

Antiplatelet/anticoagulation treatment and vascular access interventions

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Introduction

A large number of dialysis patients receive some kind of antiplatelet/anticoagulant therapy (APT/ACT), mainly because of their comorbidities, age and dialysis vintage. However, in a recent Cochrane systematic review on the use of APT/ACT in chronic kidney disease it was observed that while there was an associated reduction in early thrombosis rates of AVF, it had no effect on the suitability of dialysis supporting other underlying factors like an increased risk of bleeding.

The dynamics of intra vascular access (VA) flows and blood viscosity may contribute to an increased probability of thromboembolic episodes thus increasing VA complications and subsequent need for interventions.

Objectives

To assess the impact of the APT/ACT on the VA complications and patency on haemodialysis patients.

Methods

We conducted a retrospective, quantitative, longitudinal and descriptive study, enrolling patients with internal VAs (AVF and AVG) for a period of 3 years (between 11/2013 and 10/2016).

Two groups were considered: patients with internal VAs with and without APT/ACT therapy.

We analysed angiographic/surgical review interventions and thrombotic events.

Results

We analysed 411 VAs: 299 (72.7%) Arteriovenous Fistulae (AVF) and 112 (27.3%) Arteriovenous Grafts (AVG).

The most frequent complications requiring interventions were: Qa decrease, Kt/V reduction and VA member edema.

AVF analysis: Out of 157 (52.5%) patients under APT/ACT therapy, 113 (71.9%) did not require any intervention. In the remaining 44 (28.1%) patients, 49 angiographic, and 32 surgical review interventions were performed and 0.36 thrombotic events/patient observed. Out of 142 (47.5%) patients without APT/ACT therapy, 109 (76.7%) did not require any intervention. In the remaining 33 (23.3%) patients, 20 angiographic and 48 surgical review interventions were performed and 0.58 thrombotic events/patient observed.

AVG analysis: Out of 68 (60.7%) patients under APT/ACT therapy, 40 (58.8%) did not require any intervention. In the remaining 28 (41.2%) patients, 43 angiographic and 9 surgical interventions review were performed and 0.5 thrombotic events/patient observed. Out of 44 patients without APT/ACT therapy, 22 (50%) did not require any intervention. In the remaining 22 (50%) patients, 46 angiographic and 33 surgical review intervention were performed and 1.32 thrombotic events/patient observed.

Conclusion

We found out that the group of patients under APT/ACT therapy had a lower intervention rate.

Both AVF groups showed fewer complications than patients with AVG.

Patients under APT/ACT therapy had a lower number of thromboses, which is apparently more evident in AVG.

