

FACT SHEET

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Interventional Radiologists Provide Emergency Trauma Treatments *Embolization Technique Blocks Blood Flow and Stops Hemorrhaging—A Life- Threatening Emergency*

Any level one trauma center will have an interventional radiologist available as part of the trauma team. Embolization is a well-established interventional radiology technique that is used to treat trauma victims with massive bleeding, to control hemorrhage after childbirth, and as a treatment prior to surgery to decrease blood loss. It has been used for over 30 years.

The Embolization Technique

The interventional radiologist makes a tiny nick in the skin, about the size of a pencil tip, and inserts a catheter into the artery. Using real-time imaging, the physician guides the catheter through the artery and then releases clotting agents (coils, particles, gel, or foam, into the blood vessels, slowing the blood flow and stopping the hemorrhage from the inside out.

The State of the Art in Trauma Care

Interventional radiologists also can inflate a balloon inside the artery, just like in angioplasty, to stop the hemorrhaging and stabilize the patient so the surgeon can treat a wound, such as a gunshot wound. Often with massive bleeding, there is so much blood coming at the surgeon that it is impossible for him or her to see the wound from the outside in order to repair it. Since interventional radiologist visualize what they are doing from the inside of the vessel using imaging for guidance, they can see the blood supply, stop the bleeding, and pinpoint the location of the wound for the surgeon or for embolization treatment.

There also are certain kinds of hemorrhage that can't be controlled with surgery. For example, pelvic trauma and the arteries that go to the brain are not treatable surgically. In maxillofacial injuries, often the jaw is in the way and the surgeon can't get to the injury, but the interventional radiologist can.

Some of the treatments interventional radiologists provide are a less invasive option than surgical removal of all or part of the organ, such as in liver trauma and spleen trauma. One of the more commonly performed embolizations is for hemorrhage after childbirth. This can be caused by a torn artery, arteries that don't constrict as they should, or from bleeding from the placenta. This is a life-threatening emergency, and without the interventional radiologist, the only other treatment is emergency hysterectomy.

Interventional radiologists treat nearly everywhere in the body—internal organs, blood vessels, head, neck, back, pelvis and inaccessible areas in the body. Stent grafts are the newest interventions for trauma and are a new way to repair and shore up the artery instead of open surgical repair.

Interventional Radiologists Treat Soldiers Hurt in Combat

Military facilities also have interventional radiology suites, also known as angiosuites, available with the imaging equipment and supplies needed for interventional radiologists to treat soldiers with traumatic wounds.

About Interventional Radiologists

Interventional radiologists are doctors who specialize in minimally invasive, targeted treatments that have less risk, less pain and less recovery time compared to open surgery. They use their expertise in interpreting X-rays, ultrasound, MRI and other diagnostic imaging studies to understand, visualize and diagnose the full scope of the disease's pathology and to map out the procedure tailored to the individual patient. Then during the procedure, they image as they go to guide tiny instruments, such as catheters, through blood vessels or skin, to treat diseases at the site of the illness nonsurgically.

Interventional radiology is a recognized medical specialty by the American Board of Medical Specialties. Interventional radiologists complete preliminary training in Diagnostic Radiology and advanced training in Vascular and Interventional Radiology. The American Board of Radiology certifies their specialized training.

For Further Information

For more information on interventional radiology, including a local Doctor Finder, visit the SIR Web site at www.SIRweb.org.

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