THE INFLUENCE OF FUNCTIONING ARTERIOVENOUS FISTULA IN CARDIAC FUNCTION IN PATIENTS WITH KIDNEY TRANSPLANTATION

Evangelos Papachristou¹, Theodoros Drinias¹, Marios Papasotiriou¹, Panagiotis Trigkas¹, Nikolaos Koutsogiannis², Eirini Savvidaki³, Dimitrios S. Goumenos¹
¹Department of Nephrology, ²Department of Cardiology, University Hospital of Patras, Patras, Greece

Background and aim

The arteriovenous fistula (AVF) has been implicated in the deterioration of cardiac function in patients with end stage chronic kidney disease on dialysis. The effect of AVF on cardiac function in patients who have received a kidney transplant is unknown. Therefore there are no instructions that recommend preservation or ligation of the AVF in patients after successful kidney transplantation. Thus, the purpose of this study was to investigate the effect of a functioning AVF in the long term cardiac function and the potential benefits of a AVF ligation.

Methods

We studied a total of 99 patients who underwent kidney transplantation and had at least 5 years of follow-up after surgery with echocardiography. Patients were divided into two groups:

- The first group (control) included 47 patients with no functioning AVF immediately after transplantation
- The second (AVF group) included 52 patients with a functioning AVF for at least 2 years after transplantation.

We studied: the left ventricular ejection fraction (LVEF), the thickness of the interventricular septum (IVS) and left ventricle diastolic diameter (LVDD) immediately before surgery (baseline parameters) and at 2 and 5 years after transplantation.

Results

Baseline studied cardiac parameters (LVEF, LVDD and IVS) did not differ between controls and patients in the AVF group.

Conclusions

- Maintaining arteriovenous fistulas in patients after successful renal transplantation appears to adversely affect the long-term cardiac function. However, whether these findings may have an impact on long-term patient or renal transplant survival needs further research.

Contact: epapadoct@hotmail.com or mpapasotiriou@yahoo.com