References

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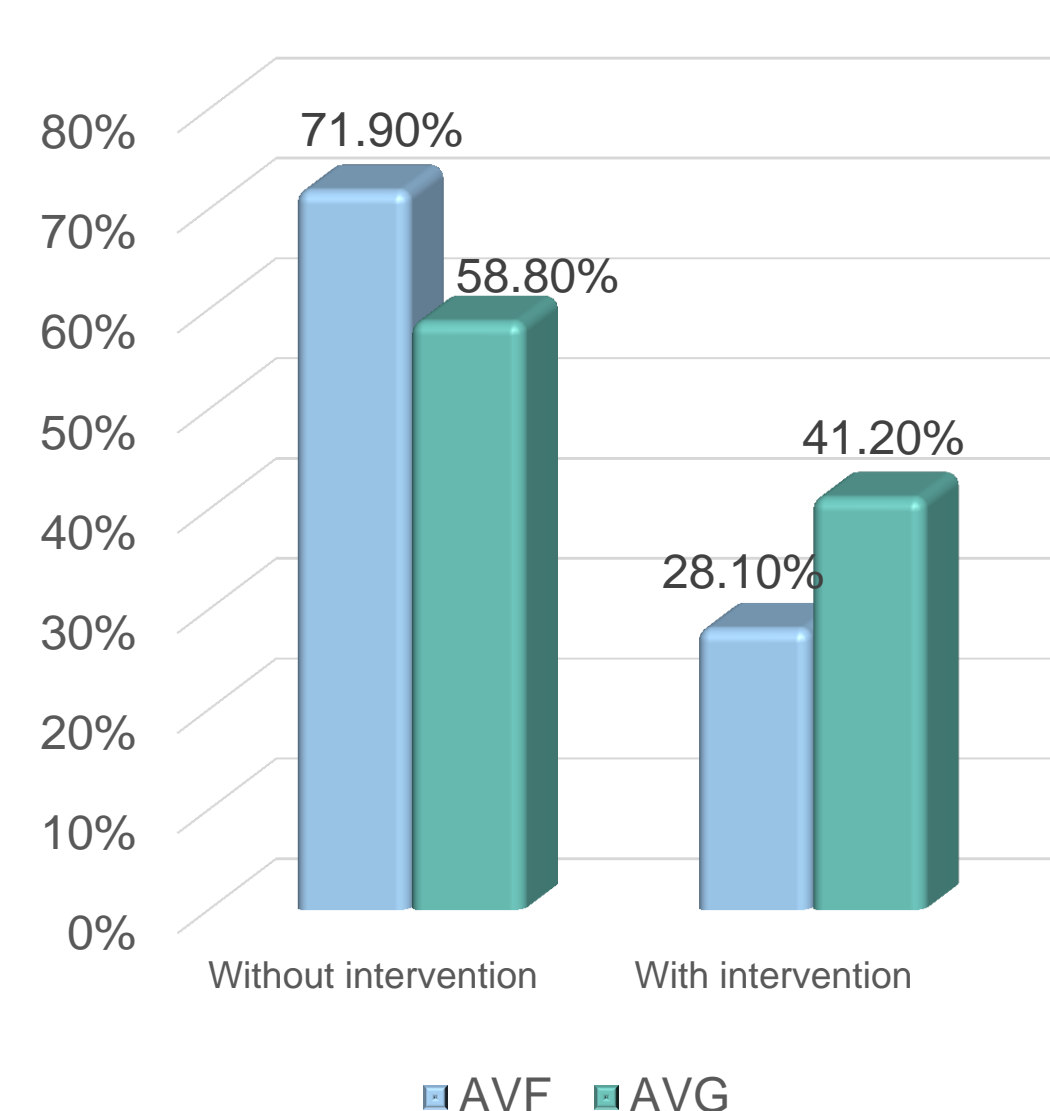


