Digital Angiography and Hemodialysis Vascular Access

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Dear Sir,

We have read the original of Bursztyn et al. [1] about Digital Intravenous Angiography in hemodialysis patients that is very close to our own experience. We have done 32 outpatients studies with Digital Intravenous Angiography in 4 groups of hemodialysis patients. In 16 cases, to evaluate malfunction of the graft (group I), in 7 just after reanastomosis, because of previous thrombosis (group II), in another 7 within the first month after their first arteriovenous fistula, as routine evaluation (group III) and in 2 patients with high-output cardiac failure (group IV). In 18 cases, the access was by the femoral vein and in 14, by the contralateral basilic vein. A pigtail 4 F catheter was introduced into the right atrium and 30 ml of contrast (59% ioxaglic acid in 24 cases and 52% iohexol, non-ionic, in another 8 patients), were injected at a rate of 18 ml/s. Images were obtained every 0.5 s for a 10-second period. The method had no morbidity and images were always demonstrative except in 1 patient with dilated cardiomyopathy. Our results are expressed in the table. In our experience, Digital Intravenous Angiography is a simple and effective method for the study of arteriovenous grafts. Anomalies of the vascular access are frequent and sometimes unsuspected, either in new non-employed fistulae, or in the long-term use. As the technique is safe, can be performed in outpatients, and permits an early diagnosis, we think it should be used routinely as a control and diagnostic procedure.

Reference

1 Bursztyn, E.M.; Sharif, K.; Berger, S.J.: Digital intravenous angiography for the study of hemodialysis vascular access. Nephron 44:85–88 (1986).

Groups

I
II
III

IV

Anastomosis and/or venous side stenosis.

11

3

3

—
Abnormal venous
dilation/aneurisms

-

-

-

2

Nonvaluable

1

-

-

-

Normal

4

4

4