

Pharmacotherapeutic report on apixaban (Eliquis®) for the prevention of venous thromboembolic events in adults following a hip or knee replacement operation.

Medicine Apixaban film-coated 2.5 mg tablet.

Therapeutic indications. "Prevention of venous thromboembolic events (VTE) in adult patients who have undergone elective hip or knee replacement surgery".

Dose. 2.5 mg orally twice daily. The first dose should be taken 12 to 24 hours after the surgery. Titration by INR is not necessary. The recommended duration of treatment is 32 to 38 days after hip replacement surgery and 10 to 14 days after knee replacement surgery.

Mechanism of action. Apixaban is an oral, reversible, direct and selective inhibitor of factor Xa. By inhibiting factor Xa, apixaban prevents thrombin generation and thrombus development.

Summary of the therapeutic value

Intended effects. In two comparative clinical trials apixaban was shown to be more effective than low molecular weight heparin (LMWH) enoxaparin in the prevention of venous thromboembolic events after a hip or knee replacement operation. In an indirect comparison, apixaban is also more effective than the coumarins (vitamin K antagonists) and fondaparinux.

Apixaban and rivaroxaban are both more effective than enoxaparin. As there were no significant differences between the populations studied in the clinical trials, the intended effects of apixaban can be supposed to be comparable with those of rivaroxaban (indirect comparison).

Unintended effects. There are no significant differences between apixaban and enoxaparin in the occurrence of major haemorrhages or clinically relevant, minor haemorrhages. An indirect comparison leads to the assumption that there is no difference in the occurrence of clinically relevant haemorrhages between apixaban, coumarins, LMWH's, fondaparinux and rivaroxaban.

Experience. Experience with apixaban is limited, with rivaroxaban it is sufficient and with enoxaparin ample experience has been obtained.

Applicability. There are no major differences in applicability. No dose-adjustment of apixaban, rivaroxaban, coumarins and LMWH is necessary for elderly patients or in case of moderate renal impairment; whilst it is necessary with fondaparinux. LMWH's and fondaparinux have fewer drug interactions than apixaban, rivaroxaban or coumarins.

Ease of use. Ease of use of apixaban is greater than that of enoxaparin and is comparable to that of rivaroxaban.

Final conclusion. For the prevention of venous thromboembolic events in adults after a hip or knee replacement operation apixaban has an added therapeutic value in comparison with coumarins, LMWH's and fondaparinux. The therapeutic value of apixaban is comparable with that of rivaroxaban.