

## A simple objective parameter for perfusion study of renal transplant

Kiyoshi KOIZUMI, Hideo KAKIUCHI, Toru SAGUCHI, Shingo INOUE, Shuichiro FUSE,  
Etsuko KAWAKAMI, Akira YAMAZAKI, Koichi KOZAKI and Takeshi NAGAO

*Departments of Radiology and Transplantation Surgery, Hachioji Medical Center, Tokyo Medical University*

We proposed a simple parameter, the kidney-to-aorta ratio (KAR), for evaluation of renal transplant perfusion. KAR was calculated from the peak counts of the kidney and the aorta. The calculated values were compared with the visual interpretation of the radionuclide first-pass flow study, percent renal uptake (%RU), and tubular extraction rate (TER) by Bubeck's one point sampling method in 37 studies. KAR correlated well with the visual interpretation of the flow study and the other quantitative parameters. Representative cases, which showed the usefulness of KAR for the objective assessment of the perfusion status of renal transplants, were presented. In conclusion, KAR is a simple and practically useful parameter for objective evaluation and follow-up of renal transplant perfusion.

**Key words:** renal transplantation, renal perfusion, Tc-99m-MAG3, renal scintigraphy