Figure 1: Angiographic/surgical review interventions in VAs with APT/ACT

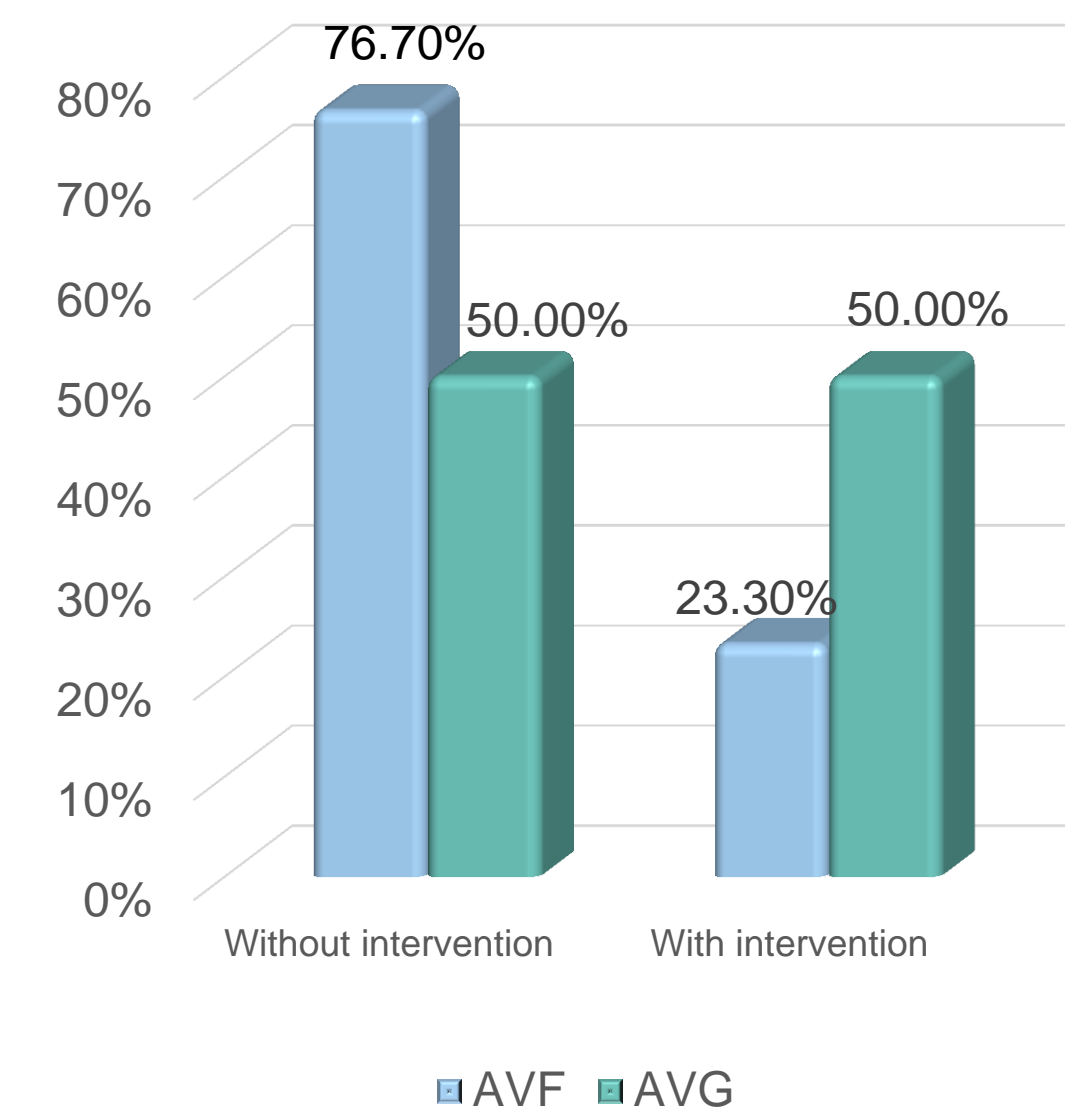


Figure 2: Angiographic/surgical review interventions in VAs without APT/ACT

