

The impact of peripheral arterial disease on outcome after percutaneous transluminal angioplasty for arteriovenous fistula: A 1-year retrospective analysis

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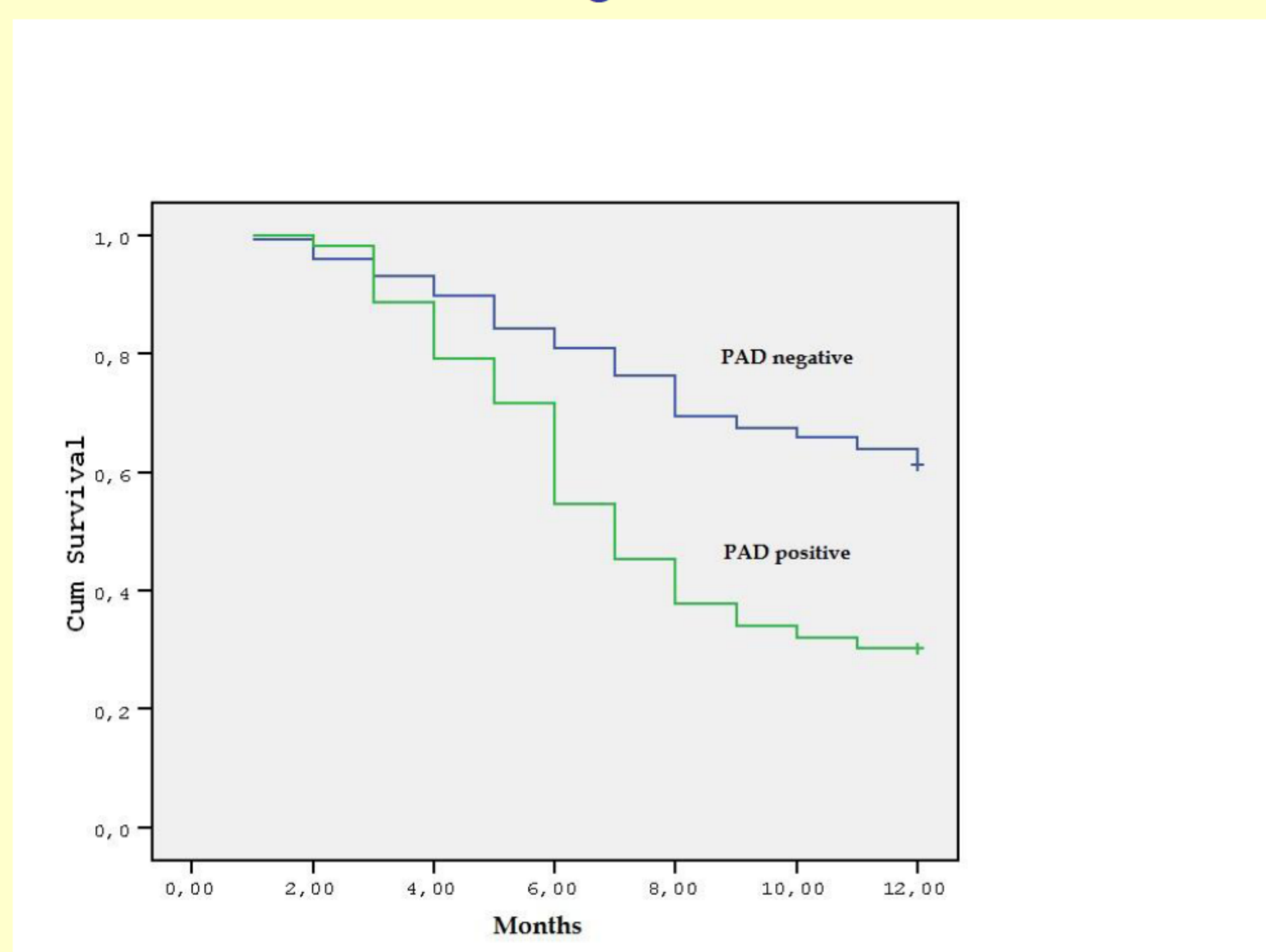
OBJECTIVES

A significant proportion of end stage renal disease patients undergoing percutaneous transluminal angioplasty (PTA) for arteriovenous fistula (AVF) have concomitant peripheral arterial disease (PAD), which plays a crucial role in the selection process of determining an optimal vascular access site. The aim of the present work was to determine the impact of PAD on 1-year AVF patency after percutaneous transluminal angioplasty in a large haemodialysis facility.

METHODS

A retrospective analysis was performed for a total of 200 patients (92 females and 108 males, mean age: 59 ± 13 years, mean hemodialysis vintage: 56 ± 36 months). Study patients were divided into 2 groups: Group 1 (patients without PAD; $n=147$) and Group 2 (patients with a previous angiographic diagnosis of PAD; $n=53$). The clinical and laboratory files were reviewed for the development of AVF dysfunction that required percutaneous intervention.

Figure



RESULTS

Compared to Group 1 patients, patients in Group 2 were elder (63 ± 10 vs 55 ± 13 years, $p=0,02$) and had more diabetes (70% vs 25% , $p=0.016$) and more history of documented coronary artery disease (42% vs 17% , $p=0.001$), reflecting more frequent and severe comorbidities. The review of clinical files revealed that 57 patients in Group 1 ($38,8\%$) and 37 patients in Group 2 ($69,8\%$) developed angiographically confirmed AVF dysfunction that required PTA in one year time ($p<0,0001$; Figure 1). In the multivariate regression analysis, PAD (HR; 2.14, 95% CI 1.26-4.04, $p=0.006$) was an independent predictor of 1-year AVF thrombosis after PTA.

CONCLUSIONS

Assessment of PAD should play an important role in developing strategy for vascular access placement.

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