

Retrievable vena cava filters: clinical experience.

Disorders of pulmonary circulation

Current Opinion in Pulmonary Medicine. 12(5):304-309, September 2006.
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Abstract:

Purpose of review: To summarize currently available literature regarding indications for inferior vena cava filters, potential problems associated with the different filters available, and the efficacy and safety of retrievable inferior vena cava filters.

Recent findings: The placement of permanent filters may present a number of long-term complications such as filter occlusion and an increased risk of recurrent deep vein thrombosis. Furthermore, patients who require inferior vena cava interruption often have short-term contraindications to anticoagulant therapy, and thus only require filters for temporary indications. Four different retrievable filters have recently received approval for temporary insertion, and preliminary data suggest that the use of these filters is associated with a low rate of pulmonary embolism and complications related to filter insertion. Retrieval was uneventful in almost all patients. No randomized clinical trials have yet been performed, and available information is based on the results of either retrospective or prospective cohort studies.

Summary: Retrievable filters are a very attractive alternative to either permanent or temporary filters when inferior vena cava interruption becomes necessary, thanks to the advantages of very easy management and the possibility of their being left in place for a long time and removed when they become unnecessary.

ALN filter

The ALN filter (ALN Surgical Implants, Bornes les Mimosas, France) is a hydrodynamic steel filter with six short legs that ensure its adherence to the vena cava walls, and three long legs that guarantee the correct central positioning along the main axis of the vena cava. The ALN filter can be placed from the femoral, brachial or jugular vein approach, and it can be retrieved only from the jugular approach using a specific kit. Four trials have recently investigated the efficacy and safety of the long-term retrieval of the ALN device [37,51-53]. The results have been promising.

The filter is characterized by a low thrombogenicity and is associated with a rare occlusivity because of the low percentage of the caval section it occupies and the small amount of metal used for its manufacture; moreover, the exclusion of welding points gives this device excellent corrosion resistance [51].