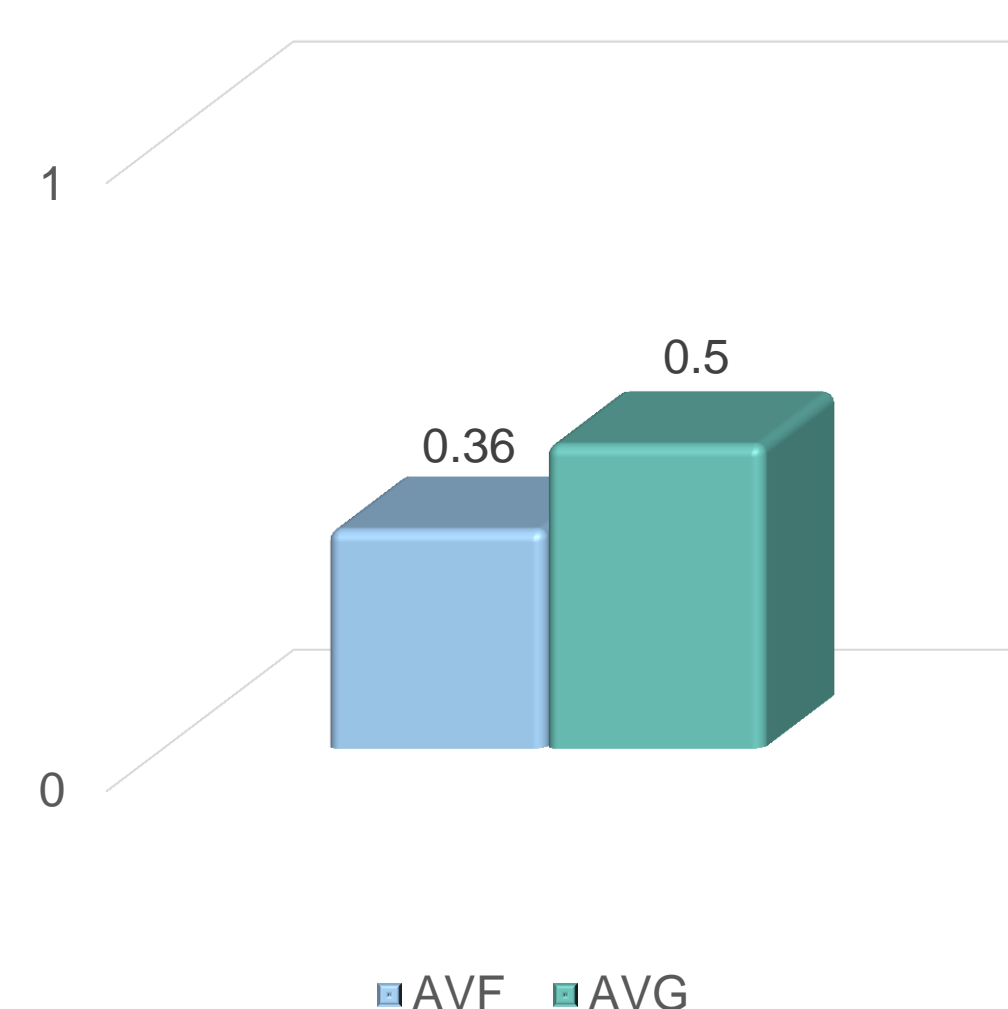


Figure 3: Thrombotic events/patient in VAs with APT/ACT

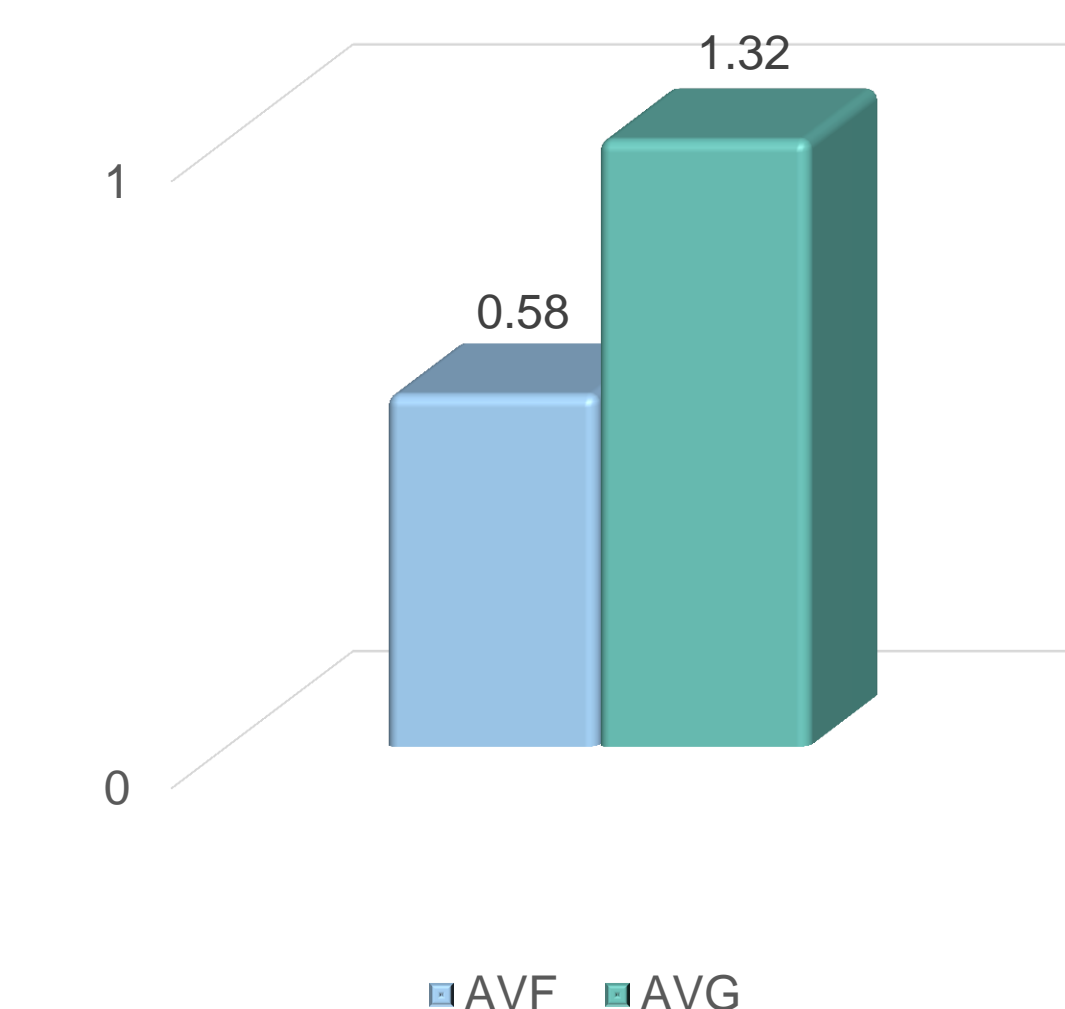


Figure 4: Thrombotic events/patient in VAs without APT/ACT