

USE OF DOACS IN HEART TRANSPLANTATION RECIPIENTS.

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Backgrounds and aims: Direct Oral Anticoagulants (DOACs) are the treatment of choice for anticoagulation in patients with atrial fibrillation and venous thromboembolism. They have a superior efficacy and safety profile compared to Vitamin K Antagonists (VKAs), with less impact on the quality of life for patients as they do not require strict laboratory monitoring.

We treated 3 heart transplant patients with DOACs: 1 male aged 69 and 2 females aged 67 and 64, respectively.

Method: The first heart transplant recipient, who had undergone the procedure 16 years ago, had been on warfarin for 7 years due to permanent atrial fibrillation and stage IIIb chronic kidney disease (CKD). He reported difficulties in monitoring the INR and had a low TTR (Time in Therapeutic Range). Warfarin therapy was stopped, and apixaban 2.5 mg BID was introduced. We monitored the circulating levels of apixaban and cyclosporine at seven days and one month. At seven days, both the trough and peak levels were within range, as were the cyclosporine levels (trough 20 ng/ml [17-25] and peak 60 ng/ml [39-85]), and CSA (46 ng/ml). The

PT-INR was 1.09. After one month, the values were still within the therapeutic range.

After three months of therapy, due to worsening renal function (stage V), the dose was reduced to 2.5 mg daily, and monitoring was done after 3 days, showing peak and trough levels of 75 ng/ml and 15 ng/ml, respectively, with CSA at 46 ng/ml. After another two months, the patient discontinued apixaban due to the initiation of dialysis.

The two female patients, both of whom had undergone second heart transplantation for graft rejection, were treated respectively with rivaroxaban 15 mg daily for recurrent phlebitis the former and edoxaban 30 mg daily for a history of pulmonary embolism the latter. The peak and trough levels and CSA monitoring remained within therapeutic ranges.

Results: In all three described cases, there were no hemorrhagic or thrombotic events.

Conclusions: The use of DOACs in heart transplant patients with or without chronic kidney disease is safe and effective when laboratory monitoring of both anticoagulant and immunosuppressant levels is possible.

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