

EFFECT OF DIFFERENT TYPES OF ACCESS ON CHANGES IN AORTIC AUGMENTATION PRESSURE AND INDEX IN A SINGLE HEMODIALYSIS SESSION

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Aortic augmentation pressure and index are parameters that reflect the central aortic pressures. These parameters have a direct relationship with cardiovascular mortality and morbidity. No studies have looked into the effects of different types of accesses on these parameters after a single hemodialysis session. The purpose of this study is to compare the effect of different types of access on changes in aortic augmentation pressure and index after a single hemodialysis session.

We performed a prospective study on 129 patients on chronic hemodialysis. We measured their aortic augmentation pressure (AAP) and index (AIX) using applanation tonometry (SphygmoCor apparatus) at the beginning and at the end of a single dialysis session.

Though not significant, patients with a tunneled hemodialysis catheter had a greater drop in AAP and AIX than patients with an AV fistula after a single hemodialysis session (*Drop in AAP 4.1 vs. 1.0 mmHg, $p=0.096$; Drop in AIX 3.4 vs. -0.5, $p=0.215$*). The difference was not evident when comparing patients with tunneled hemodialysis catheter and patients with AV Graft (*Drop in AAP 4.1 vs. 2.7 mmHg, $p=0.570$; Drop in AIX 3.4 vs. 4.0, $p=0.864$*).

We conclude that hemodialysis patients with a tunneled hemodialysis catheter tend to have a greater drop in AAP and AIX than patients with an AV fistula after a single hemodialysis session. This may indicate a greater benefit in decreasing cardiovascular risks in patients with a tunneled hemodialysis catheter than in patients with an AV Fistula after a single hemodialysis.