UPDATE

Action to reduce incidence of venous thromboembolism

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Despite the availability of well-known and effective prophylactic measures, between 25,000 and 32,000 people in England each year contract a fatal venous thromboembolism while in hospital. This article highlights concerns raised by the House of Commons inquiry into this problem and outlines the Departments of Health’s response.

There has been considerable concern in recent years about the incidence of travel-associated deep vein thrombosis (DVT) and contraceptive pill-related DVT (National Prescribing Centre, 2003). However, more recently concern has been expressed that 25,000–32,000 people in England each year contract a fatal venous thromboembolism (VTE) while in hospital (House of Commons Health Committee, 2005).

The condition is not a new phenomenon – the process of VTE was first identified in 1859 and effective methods of prevention have been available for many years (Dalen, 2003). Despite this there is no consistent and systematic approach to preventing VTE in patients who have been admitted to hospital (DoH, 2005). While some progress has been made in reducing its incidence the rate is still high and the condition can be considered a major public health problem (House of Commons Health Committee, 2005).

What is VTE?
Venous thrombosis (a blood clot in a vein) most commonly occurs in the deep veins of the legs, thighs or pelvis (DoH, 2005). If part of a clot breaks off, forming an embolism, this can travel through the venous system and the heart and lodge in the pulmonary artery system blocking bloodflow through the lungs and causing a pulmonary embolism (PE). Venous thromboembolism is defined as DVT with or without PE.

Pulmonary embolism is a serious, often fatal, condition and 90 per cent of cases result from an asymptomatic DVT (SIGN, 2002). The most effective way of reducing the number of fatal PEs is to recognise patients at risk of VTE and take preventive action (Dalen, 2003).

The inquiry
In November 2004, prompted by the high number of recorded deaths caused by VTE, the House of Commons Health Committee undertook a short inquiry into its prevention in patients already in hospital. The inquiry received oral evidence from representatives from a number of organisations such as NICE, the Royal College of Surgeons and the National Patient Safety Agency. It also received written information from a variety of professional bodies, companies, charities and clinicians.

The collected evidence was reported in the document Prevention of Venous Thromboembolism in Hospitalised Patients (House of Commons Health Committee, 2005). Several areas of particular concern were identified in the report:

- There is insufficient awareness of the incidence of VTE – especially when it occurs after hospital discharge, as surgeons and/or physicians are not necessarily notified of the incident;
- NHS cost pressures can mean departments do not prescribe thromboprophylaxis in order to save money, although across the whole NHS its prescription is more cost-effective than treating patients who have developed a VTE;
- The perception that thromboprophylaxis increases bleeding during surgery can result in a reduction in its use – there is considerable disagreement between clinicians about whether the risk of bleeding is increased;
- There are inconsistencies between the current guidelines regarding the most effective treatment for the prevention of VTE and their application by practitioners, which results in patients receiving a variety of treatments.

The inquiry noted that, for some specialties in the UK and other countries, effective VTE guidelines already exist. However, it found that in the absence of nationally recognised evidence-based guidelines risk assessment for VTE remains variable and prophylactic regimens continue to be inconsistent.

Existing guidance
The inquiry was told that there has been a huge amount of research into pharmacological thromboprophylaxis, which has provided considerable evidence on which to base practice. However, less research has been undertaken into the use of mechanical or non-pharmacological prophylaxis.

There is general agreement that pharmacological...
thromboprophylaxis is a cost-effective therapy for patients in hospital, but a lack of consensus as to whether this is still the case following discharge. This is due to the cost associated with blood monitoring and dosage adjustment in the community.

There is a wide variation in the delivery of thromboprophylaxis both between different geographical regions and between hospitals. The inquiry was made aware of The Royal College of Obstetricians and Gynaecologists guidelines for different types of thromboprophylaxis (RCOG, 2005), which have been successfully implemented and widely accepted by the obstetric community. The American College of Chest Physicians guidelines (ACCP, 2004) are considered to be the most comprehensive guidelines currently available as they are based on evidence drawn from approximately 800 references.

Some areas have developed local protocols based on existing guidelines, in particular those of Scottish Intercollegiate Guidelines Network (2002) and the ACCP. These vary significantly in their recommendation with regard to the use aspirin as a prophylactic in surgical patients. The SIGN guidelines recommend its use – the development group states in its notes that aspirin is as effective as heparin in reducing the risk of fatal PE, which is the most clinically relevant endpoint in prophylaxis of VTE. The notes also state that aspirin carries a lower relative risk of major bleeding compared with heparin. The US guidelines do not recommend aspirin because other prophylactic methods, such as heparin, are more effective in reducing asymptomatic DVT.

Clarification of the appropriate use of aspirin and the use of mechanical methods such as foot pumps and compression stockings is needed.

The government response
The UK government has responded to the inquiry and agrees that much more needs to be done to reduce deaths from VTE in hospitalised patients. It intends to develop a comprehensive strategy for both treatment and prevention, and will establish an independent expert working group to assess available guidance and work on VTE.

It will also recommend what action needs to be taken immediately and what can wait until NICE issues its guidance – due as a first consultation draft in December 2006. The independent expert group will make its final recommendations in summer 2006.

Until the recommendations are released the government suggests that existing guidelines should be circulated and practitioners should seriously consider implementing them. Five key guidelines for the prevention of VTE in hospitalised patients have been highlighted (Box 1).

The government has also indicated a number of planned actions. It intends to:

- Discuss with NICE the possibility of producing a separate clinical guideline covering the groups currently excluded from the scope of the current plans – medical patients and patients undergoing low-risk procedures who are themselves at high risk from VTE;
- Ask the Healthcare Commission to promote conformity to guidance, once it has been assessed, by indicating that VTE will be included in annual inspections;
- Establish an independent expert working group to look at the existing thrombosis committees and the current blood transfusion team arrangements with a view to mainstreaming this work into existing structures and making recommendations on identifying appropriate resources needed to underpin their development;
- Approach the relevant bodies to ask them to consider changes to undergraduate and postgraduate education in light of the committee’s report.

The results of the inquiry will also be fed into work being carried out for reform of coroner and death certification systems, improving feedback to clinicians and increasing awareness of VTE incidence after discharge.

**Box 1. Guidance on Preventing VTE in Hospitalised Patients**

- The British Committee for Standards in Haematology (BSCH) guidelines on the use of heparin cover prevention of VTE. The BSCH will be producing two additional guidelines on thromboprophylaxis (in surgery and medicine), which will include mechanical methods, by the end of this year (BSCH, 2005).
- British Thoracic Society guidelines cover the management of suspected acute pulmonary embolism (BTS, 2003).
- The Royal College of Obstetricians and Gynaecologists has issued a series of guidelines on VTE and its prevention that are followed by the obstetric community (RCOG, 2005).
- American College of Chest Physicians’ latest guidance is on antithrombotic therapy (ACCP, 2004).
- The Scottish Intercollegiate Guidelines Network has produced national guidelines for Scotland containing recommendations for practice based on current evidence on the use of prophylaxis in the prevention of VTE (SIGN, 2002).

**REFERENCES**


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