

EFFECTIVENESS AND SAFETY OF DOACS IN PATIENTS WITH RENAL TRANSPLANTATION.

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Background and aims: Kidney transplantation is a critical therapeutic option for patients with end-stage chronic kidney disease. Despite advancements in surgical techniques and immunosuppressive therapies, the procedure is associated with a high risk of potentially fatal thromboembolic complications, such as deep vein thrombosis (DVT) and pulmonary embolism (PE). These complications are multifactorial, with contributing factors including postoperative immobility, immunosuppressive drug use, graft dysfunction, and comorbidities like obesity and cardiovascular disease. The use of direct oral anticoagulants (DOACs) in kidney transplant recipients, particularly those requiring long-term anticoagulation due to previous thrombotic events, has generated increasing interest.

This study aims to examine the effectiveness and safety of DOACs in kidney transplant recipients, focusing on drug interactions with calcineurin inhibitors (CNI) and evaluating clinical outcomes in terms of both safety and efficacy.

Methods: A literature review was conducted to analyze existing studies on the use of DOACs in kidney transplant recipients, with a focus on pharmacological interactions with CNIs. In addition, clinical data from a monocentric cohort of

5 kidney transplant patients treated with DOACs were reviewed. Data sources included clinical files from the Hemostasis and Thrombosis Center of AOU Dulbecco, relevant published studies, and safety reports from pharmacovigilance databases.

Results: The reviewed literature indicates that DOACs, such as apixaban, rivaroxaban, edoxaban and dabigatran, may be safe and effective for preventing thromboembolic events in kidney transplant patients, particularly those with moderate renal dysfunction. However, concerns persist regarding the interactions between DOACs and immunosuppressive drugs, such as tacrolimus and cyclosporine. Clinical outcomes in our cohort showed no major thrombotic or hemorrhagic events during follow-up. The patients have undergone a mean follow-up of 8.8 months (median 11, range 1-13 months). Although the follow-up is relatively short, no adverse events of a bleeding or thrombotic nature have been recorded for any of the patients so far.

Conclusions: The use of DOACs in kidney transplant recipients shows promise in preventing thromboembolic events, with a favorable safety profile compared to traditional anticoagulants. However, their use requires careful monitoring, particularly regarding renal function and drug interactions.

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