

## Effectiveness of apixaban versus enoxaparin in preventing wound complications and deep venous thrombosis following total knee replacement surgery: A retrospective study

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### Abstract

**Background:** Enoxaparin, a thromboprophylactic drug that is widely used for preventing deep venous thrombosis (DVT) and surgical wound complications after total knee replacement surgery, can only be administered subcutaneously. Apixaban, a novel factor Xa inhibitor that could be comparable to enoxaparin, is an oral formulation and thus would be easier to manage.

**Objective:** To compare the thromboprophylactic effectiveness of apixaban and enoxaparin in patients receiving total knee replacements.

**Methods:** In this retrospective, single-institution study, the records of 200 patients who underwent elective total knee replacement surgery were reviewed. Of those, 120 patients had received enoxaparin 4000 IU daily (initiated 6 hours before surgery), whereas 80 had received apixaban 2.5 mg twice daily (initiated 12 hours after surgery), for 21 days. All patients were examined for major and minor surgical wound complications and DVT incidence during their hospital stay and 7-21 days after surgery.

**Results:** No statistically significant differences ( $P \geq .005$ ) were found between the apixaban and enoxaparin groups with regard to minor and major surgical wound complications and DVT incidence. Patients in both groups were comparable in terms of age, hospital stay, and required blood transfusion units. Two enoxaparin-treated patients and one apixaban-treated patient developed DVT (1.5%) during the study period.

**Conclusion:** Oral apixaban is an effective alternative to enoxaparin as a thrombopro-