Catheter Embolization

Catheter embolization places medications or synthetic materials called embolic agents through a catheter into a blood vessel to block blood flow to an area of the body. It may be used to control or prevent abnormal bleeding, close off vessels supplying blood to a tumor, eliminate abnormal connections between arteries and veins, or to treat aneurysms. Embolization is a highly effective way to control bleeding and is much less invasive than open surgery.

Embolization is a minimally invasive treatment that occludes, or blocks, one or more blood vessels or vascular channels of malformations (abnormalities).

In a catheter embolization procedure, medications or synthetic materials called embolic agents are placed through a catheter into a blood vessel to prevent blood flow to the area.

What are some common uses of the procedure?

Catheter embolization is performed to control or prevent abnormal bleeding, including:

- bleeding that results from an injury, tumor or gastrointestinal tract lesions such as ulcer or diverticular disease. Embolization is commonly the first line of treatment in gastrointestinal bleeding of any cause. Controlling bleeding into the abdomen or pelvis from injuries caused in a motor vehicle crash is especially suitable for this treatment.
- long menstrual periods or heavy menstrual bleeding that results from uterine fibroid tumors. Embolization may prove to be an excellent alternative to a hysterectomy, the surgical removal of the uterus. Because fibroids have a large blood supply, they will tend to shrink and control heavy menstrual bleeding if this blood supply is interrupted. See the Uterine Fibroid Embolization page for more information.
- occlude or close off the vessels that are supplying blood to a tumor, especially when the tumor is difficult or impossible to remove. After embolization a tumor may shrink or it may continue to grow but more slowly, making chemotherapy or surgery a more effective option.
- eliminate an arteriovenous malformation (AVM) or arteriovenous fistula (AVF) (abnormal connection or connections between arteries and veins). These passageways, which may occur anywhere in the body including the brain or spinal cord, act like a short circuit diverting blood from fully circulating and delivering oxygen where it is needed.
- treat aneurysms (a bulge or sac formed in a weak artery wall) by either blocking an artery supplying the aneurysm or closing the aneurysmal sac itself as an alternative to surgery.
- treat varicoceles (enlarged veins) in the scrotum that may be a cause of infertility.

Catheter embolization may be used alone or combined with other treatments such as surgery or radiation.