



Diagnostic Service: WADA Test

Patients with epilepsy can sometimes be helped by neurosurgery. In preparation there are several tests a patient may undergo. MRI with high-resolution coronal FLAIR imaging through the temporal lobes at 1.5 or 3 Tesla field strength can delineated anatomic changes. 18-FDG PET study may show metabolic changes. However, angiography may be required to define the laterality of language function. This is essential in choosing the appropriate therapy. A WADA test is an angiographic procedure, which is done in concert with the Epilepsy service at MGH. A catheter is placed in the femoral artery in the groin and advanced into the aorta. The catheter is navigated into one of the carotid arteries and an angiogram is done to look at the anatomy. Sodium amytal (125 mg) or brevitall (7-8 mg) is then administered through the catheter, which temporarily anesthetizes that part of the brain. Over the next few minutes the Neurology doctors test the patient's motor and language skills. After 20 minutes the catheter is navigated into the other carotid artery and the process is repeated. At the end of the procedure, the catheter is removed and manual compression is used to achieve hemostasis. The patient will need to keep his or her leg straight for 3-8 hours depending on their anatomy and closure method used.

The Neurovascular Service at Massachusetts General Hospital provides a multidisciplinary approach to patient care that combines neurosurgery, neurology and interventional neuroradiology. Based in the Department of Radiology, the Neurovascular Service's Interventional Neuroradiology Program uses minimally invasive procedures to treat a range of neurovascular disease and spinal disorders. For more information, visit www.mgh-interventional-neurorad.org

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