
CTS Collaborative Transplant Study

Newsletter 4:2006

November 1, 2006

There has been an **interesting recent report** (JASN 2006, 17: 889-999) showing that treatment of kidney graft recipients with Angiotensin Converting Enzyme Inhibitors (ACEI) or Angiotensin II type 1 Receptor Blockers (ARB) **improves long term** allograft and patient survival by approximately 20 % at 5 years, a truly **impressive** result. Treatment with ACEI/ARB was shown in previous studies to be associated with a survival advantage in non-transplant patients at increased cardiovascular risk. We felt that it was important to **verify** these earlier results in a transplant population, since, if substantiated, **ACEI/ARB treatment** should be recommended for all kidney transplant recipients.

For many years, data on ACEI/ARB treatment at intervals after transplantation have been provided by centers participating in the CTS study on the extended follow up questionnaires (colored forms). Because of **your exceptional support**, the CTS database is the largest available resource for analyzing associations between ACEI/ARB and kidney graft outcome. In this newsletter, we are presenting the results for transplants performed during the years **1998-2005**. To our disappointment, we were **unable to substantiate** claims on significantly improved survival rates resulting from ACEI/ARB treatment.

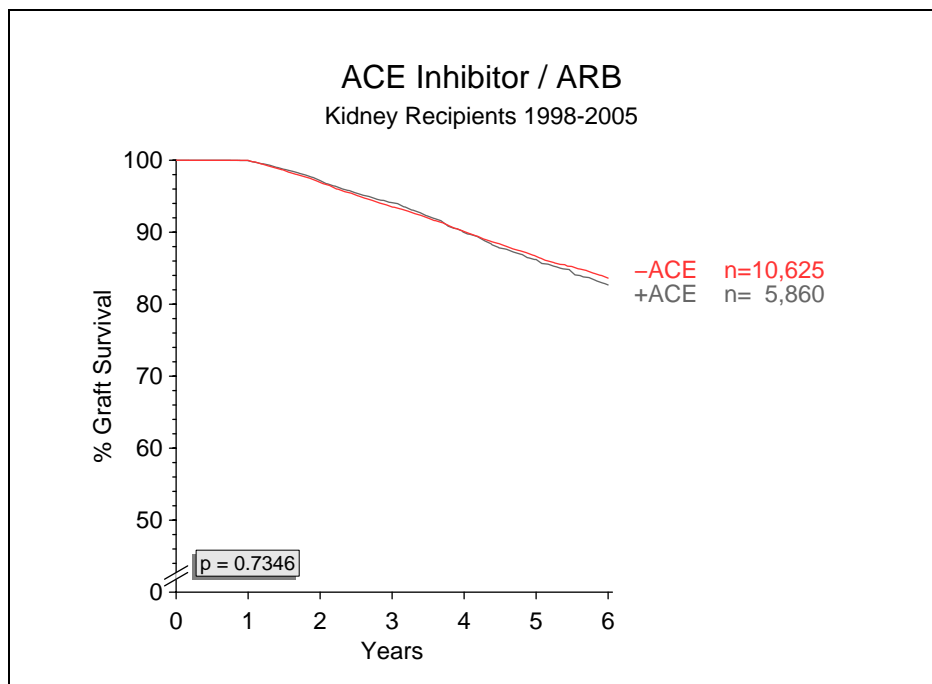


Figure 1

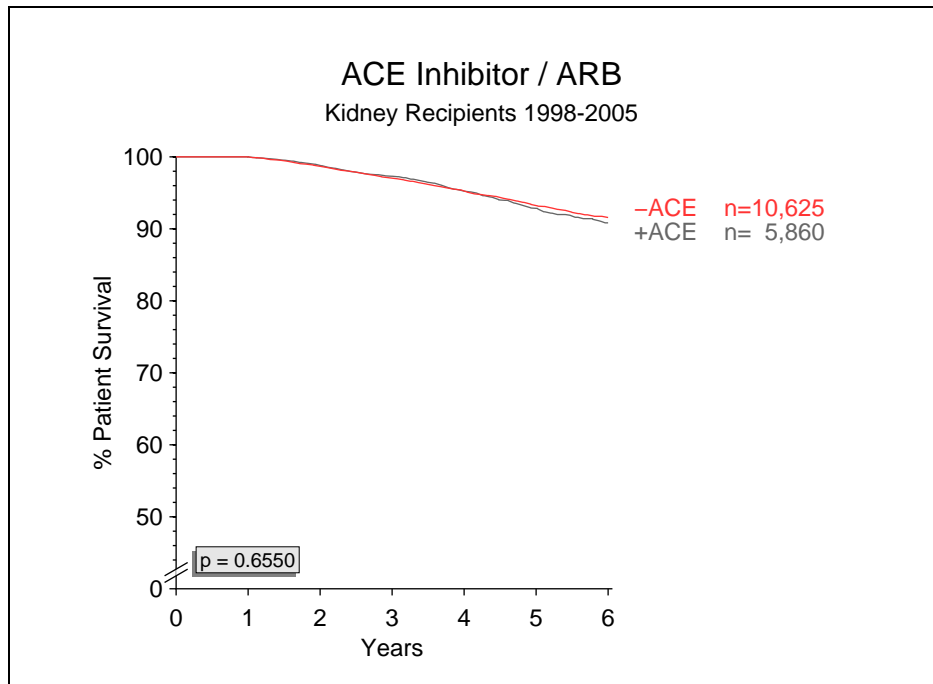


Figure 2

When kidney graft recipients were separated according to whether they were or were not treated with ACEI/ARB **one year after transplantation**, the **graft** survival rates during the subsequent 5 years were virtually identical (Figure 1). Likewise, the **patient** survival rates for the two groups were not significantly different (Figure 2). These results did not change substantially when the analysis was performed separately for recipients of grafts from deceased or living donors. Nor was it possible to document a lower rate of cardiovascular death in patients on ACEI/ARB therapy.

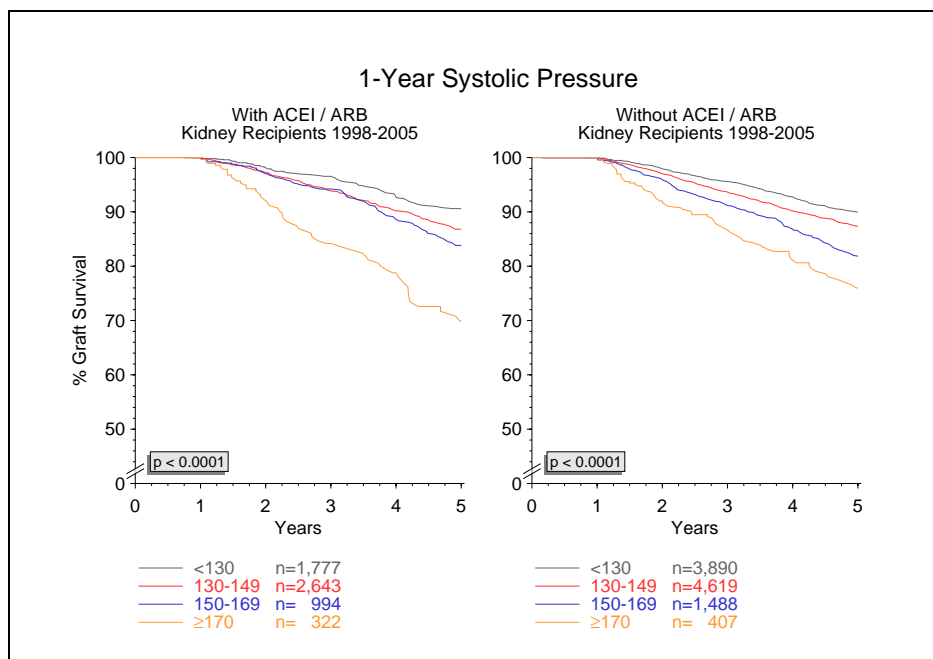


Figure 3

The primary reason for administering ACEI/ARB to kidney transplant recipients is the treatment of hypertension. In Figure 3, the influence of systolic blood pressure one year post-transplant is shown for recipients with or without ACEI/ARB treatment. Clearly, the **primary influence** on graft survival is exerted by the **level of blood pressure** and not by whether patients were on ACEI/ARB treatment.

