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Anti-coagulant therapy in treating deep vein thrombosis: An updated management guideline

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Abstract
Venous Thrombo-Embolism (VTE) is a leading cause of worldwide death & disability and a growing public health concern. In the United States, there is no national surveillance system for VTE, so the national incidence is unclear.

Keywords: Anti-coagulant therapy, Treatment & Deep Vein Thrombosis

Introduction

Roberts, Sarah Hudson, DNP, MSN, RN; Lawrence, Sherry Motes, DNP, MSN, RN, an author of this article its published-on May 2017- volume 117 – Issues 5 – pages 38-47 in The American Journal of Nursing

As I have summarized in this article and offer commands about selected aspect to identify some relevant changes than have occurred since the article has been published &suggested area where update in research findings would assist in understanding current state of medical care in regarding an issue raised.

Article Summary

Venous thromboembolism (VTE) is a leading cause of death & disability worldwide. Each year, more than 10 million cases of VTE are diagnosed; studies suggest there are as many as 900,00 cases per year in the United states. In February2016, the American college of chest physician released the 10th edition of anti-thrombotic therapy for VTE disease: chest guideline and expert panel report. After providing an overview of VTE pathophysiology, risk factors, signs & symptoms and key clinical assessments, this article details recommendations from the new guideline, which incorporates the most up-to date treatment options for patients with VTE.

Brief Summary

Venous Thrombo-Embolism (VTE) is a leading cause of worldwide death & disability and a growing public health concern. In the United States, there is no national surveillance system for VTE, so the national incidence is unclear.

VTE, which includes both deep venous thrombosis (DVT) & pulmonary embolism (PE), is the second most common medical complication related to hospitalization & an extended length of stay and the third most common cause of excess hospital charges & high mortality rates. Hospital stays for VTE plays a considerable economic burden on the U.S. health care system, with total health care costs.

Table 1: Major changes in the guideline recommendation for management of VTE

Category	Prior recommendation	Current recommendation	Evidence supporting this change
Choice of long-term anti-coagulants	Warfarin for patients without cancer	NOACs over warfarin for patients without cancer	Risk reduction is similar with NOACs. Risk of bleeding is less with NOACs.
Use of aspirin for extended therapy	Not addressed	Aspirin recommended for patients discontinuing NOAC therapy & for those who decline NOAC therapy	Moderate – quality that use of aspirin reduces that use of aspirin reduces the recurrent VTE by about 33 %
Use of compressive stocking to prevent post thrombotic stockings	Recommended	Not recommended	No evidence to support the use of compression stockings to prevent post thrombotic syndrome
Treatment of subsegmental PE	Not addressed	Clinical surveillance over anti coagulation in patients with no proximal DVT& low risk of recurrence	After subsegmental PE, which is small & usually originates from an isolated DVT, the risk of recurrence is less than with a larger PE
Outpatient treatment of acute PE	RECOMMENDED early discharge (after 5 days)	Outpatient treatment recommended for carefully selected patients	Treatment with NOAC facilities out-patient treatment for selected patients. A NOAC that does not require bridge therapy should be selected to aid in this process
Management of recurrent VTE, While on anti-coagulant therapy	Not addressed	For patients on oral anti-coagulant therapy, switch to LMWH for one month. Forpatients on LMWH, increase dosage by 25-33%	Low quality evidence supports the use of LMWH for a short period because the risk of recurrent VTE decreases over time.

Updated Guideline Recommendations

The 10th edition of the chest guideline dd not change previous recommendations regarding which patients should and should not receive extended anticoagulation therapy; however, several recommendations concerning VTE prevention and treatment were reversed or modified.

- Choice of anti-coagulant therapy
- Duration of anti-coagulant therapy
- D-dimer levels
- The use of anti- platelet therapy
- The risk of developing recurrent VTE
- DVT management varies with thrombi location & symptoms
    - Size of thrombus (>5cm in length, > 7mm in dm/ multiple veins)
    - A markedly positive D-dimer test
    - In patient status
    - Active cancer
    - Location of the thrombus near proximal veins
    - History of VTE
    - No reversible provoking factors

The author found the results of hospital stay for VTE place a considerable economic burden on the U.S. health care system, with total health care costs, including the treatment of acute & recurrent VTE as well as the treatment of resulting complications, estimated between $7 billion & $10 billion per year. In 2011, $ 37,006 for PE, while the mean length of the stay was 4.7 days for patients with DVT & 5.1 days for patients with Pulmonary embolism.

Conclusion

Successful VTE management is a collaborative process that includes health care providers, their patients & their care givers. patients who are actively involved in their health care 7 follow their prescribed plans of care have improved health outcomes & lower health care costs. While NOACs may reduce the overall costs associated with their use. Nurses play a pivotal role in ensuring that these new anti-coagulants improve patient outcomes through

- Ensuring that patients have a voice in their medication selection
- Developing effective patient education programs
- Follow up in the out-patient setting

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