ARE THE COMPLICATIONS OF ARTERIOVENOUS FISTULAS ASSOCIATED WITH AN ABNORMAL ANKLE-BRACHIAL INDEX IN HEMODIALYSIS PATIENTS?

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AIM

The peripheral artery disease is frequent among patients undergoing hemodialysis much more than in the general population. The ankle-brachial index (ABI) is a potent tool to screen this pathology. We analyzed the relationship between ABI abnormal values and arteriovenous fistulas (AVF) complications such as stenosis and thrombosis among chronically hemodialysis patients (HD).

Patients and methods

Thirty-eight chronically HD patients have been followed during 4 years with 3 measures of ABI: the two first one year apart and the third 5 years later. The AVF complications (stenosis and thrombosis) have been recorded as well as other routine dialysis parameters: blood pressure (BP), phosphocalcic metabolism and cardiovascular risk factors. Patients were divided into two groups (based on their last ABI measure) according to an ABI less or higher than 0.9.

Results

Patients whose last ABI was <0.9 (n=15) were 71.6 years old (64-87 years), 61% were females, and 80% were on HD for at least 6 years. The AVF complications arose in half of them against 74% for those with an ABI >0.9. Although there was no significant difference in terms of age, the overall hospitalization days were significantly longer in the <0.9 group (62 vs. 33 days).

Conclusion

In our study, patients with ABI<0.9 had a higher rate of arterial calcifications, a higher rate of cardiovascular events, a higher predialysis SBP and a higher rate of active and ex-smokers. However, ABI<0.9 was not associated with a higher incidence of AVF complications compared to patients with an ABI>0.9. So, in the limits of our study ABI<0.9 did not predict a higher incidence of AVF thrombosis and stenosis. These observations would benefit from a larger scale HD population study.