

Health Bulletin



Advances in Neurosurgery: Visualizing Blood Flow

(NAPSA)—Patients having to undergo neurosurgery will now benefit from a new technology that allows neurosurgeons to visualize actual blood flow in vessels and reveal obstructions, assess patency (the openness or lack of obstruction of a bodily passage or duct) and confirm the success of surgery, such as arterial bypass or aneurysm clipping. The visualization is accomplished through the microscope eyepieces in real time, during neurovascular surgery.

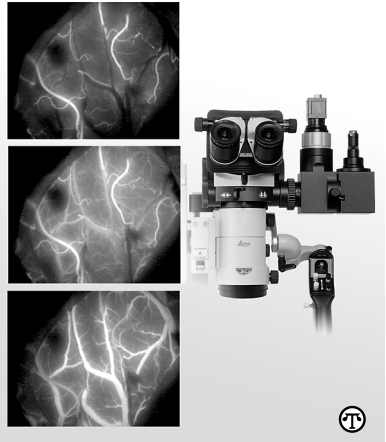


Dr. Fady Charbel,
chief of the neuro-
vascular section,
UIC

The new FL800 integrated neurovascular fluorescence device from Leica Microsystems is used in conjunction with the Akorn™ fluorescence agent Indocyanine Green™ (ICG) to view neurovascular blood flow.

ICG neurovascular fluorescence provides a relatively straightforward way to visualize blood flow in vessels within the operative field. “Patients will benefit from this new assessment method, as this information is often quite important in the treatment of various conditions, such as aneurysms, arteriovenous malformations and vascular reconstruction,” says Dr. Fady Charbel, Department Head of Neurosurgery, University of Illinois Medical Center at Chicago. “Such a tool will likely decrease the need for more conventional intraoperative, X-ray-based contrast angiography.”

The procedure is straightforward for a surgeon to perform. The ICG agent is injected intravenously into the patient; a camera detects the fluorescence signal



Leica FL800 allows neurosurgeons to view neurovascular blood flow during surgery.

and displays the image to the surgeon through the microscope eyepieces and/or on a monitor. Since the procedure can be repeated six times in a single surgery, the surgeon can review initial, baseline images later in surgery for comparison purposes, track the effects of a surgical procedure on blood flow in the brain and confirm patency.

Says Dr. Charbel, “With further utilization and accumulation of data, ICG fluorescence holds great promise for more widespread use during neurovascular procedures.”

Dr. Charbel headed the clinical trials of the Leica FL800 integrated neurovascular fluorescence device at the University of Illinois Medical Center at Chicago. Leica Microsystems, Inc., a leading global designer and producer of precision optical microscopes and systems for the analysis of microstructures, received FDA 510(k) clearance to market the new device in November 2006.