The analysis shown in Figure 3 might be considered biased against the ACEI/ARB group because patients who received no treatment for high blood pressure would be included among the recipients not on ACEI/ARB. We therefore selected patients for comparison who were **on antihypertensive medication** but did not receive ACEI/ARB. The results shown in Figure 4 illustrate that this analysis only **confirmed** that subsequent outcome was determined by the extent of hypertension, and not by whether patients received ACEI/ARB or not.

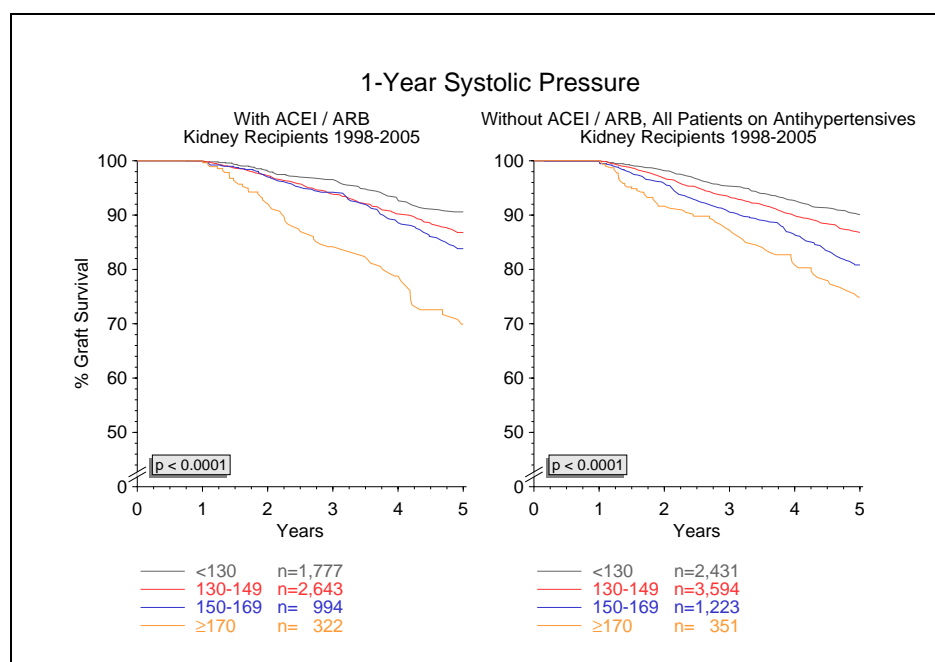


Figure 4

In spite of presenting a negative finding, we believe that the analysis shown in this newsletter is a **good example of the useful role** of the international collaborative study. **Verification** of preliminary reports is an **important function** that can help avoid misguided policy recommendations. Of course, there is no guarantee that the registry data are absolutely valid and large prospective trials would be necessary for resolution of this debate. Nevertheless, the CTS data raise serious doubts in this instance and suggest the importance of careful consideration and further study before recommendations for the uniform treatment of transplant recipients with ACEI/ARB are made.

We are **very grateful to all CTS participants who have provided the data** on the extended follow up forms which made this analysis possible.

As already announced, the **next deadline** for sample shipment for the **DNA and serum studies** is (on or about)

November 20, 2006.

Please be sure to inform us by fax, e-mail, or phone of your shipment so that we can check on any missing parcels.

Thank you very much for your support of these important projects. For those who are not yet contributing, these studies are ongoing and **it is not too late for joining**. Please consult the CTS website under "Special Studies" for details on sample collection.

With the next CTS newsletter (February 1, 2007) we will release a **complete update** of all website graphics. Providing your follow up data in a timely fashion for inclusion in the statistical analysis is therefore particularly important this time. Please send in your printouts or TaXi returns in time for **arrival on January 22, at the latest**, in order to allow sufficient time for processing. All general graphs as well as all individual center statistics will be updated.

Thank you for your cooperation!

Sincerely yours,

Gerhard Opelz