To say that the subject of VTE prophylaxis in orthopaedic surgery is a thorny issue may be understating the case. Debate and difference of opinion is something which is part and parcel of orthopaedic surgery and one of the many components that makes this specialty fascinating. Seldom has one single issue been the subject of so much controversy.

It was the BOA’s initial intention to write a “Blue Book” on the subject, but it became obvious a year or two ago that if such a document had been produced, then it would be out of date almost by the time it left the printers. New evidence, new drugs, continuously published position statements and recent research make the topic of VTE prophylaxis an area of constantly shifting sand.

Consequently the BOA therefore, via the Professional Practice Committee (PPC), has decided to launch a “living document” on the BOA website so that members, patients and the general public can reference up to date guidance on this matter of crucial importance.

The living document will be regularly updated as new evidence and research become available. The American Academy of Orthopaedic Surgeon (AAOS) already has such a facility in place. For those of you who have not accessed the AAOS website it is recommended that you do so. The BOA website will provide a link to this already available and valuable resource. It is important, however, that the BOA have their own reference point as the philosophy of VTE prophylaxis differs in some respects to our American colleagues. For example Warfarin (Coumadin) is used more often as routine prophylaxis in North America than it is in the UK. The role of Aspirin has also been recently hotly debated, particularly by the British Hip Society (BHS) and it now appears that this drug is a more readily acceptable method of chemical prophylaxis than it was the case in the past (1).

NICE published guidelines in 2010 (2) recommending that for most major lower limb orthopaedic procedures prophylactic measures should include physical and chemical modalities. Few of us object to physical measures such as graduated compression stockings, intermittent calf compression or foot pumps. The common-sense interventions such as early mobilisation and adequate hydration cannot really be argued against and appear universally accepted. Many of us will now mobilise our hip and knee replacement patients on the day of surgery, encourage self care and early discharge from hospital. A move away from femoral and sciatic nerve blocks towards neuraxial anaesthesia has facilitated this process.

The use of chemical prophylaxis has been the area of most debate and controversy. Over the last two decades many surgeons have used low molecular weight heparin (LMWH) or sometimes Fondaparinux. However, the dosage, timing of administration and duration of treatment remained variable and was not always complicit with the manufacturers’ recommendations. There were also reports of bruising, leaking wounds, haematoma formation and the phrase “Clexane or Fragmin Leg” was coined.

In recent years, a new group of drugs have been introduced to the market, the direct thrombin inhibitors: Rivaroxaban, Dabigatran and Apixaban. These new drugs have the distinct advantage that they can be taken orally rather than injected. Administration is therefore easier. However, we still receive reports that these oral anti-coagulants have similar side effects to the injectable preparations. Nevertheless, this new generation of drugs do appear to be becoming more widely accepted. Indeed, many patients expect to receive some form of chemical prophylaxis and should be given appropriate information and an opportunity to discuss VTE prophylaxis prior to their surgery.

Data from the National Joint Registry for England and Wales (9th Annual report)(3) show that in 2011 for hip and knee replacement patients, LMWH was the most frequently prescribed chemical method of prophylaxis (71% and 70% respectively). The usage of aspirin has decreased from 20% in 2009 to 9% in 2011. Direct thrombin inhibitors were used in 11% of primary hip procedures and in 10% of primary knee procedures.
There is no attempt by the BOA to be prescriptive and dictate strict guidelines. Rather we encourage all orthopaedic surgeons to look at the available evidence and formulate a VTE strategy for their department. Proposed departmental guidelines should be submitted and then approved by the hospital’s drug and therapeutic committee and also the VTE group, if one exists. We recommend that wherever possible NICE guidelines are adhered to and we particularly emphasise that all patients should have a VTE assessment carried out prior to or on admission to hospital. This assessment should be regularly updated throughout the patient’s length of stay.

We recognise that a number of accepted regimes exist and that in some cases there may be surgeons with differing views within a department. We do consider that it is acceptable for there to be more than one VTE strategy within a department. However, it should be recognised that the existence of more than one regime in the same department may represent an additional risk to the patient, since it may encourage prescribing errors and other errors of either omission or commission. It is important that any such regime used should be compliant with existing prescribing policies and that each regime should be approved by the relevant committees in the hospital. It is also wise to limit the number of such policies within a unit as much as possible.

The PPC have asked the specialist societies to supply their advice for VTE prophylaxis in their relevant fields and these short summary documents will be available on the website. The advice is referenced and considered best practice.

Clearly the risks of VTE are higher in some patients than others. The risks are higher in patients with lower limb conditions than those undergoing upper limb procedures. Upper limb surgeons seldom appear to recommend routine VTE prophylaxis unless there are specific risk factors. Children also have a relatively low risk.

The published living document is intended to help and assist all orthopaedic departments. The advice is not prescriptive or rigid and if a surgeon considers that the risk of providing chemical or physical VTE prophylaxis outweighs the benefits (for example if there is a bleeding risk), then there will be occasions when chemical prophylaxis can reasonably be withheld. The reasons should be clearly documented and recorded contemporaneously in the medical records.

The PPC welcomes comments and suggestions from all parties on the VTE living document. Inevitably there will be changes, additions and redactions as time goes by. The issue of VTE prophylaxis is a constantly evolving process as new publications and research come into existence.

Please let us have your feedback!

References


2. Venous Thromboembolism: Reducing the Risk. NICE Jan 2010