Flow disruption

“Flow disruption” in the medical context refers to the intentional disruption or alteration of blood flow within blood vessels, typically for therapeutic purposes. This term is closely related to the use of embolization devices, particularly in the context of treating vascular conditions and controlling blood flow to specific areas of the body. Here are some examples of flow disruption techniques:

Aneurysm Flow Disruption: In the treatment of intracranial aneurysms, a flow diversion device may be used. These devices, like flow diverters or stents, are designed to divert blood flow away from the aneurysm, effectively disrupting the blood flow within the aneurysm sac. This promotes the formation of a blood clot within the aneurysm, ultimately sealing it off and preventing the risk of rupture.

Tumor Blood Flow Disruption: In cases of cancer, flow disruption techniques may be employed to reduce the blood supply to tumors. This can be achieved using embolization devices, such as microspheres or particles, which are delivered to the blood vessels feeding the tumor. By disrupting the blood flow to the tumor, its growth can be slowed or halted, and it may become more susceptible to other forms of treatment like chemotherapy.

Varicocele Flow Disruption: Varicoceles, which are dilated veins in the scrotum, can be treated by disrupting the blood flow within the affected veins. Embolization devices, such as coils or sclerosing agents, can be used to block these veins, redirecting blood flow to healthier veins and reducing the size of the varicocele.

Arteriovenous Malformation (AVM) Flow Disruption: Flow disruption techniques can also be used to treat arteriovenous malformations. Embolization devices are introduced into the abnormal tangle of blood vessels to disrupt the flow within the AVM, reducing the risk of bleeding or other complications associated with these vascular anomalies.

Flow disruption procedures are typically performed by interventional radiologists or vascular surgeons who have expertise in using various devices and techniques to control blood flow within the body. The choice of the specific device and approach depends on the patient's condition and the location and size of the affected blood vessels or vascular abnormality. These procedures are minimally invasive compared to traditional surgical approaches and often result in shorter recovery times and reduced risks.

Flow disruption is another endovascular approach that involves placement of an intrasaccular device WEB.