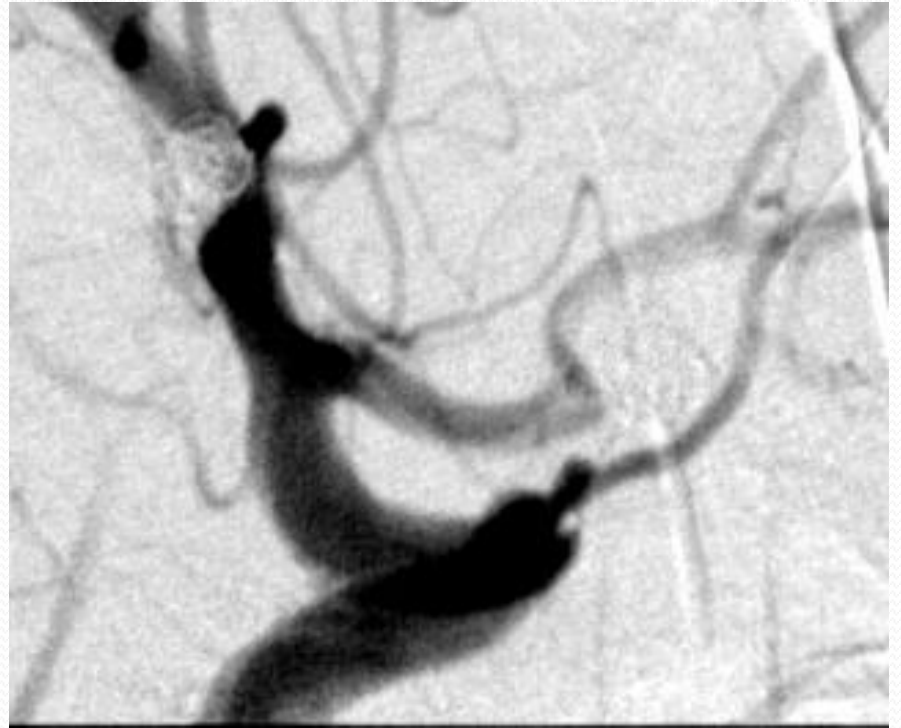
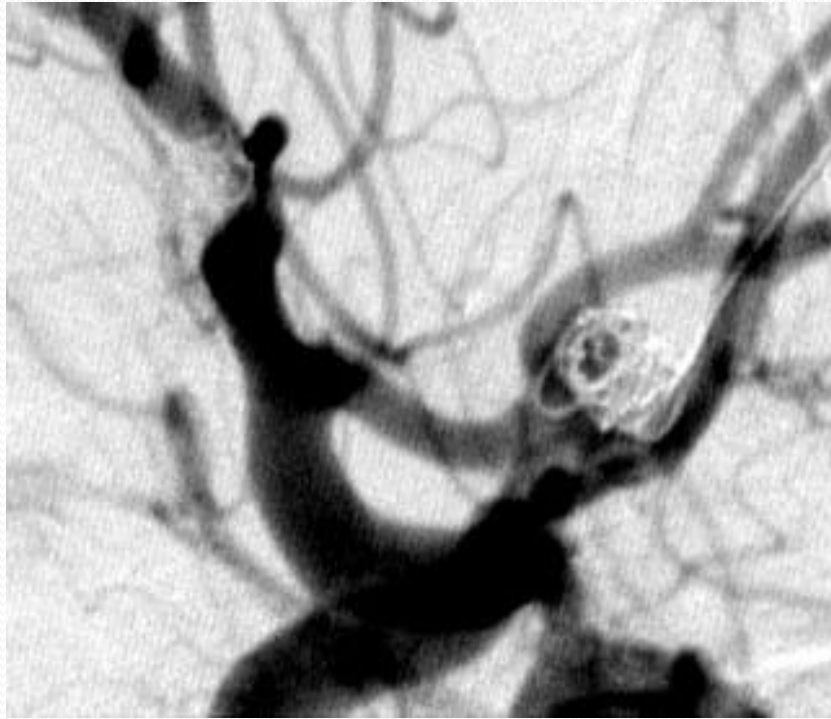
Case #3

