Discussion

Nursing Practice

These include: the use of combined oral contraceptives for women – particularly those with the factor V Leiden mutation; advancing age; surgery; trauma; cancer; sustained immobility; and pregnancy, particularly during the post-partum period (HTTF and BCSH, 2001; De Stefano et al, 1996).

Contraceptive use

Combined oral contraceptives are not generally recommended for people with hereditary thrombophilia, especially those containing third-generation progestogens as these are associated with a higher risk than second-generation progestogens.

Pills containing progestogen only should be considered instead as these do not appear to increase thrombosis risk (HTTF and BCSH, 2001; Bloemenkamp et al, 1995).

Pregnancy

Venous thromboembolism is the most frequent cause of maternal mortality. The risk is exacerbated by factors such as obesity, age, parity and immobility.

Risk increases during the postpartum period, particularly for women who have had a Caesarean section or assisted birth (HTTF and BCSH, 2001).

Surgery/trauma

Certain types of surgery pose a greater risk of thrombosis. These include major general surgery and lower-extremity orthopaedic operations.

It has been suggested that around half of elective total hip and knee replacement patients develop venous thromboembolism if they do not receive prophylaxis (Donahue, 2004; Anderson and Spencer, 2003; Lindahl et al, 1999). This falls to approximately 1-3% when prophylaxis is used (National Institute for Health and Clinical Excellence, 2010; Anderson and Spencer, 2003).

Hip or leg fractures increase the risk of thrombosis, as do major trauma and spinal cord injuries, stroke, congestive heart or respiratory failure, and varicose veins (Anderson and Spencer, 2003).

Cancer

Patients with cancer have an increased risk of thrombosis and a high risk of recurrence (Prandoni, 2005). Chemotherapy also increases the risk (Anderson and Spencer, 2003).

Immobility

Recent guidelines on travel indicate that all journeys over three hours should be considered a risk factor for developing thrombosis. The risk remains for up to eight weeks after the journey (Watson and Baglin, 2010).

Dehydration

There are conflicting views about whether dehydration is a risk factor for thrombosis, but national guidance says dehydrated patients should be considered at risk (NICE, 2010).

While there is no evidence that dehydration and travel-related thrombosis are linked, Watson and Baglin (2010) say maintaining good hydration is unlikely to cause harm.

Management of hereditary thrombophilia

Initial management of thrombosis involves five days of anticoagulation treatment with unfractionated or low molecular weight heparin, followed by oral anticoagulants for six months (HTTF and BCSH, 2001).

5 key points

1 Hereditary thrombophilia is inappropriate blood clotting as a result of genetic mutations

2 Routine screening is not recommended but genetic testing may be carried out after a thrombotic event or if there is a family history of thrombosis

3 The condition is managed with anticoagulants and by avoiding risks where possible

4 Risk factors include surgery, pregnancy, combined oral contraceptives, advancing age and long-term immobility

5 Patients often have little understanding of hereditary thrombophilia. Nurses can educate them about risk factors and how to manage it

Box 1. Definitions

- Thrombophilia: a blood coagulation disorder that increases the likelihood of inappropriate clotting
- Hereditary thrombophilia: inherited form of the condition caused by a change in one of the genes involved in the blood coagulation cascade
- Allele: different versions of the same gene that have different DNA sequences
- Deep vein thrombosis: a blood clot or thrombus that forms in the leg veins
- Pulmonary embolism: this occurs when a blood clot breaks off and blocks the blood vessels in the lungs. It can be fatal

Box 2. Thrombosis facts

- Thrombosis is estimated to have a mortality rate of between 2.3% and 28% (Simpson et al, 2009)
- Hereditary thrombophilia causes 20-50% of venous thrombosis (Simpson et al, 2009)
- Around half of patients undergoing elective total hip and knee replacements develop venous thromboembolism if not given prophylaxis (NICE, 2010; Anderson and Spencer, 2003)
- The risk of thrombosis recurring is 15-20% within two years (Prandoni et al, 1996)