

Inferior vena cava filters in patients with advanced-stage cancer



Asem Mansour ^a, Yousef Ismael ^b, Hikmat Abdel-Razeq ^{b,*}

^a Department of Radiology, King Hussein Cancer Center, Amman, Jordan, ^b Department of Internal Medicine, King Hussein Cancer Center, Amman, Jordan

* Corresponding author at: Department of Internal Medicine, Head, Section of Hematology and Medical Oncology, King Hussein Cancer Center, Amman 11194, Jordan. Tel.: +962 6 5300460x1000; fax: +962 6 5353001. · habdelrazeq@khcc.jo · Received for publication 24 April 2014 · Accepted for publication 1 September 2014

Hematol Oncol Stem Cell Ther 2014; 7(4): 136–141

© 2014 King Faisal Specialist Hospital & Research Centre. Published by Elsevier Ltd. All rights reserved.
DOI: <http://dx.doi.org/10.1016/j.hemonc.2014.09.005>

BACKGROUND: Cancer and its treatment are recognized risk factors for venous thromboembolism (VTE). Inferior vena cava (IVC) filters are utilized to provide mechanical thromboprophylaxis to prevent pulmonary embolism (PE) or to avoid bleeding from systemic anticoagulation.

PATIENTS AND METHODS: A retrospective analysis of 107 cancer patients who had IVC filters inserted and followed up at our institution was performed. All patients had active cancer; a majority (> 90%) had advanced-stage disease, whereas only five patients (5.8%) had stages I or II disease.

RESULTS: Eighty six patients (80.3%) had their IVC filter placed through a jugular approach. Filter insertion was not without complications; recurrent deep vein thrombosis (DVT) was reported in 10 (9.3%), PE in three (2.8%) and filter thrombosis in one patient. The value of IVC filter in patients with advanced stage disease was very limited: among 59 patients with stage IV disease for whom survival data was available, the median survival was only 1.31 months (0.92–2.20) with 23 patients (39.0%) surviving less than a month, and 40 (67.8%) surviving less than three months.

CONCLUSIONS: Systemic anticoagulation can be safely offered for the majority of cancer patients. When the risk of bleeding or PE is high, IVC filters can be utilized. However, the placement of such filters should take into consideration the stage of disease and life expectancy of such patients. Patients with advanced-stage disease may gain little benefit from IVC filter insertion.

KEYWORDS: Inferior vena cava filter; Cancer; Anticoagulation; Bleeding

Venous thromboembolism (VTE), which represents a spectrum of diseases including both deep vein thrombosis (DVT) and pulmonary embolism (PE), occurs more frequently in cancer patients. Cancer and its treatment are recognized risk factors for VTE. Studies have reported a sixfold increased risk of VTE in cancer patients compared to those without.¹ Active cancer accounts for almost 20% of all new VTE events occurring in the community.² The risk varies by cancer type, and is especially high among patients with malignant brain tumors and adenocarcinoma of the ovary, pancreas, colon, stomach, lung, prostate, and kidney.³

Treatment of VTE typically includes initial anticoagulation with unfractionated heparin (UFH), a low molecular weight heparin (LMWH) or a

pentasaccharide such as fondaparinux,⁴ along with vitamin K antagonists such as warfarin. Thrombolytic agents may be used in severe cases.⁵ Occasionally, specific clinical situations are encountered in which the risk of PE is very high or systemic anticoagulation might be associated with high risk of bleeding. In these instances, IVC filters are utilized to provide mechanical thromboprophylaxis to prevent PE, the life-threatening complication of VTE. Such filters are inserted using a relatively noninvasive technique to maintain central flow. Thanks to newer technology, IVC filters are becoming a very attractive option and can function with anticoagulation to optimize the prophylaxis strategy. In this study, the benefits and complications associated with IVC filter placement in cancer patients will be reviewed.

MATERIALS AND METHODS

This study was performed at a stand-alone, Joint Commission International (JCI)-accredited comprehensive cancer center. Hospital database was searched for all patients discharged with IVC filter insertion. Additionally, the radiology database was queried for cancer patients undergoing IVC filter placement. To further identify patients, medical records were then reviewed for data collection and confirmation of diagnosis.

For each confirmed case, clinical data including primary cancer, stage of disease, anti-cancer therapy, indications for filter placement, complications and survival post filter placement, were recorded (Table 1).

Statistical analysis

Descriptive statistical analysis was performed to present patients' demographic and clinical characteristics. All statistical analyses were carried out using SAS Software (version 9.1). A p-value of 0.05 was considered to be statistically significant, and was measured using Chi-square.

RESULTS

From January 2004 through March 2011, we identified 107 patients who had their IVC filter inserted and followed up at our institution. The 107 patients comprised 59 (55.1%) men and 48 (44.9%) women, and the mean age (\pm SD) of the whole group was 50.8 (\pm 14.2) years. All patients had active cancer; the most common types were gastrointestinal (32 cases; 29.9%), brain (16 cases; 15.0%) lung (13 cases; 12.1%) and gynecological tumors (11 cases; 10.3%). At the time of filter insertion, the majority of patients had advanced-stage disease; out of 86 patients with identifiable TNM (Tumor, Node, Metastasis) stage, 81 patients (94.2%) had locally-advanced stage III or metastatic stage IV disease, whereas only five patients (5.8%) had stages I or II disease (Table 1).

During the six weeks prior to IVC filter insertion, 74 patients (69.2%) were on active anticancer therapy; 45 (42.1%) were on chemotherapy and seven (6.5%) on radiotherapy. Nineteen patients (17.8%) had surgical intervention for their cancer while only three (2.8%) were on hormonal therapy. The remaining 33 patients (30.8%) were on hospice and palliative care service, with 18 (16.8%) already as DNR (Do not Resuscitate). Prior to IVC filter insertion, a diagnosis of DVT was made on 76 patients (71.0%);

Table 1. Patient characteristics.

Gender	
Male	59 (55.1%)
Female	48 (44.9%)
Primary cancer	
Gastrointestinal	32 (29.9%)
Brain	16 (15.0%)
Lung	13 (12.1%)
Gynecological	11 (10.3%)
Breast	6 (5.6%)
Bladder	6 (5.6%)
Sarcoma	5 (4.7%)
Lymphoma	5 (4.7%)
Others	13 (12.1%)
Stage*	
I	2 (2.3%)
II	3 (3.5%)
III	20 (23.3%)
IV	61 (70.9%)
Unstageable	21(19.6%)
Active treatment	
Chemotherapy with or without radiotherapy	45 (42.1%)
Hormonal therapy with or without radiotherapy	3 (2.8%)
Radiotherapy only	7 (6.5%)
Surgery alone (or with chemotherapy and/or radiotherapy)	19 (17.8%)
Palliative/hospice care	33 (30.8%)
Type of VTE	
PE	14 (13.1%)
DVT	76 (71.0%)
Both DVT and PE	17 (15.9%)

PE: pulmonary embolism, DVT: deep vein thrombosis.

* Percentages from total cancers that have TNM (Tumor, Node, Metastasis) stages (86 patients).

Download English Version:

<https://daneshyari.com/en/article/2135700>

Download Persian Version:

<https://daneshyari.com/article/2135700>

[Daneshyari.com](https://daneshyari.com)