- **Technique**

- Under general anesthesia, a 6F sheath was placed in the right common femoral artery. A 5F catheter was advanced into the left common carotid artery followed by placement of an exchange wire into the internal carotid artery using roadmap guidance. The sheath and diagnostic catheter were then exchanged for a 6F Shuttle.
- The aneurysm was catheterized with an Echelon™ 10 Micro Catheter (Micro Therapeutics, Inc., Irvine, CA) over an X-pedion™ 0.014" Guidewire (Micro Therapeutics, Inc., Irvine, CA).
- The following 2 Axium™ Detachable Coils were then deployed, in order:
 - 1. 2.0mm X 3cm Helix™ Soft Tension Safe™
 - 2. 2.0mm X 3cm Helix™ Soft Tension Safe™

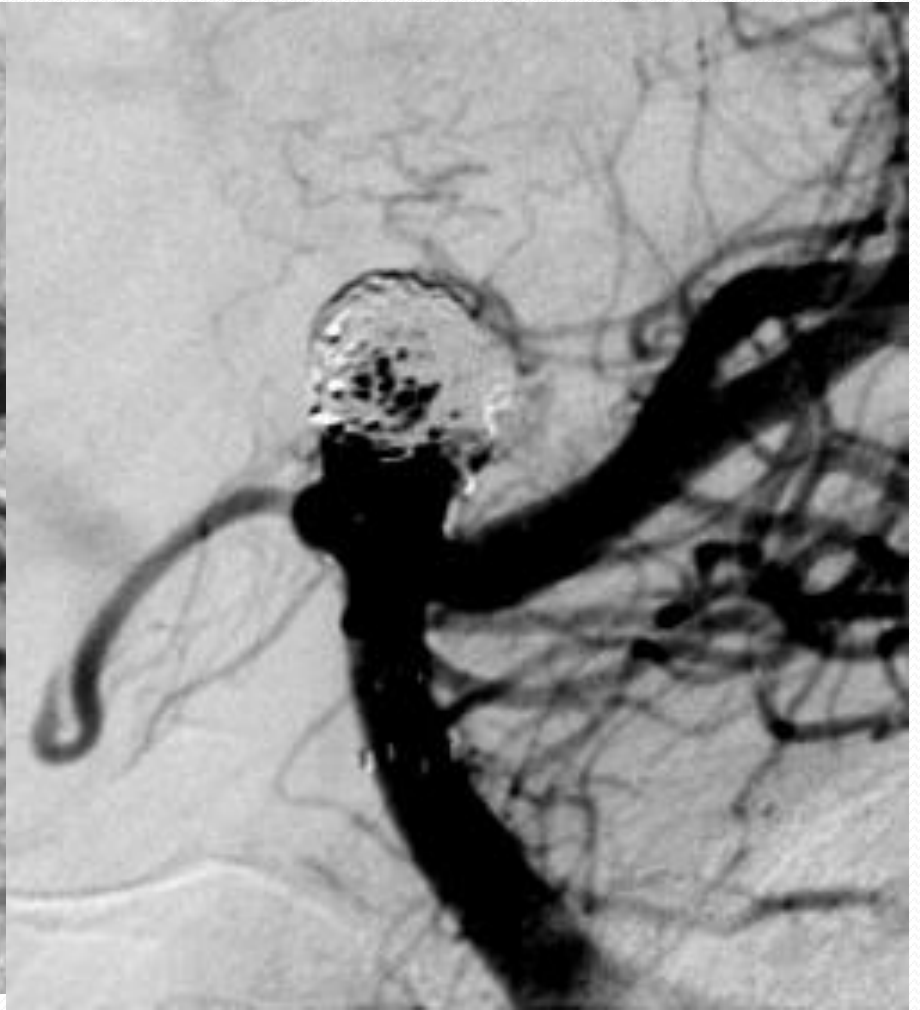
Case #3

- **Angiographic Assessment Post Embolization**
 - At the end of the procedure there was no residual filling of the aneurysm.



