Novel device for treating wide neck bifurcation brain aneurysms – First Pulse Rider case at UCLA

**PATIENT PRESENTATION**

- 62 year old woman was found to have an asymptomatic basilar artery aneurysm.
- She was referred to UCLA for higher level of care.
- Her MRA imaging from the outside facility revealed wide neck 7mm basilar artery tip aneurysm (Fig. 1).

**EVALUATION AND IMAGING**

- We performed a cerebral angiogram to better characterize the anatomy of the aneurysm as well as the basilar artery and its branches.
- Angiogram (Fig. 2) revealed wide neck irregularly shaped basilar artery tip aneurysm. The two posterior cerebral arteries branching of the basilar artery were found to be in favorable angles for Pulse Rider device assisted coiling treatment.
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Division of Interventional Neuroradiology – A Leader in Neurovascular Care and Research

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- Invented GDC and Matrix coils – the leading tool for aneurysm treatment around the world
- Developed Onyx liquid embolic material – the leading therapy for brain vascular malformations

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INTERVENTION PERFORMED

- Pulse Rider assisted coiling was performed. Pulse Rider device was placed into the distal basilar artery with its 2 wings in posterior cerebral arteries. With this support, coils (arrow) were introduced into the aneurysm (Fig. 3 and 4).

THE OUTCOME

- The Pulse Rider remodeled the wide neck of the aneurysm, with the wings in the 2 posterior cerebral arteries, allowing good coil embolization to protect the aneurysm from rupture.
- The patient tolerated the embolization procedure well without complications.

Fig 6. Pulse Rider device (arrows) remodeled neck of the aneurysm with the coils (arrowhead) in the aneurysm dome.

Fig 5 and 7. Pulse Rider, a self-expandable stent designed for the treatment of complex wide neck bifurcation aneurysms. It acts as a bridge through the neck of the aneurysm, allowing safe coiling to secure the aneurysm from rupturing.

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Fig 3. Fig 4. Fig 5.

Fig 7.