OPEN ACCESS Freely available online

ISSN: 2329-6925
Journal of Vascular Medicine & Surgery

Perspective

Employing Dual Series Filters to Treat Thrombosis Induced by Superior Vena Cava Filter

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DESCRIPTION

According to earlier research, 2.6% to 4.0% of patients with lower extremity deep vein thrombosis experience Inferior Vena Cava (IVC) thrombosis. However, it has turned into a significant risk factor for IVC thrombosis due to the exponential rise in IVC filter usage in China. Regrettably, a number of patients experiencing thrombosis mediated by IVC filters have serious side effects, such as pulmonary embolism and Post-Thrombotic Syndrome (PTS). Furthermore, worries regarding filter-related issues like tilting, breakage, and penetration are growing with time. Therefore, the secret to lowering such issues is to remove the IVC filters as soon as possible. In patients with lower limb deep vein thrombosis, IVC filter devices are intended to avoid pulmonary thromboembolism. Research indicates that many IVC filters that are inserted might not be removed, which raises the possibility of problems down the road. Retrievable IVC filter primary complication rates varied greatly, with thrombosis ranging from 6%-30%. As a result, it presented numerous difficulties for filter retrieval. When it comes to treating acute or subacute filter thrombosis, CDT can lessen the thrombus burden in the filter; however, even in these cases, there is still a significant risk of bleeding and the thrombosis may not fully resolve. Similar to the preceding study, in which 3 patients had persistent thrombus and 1 patient had an abdominal hematoma, 4 patients had not received CDT assistance due to a significant risk of bleeding. It would be crucial to find an appropriate location for the suprarenal IVC filter. Prior to implanting the suprarenal IVC filter, we should thoroughly assess IVC imaging and define the relationship between the filter and thrombosis. The location of the suprarenal IVC filter is often chosen by femoral vein access. Nonetheless, jugular vein access is appropriate if there is a free-floating thrombus above the infra renal filter. The respiratory cycle, blood volume, and venous return can all have an impact on the IVC's diameter. A suprarenal IVC is shorter in length but has a bigger diameter than an infra renal IVC. In order to make it simple for the I stage to remove the suprarenal IVC when it is too big to deploy the filter, we will choose those positions but not fully release the filter. Regarding when to take out the suprarenal IVC filter. Six out of the seven patients in the study were retrieved at the I stage; only one patient, whose suprarenal IVC filter had been removed through venography, remained partially thrombosed after the first filter was removed. This patient was scheduled for imaging again two weeks later after receiving adequate anticoagulation therapy, and the results demonstrated a significant reduction in thrombus. At that point, the suprarenal IVC filter was removed. Additionally, greater care should be taken to monitor the patient's blood oxygen saturation during filter retrieval, as well as any additional symptoms or brief chest shortness of breath. Venography of the pulmonary artery should be performed as soon as feasible in cases where the patients exhibited certain symptoms in order to determine the severity of the pulmonary embolism. When thrombus is present in the pulmonary artery trunk, pigtail catheter thrombus fragmentation can be beneficial.

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Received: 05-Jan-2024, Manuscript No. JVMS-24-24716; Editor assigned: 08-Jan-2024, PreQC No. JVMS-24-24716 (PQ); Reviewed: 26-Jan-2024, QC No. JVMS-24-24716; **Revised:** 02-Feb-2024, Manuscript No. JVMS-24-24716 (R); **Published:** 09-Feb-2024, DOI: 10.35248/2329-6925.24.12.549

Citation: Aoife K (2024) Employing Dual Series Filters to Treat Thrombosis Induced by Superior Vena Cava Filter. J Vasc Surg. 12:549.