Case #4

- 47 year old female was noted to have residual filling of a previously stent-coiled ruptured basilar apex aneurysm. Repeat treatment was recommended. After treatment, the patient awoke neurologically intact and was discharged the following day.



Case #4

- **Technique**

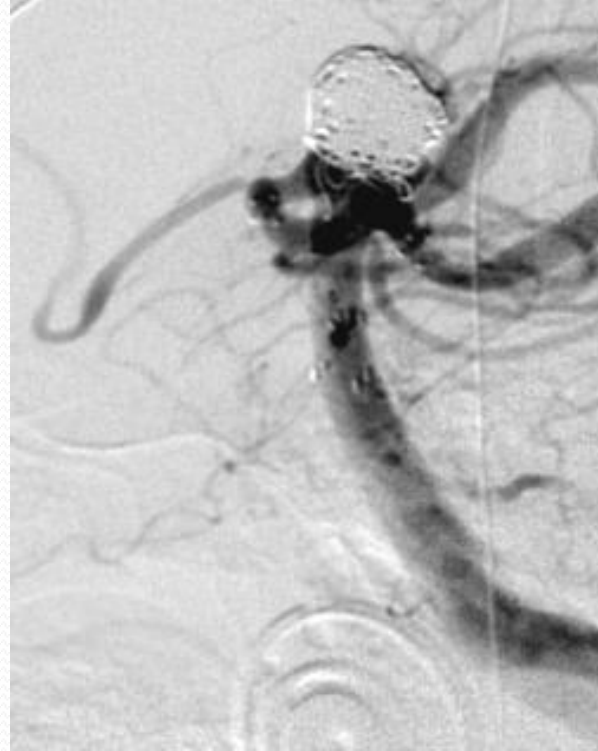
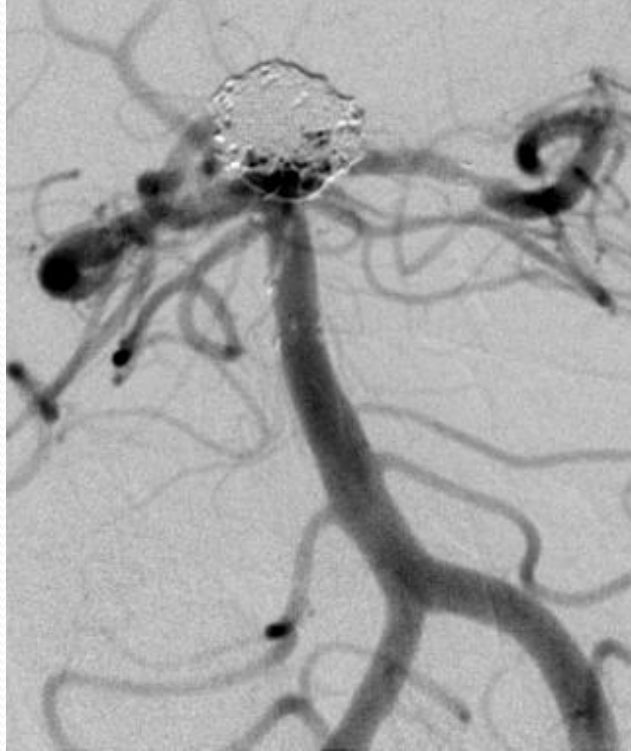
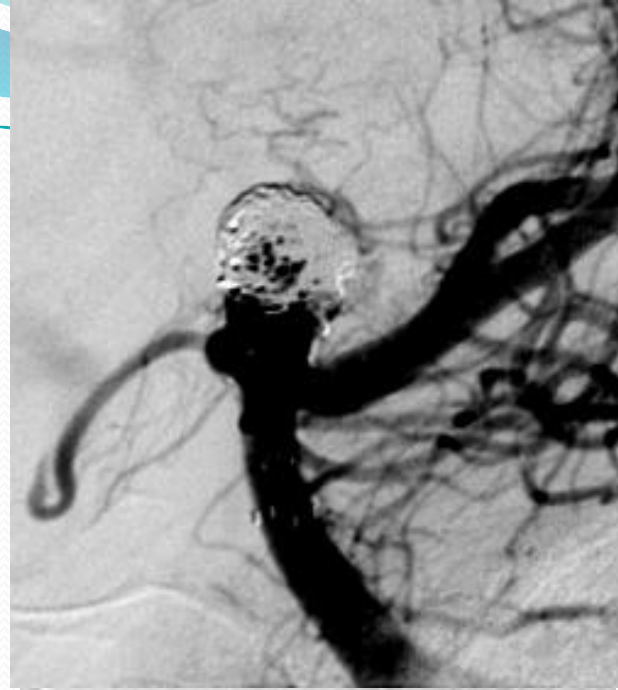
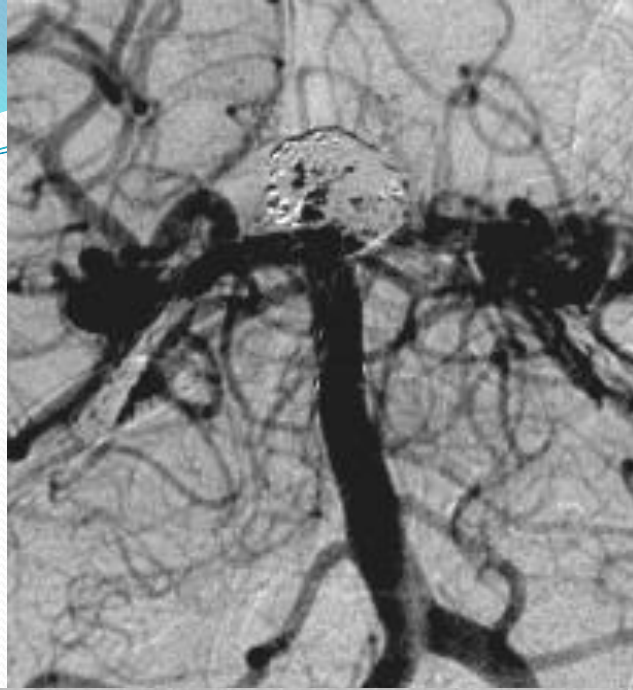
- Under general anesthesia, a 6F sheath was placed in the right common femoral artery. A 5F catheter was advanced into the left common carotid artery followed by placement of an exchange wire into the internal carotid artery using roadmap guidance. The sheath and diagnostic catheter were then exchanged for a 6F Shuttle.
- The aneurysm was catheterized with an Echelon™ 10 Micro Catheter (Micro Therapeutics, Inc., Irvine, CA) over an X-pedion™ 0.014" Guidewire (Micro Therapeutics, Inc., Irvine, CA).

Case #4

- The following 5 Axium™ Detachable Coils (Micro Therapeutics, Inc., Irvine, CA) were then deployed, in order:
 1. 2mm X 4.0cm Helix™ Soft Tension Safe™
 2. 2mm X 6.0cm Helix™ Soft Tension Safe™
 3. 2mm X 6.0cm Helix™ Soft Tension Safe™
 4. 3mm X 6.0cm Helix™ Soft Tension Safe™
 5. 3mm X 6.0cm Helix™ Soft Tension Safe™

Case #4

- **Angiographic Assessment Post Embolization**
 - At the end of the procedure there was slight filling within the inferior interstices of the coil mass, however no further coils could be placed due to concern of rupture





Future Directions