

Variable kidney position mimicking renal artery branch stenosis in a Tc-99m-DTPA captopril scintigraphy

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Tc-99m-DTPA captopril scintigraphy was performed in a patient with suspected renovascular hypertension. Markedly impaired right renal function (Glomerular filtration rate (GFR) values for the right kidney = 14 ml/min, left kidney = 79 ml/min) was detected in the initial captopril study. Only lower pole activity of the right kidney was observed during the whole study. Since prior ultrasonographic examinations have shown bilateral normal kidney parenchyma, branch stenosis of the right upper pole was suspected. Besides significant function improvement in the following baseline study (GFR values for the right kidney = 59 ml/min, left kidney = 79 ml/min), the right kidney, this time normally shaped, was visibly higher positioned. Because of the possibility of mobile kidney and/or branch stenosis, the patient underwent selective renal angiography. A long pediculed right kidney without renal artery stenosis was found. The final diagnosis was essential hypertension. Kidney position anomalies could influence the reliability of the captopril scintigraphy, particularly when a theoretical kidney depth formula is employed for the attenuation correction.

Key words: captopril, renovascular hypertension, Tc-99m-DTPA scintigraphy