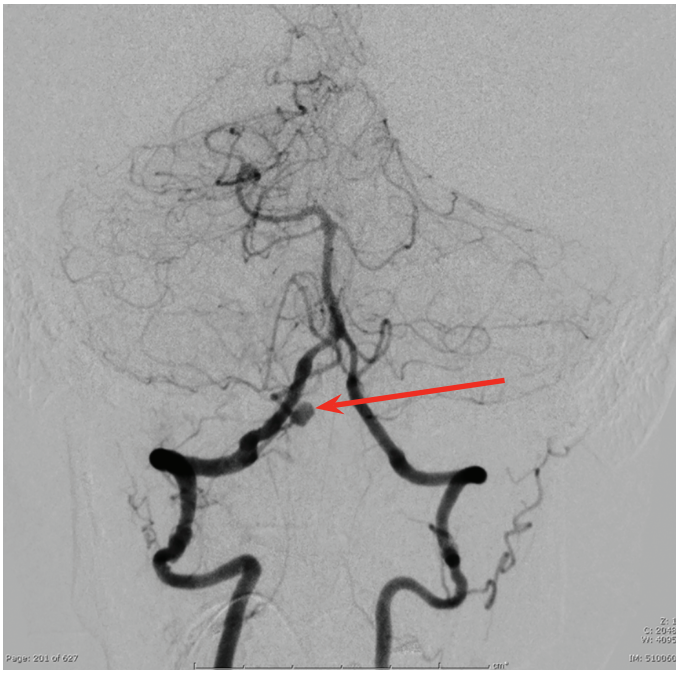
3D DSA Device Fusion

History: A 77-year-old female presented with an acute stroke with a diffused subarachnoid hemorrhage (SAH) with multiple comorbidities of Hunt and Hess IV and Fisher Grade III. An emergent external ventricular drain was surgically placed to control hydrocephalus, and an emergent diagnostic cerebral angiogram was scheduled to follow.

Technology: Toshiba's Infinix VF-i bi-plane system facilitates easy biplane positioning of the patient with the lateral C-arm variable iso-center which combines with our comprehensive three-dimensional imaging technology, including Device Fusion. The system and the 3D technologies reduce contrast use and save time by using one injection when treating complex aneurysms. The operator can utilize Toshiba's 3D technology to rotate the image to better visualize the anatomy.

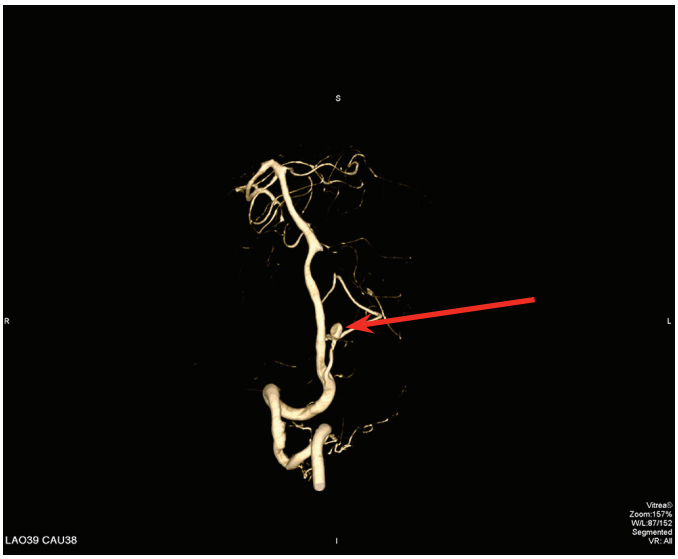
Findings: After evaluating the 2D DSA images and the 3D DSA acquisition, a 2.8 mm ruptured right PICA aneurysm was found. The 3D image provided the best working angle and was used during the treatment. The aneurysm was successfully coiled and a post-treatment 3D Device Fusion was utilized to evaluate the effectiveness of the coiling and to determine that no residual aneurysm remained.

Conclusion: The 3D DSA imaging technology is important for evaluating and treating complex aneurysms. Device Fusion imaging allows the operator to easily view the implanted coils fused to the target vessel, enhancing aneurysm treatment. The 3D DSA and Device Fusion technologies saved contrast and time and ensured effective aneurysm coiling, restoring normal flow back to the artery.

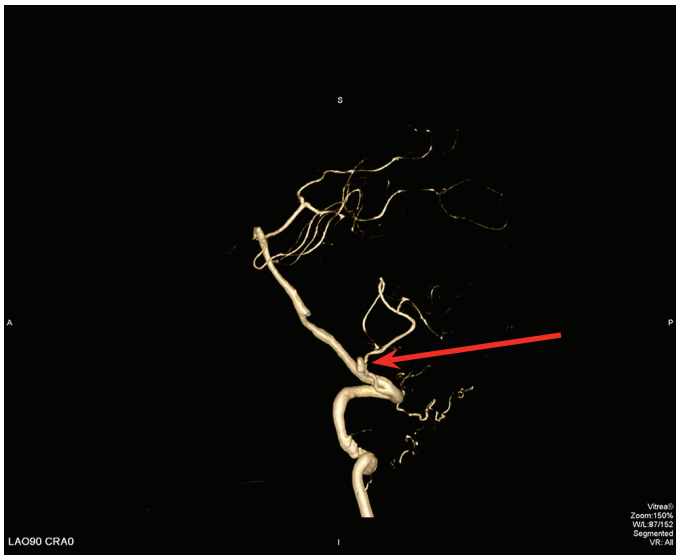


2D DSA AP plane showing aneurysm.

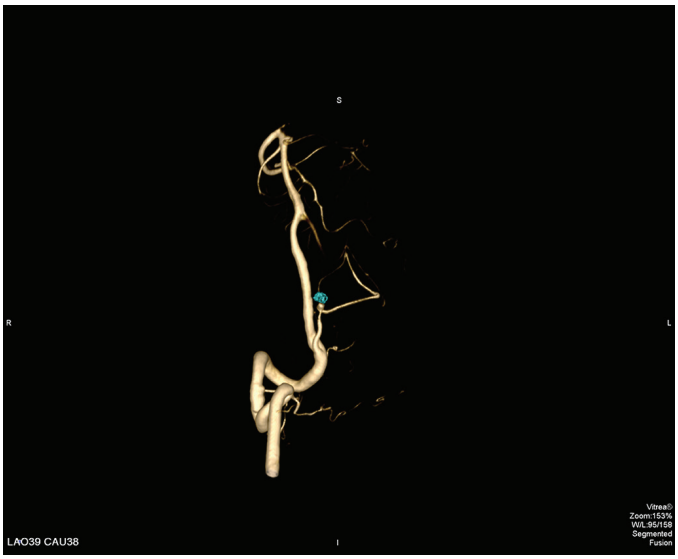
2D DSA lateral plane showing aneurysm.



Pre-coiling 3D oblique showing aneurysm.



Pre-coiling 3D lateral showing aneurysm.



Device Fusion images showing no residual aneurysm.

Made for Life

TOSHIBA AMERICA MEDICAL SYSTEMS, INC.

2441 Michelle Drive, Tustin CA 92780 / 800.421.1968

©Toshiba Medical Systems Corporation 2013. All rights reserved.