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LETTERS TO EDITOR

BACKTABLE ANGIOSCOPY TO EVALUATE THE RENAL ARTERY[1]

Pathological conditions of the intima due to trauma or existing donor pathology can result in arterial thrombosis after transplantation (*1*). We recently encountered a case where a question was raised about the condition of the donor renal artery, in which angioscopic examination was used to establish that the artery was satisfactory. The kidney was from a 58-year-old donor who died of an intracranial hemorrhage. Organ recovery was uneventful. On backtable examination of the renal artery there appeared to be intramural hemorrhage and the possibility of an intimal dissection.

We used a 2.2-mm angioscope (Olympus Angiofiberscope PF22) that was easily directed into the distal renal artery. The cold UW preservation solution in which the kidney was immersed provided a perfect bloodless field. During withdrawal of the angioscope, a clear view of the wall of the renal artery was obtained. A small proximal artherosclerotic plaque was noted near the orifice to the aorta. There was no evidence of intimal tear. The procedure lasted less than 10 min. The kidney was transplanted without technical complications.

The development of angioscopy has been one of the recent advances in vascular surgery (*2*). Angioscopes can be readily used in transplantation, as was shown in this case. The advantages of backtable angioscopy include simplicity and rapidity of diagnosis in a bloodless, easily accessible field, as well as accuracy for pinpointing the potential intimal pathology, as the light of the angioscope can be seen through the wall of the vessel. To our knowledge, angioscopy has not been used previously in transplantation.

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THE CHACMA BABOON AS AN ORGAN DONOR FOR MAN

The recent article by Jennifer Stark and her colleagues from Johannesburg (*Transplantation* 1991; 52; 107) reporting studies exploring immunologic compatibility between the Chacma baboon and man was of considerable interest. Their statement, however, that "in concordant xenotransplantation, the rejection process mimics that seen in human allografts" is not entirely supported by the few studies that have been performed.

Using the vervet (African green) monkey–to–baboon heterotopic cardiac transplant model, which involves two Old World monkeys that would appear to be phylogenetically closer than the baboon and man, the Cape Town group noted that, although graft survival extended for a mean of 10 days, approximately 80% of the hearts of nonimmunosuppressed baboons showed features consistent with vascular (antibody-mediated) or mixed cellular and vascular rejection (*1*). Furthermore, triple-drug therapy consisting of cyclosporine, azathioprine, and methylprednisolone did not extend survival significantly (*2*). By increasing the immunosuppressive therapy even further by the addition of induction ATG or 15-deoxyspergualin and bolus methylprednisolone for rejection, some prolongation of graft survival was obtained, but at the cost of increased infection and other complications (*3*).

Although the Columbia-Presbyterian group reported prolonged survival of heterotopic cynomolgus-to-baboon hearts (*4*, *5*), they could not demonstrate significantly increased survival of orthotopically transplanted cynomolgus monkey hearts in baboons despite quadruple-drug immunosuppression (*5*). A note of optimism is provided by Panza et al. (*6*) who—in the same animal model but utilizing a combination of total lymphoid irradiation, cyclosporine, and steroids—achieved survival of heterotopic heart transplants beyond one year; in view of the Columbia-Presbyterian experience, however, this result must be viewed with some caution. The Johannesburg group, with its unique experience with TLI in renal allografting is, of course, in an ideal position to explore this approach further.

The authors imply that ABO incompatibility played a major role in the development of severe rejection episodes "in the majority of baboon-man xenotransplants reported." This may well have been so, although the addition of ABO incompatibility in the Cape Town vervet-to-baboon xenografts did not result in an increased incidence of histopathological features of vascular rejection, though there may have been an increased incidence of early hyperacute rejection (*1*, *2*). From this study it would seem that xenoreactive antibodies play a more important role than anti-ABO antibodies.

However, as approximately 20% of all vervet-to-baboon