
FAILURE TO VISUALISE A MULTICYSTIC KIDNEY WITH TECHNETIUM 99m-DTPA DOSE NOT PRECLUDE RECOVERABLE FUNCTION.

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ABSTRACT

We present a patient with multicystic left kidney as diagnosed by ultrasonography. A 99m Tc-DTPA scan showed absent uptake by the left kidney. However, post-operative scan after partial nephrectomy was normal. In this case, absence of 99m Tc-DTPA uptake by the kidney does not necessarily mean that renal function is irreversibly lost in patient with multiple cysts. In general, the renal uptake of 99m Tc-diethylenetriamine pentaacetic acid (DTPA) is a measure of glomerular filtration rate (GFR) and absent uptake is equivalent to non-function. In this report, we describe a patient who had non-visualised left kidney on 99m-Tc DTPA scan due to obstruction by multiple cysts, but normal renal function returned after surgical removal of the cysts.

CASE REPORT

A 48 years old male presented with loin tenderness. On examination, the left kidney was found to be enlarged. Abdominal sonogram revealed multiple cysts in the left kidney pressing the left ureter. Other investigations including biochemical tests were all normal except the 99m Tc-DTPA scan which showed absent uptake in the left kidney only. As the right kidney was normal in sonogram and 99m Tc-DTPA scintiscan, surgery on left kidney was planned. Partial nephrectomy was done to remove the cysts. A repeat scintiscan was done when the patient began to recover, it clearly showed bilateral renal activity.

DISCUSSION

This patient demonstrated recoverable kidney function as documented by reversal of absent renal uptake of 99m Tc-DTPA when the cysts were removed. Of interest, Taylor et al, have described absence of 99m Tc-DMSA (dimercaptosuccinic acid) uptake in a patient with acute tubular necrosis from ischemia, but normal renal function returned after hemodialysis.¹ Sherman and Blafox² reported reversal of absent renal uptake of I-131 orthoiodohippurate in obstructive uropathy when the obstruction was relieved. Quinn and Elder³ presented a patient with very poor uptake of 99m Tc-DMSA on two occasions despite a 99m Tc-DTPA scan demonstrating only mild renal impairment. Our patient shows recoverable kidney function following removal of

multiple cysts and highlights the importance of ultrasonography in renal disease.

REFERENCES

1. Taylor et al, J Nucl Med 27: 377-379, 1986.
2. Sherman and Blaufox, Nephron 25: 82-86, 1980.
3. Quinn and Elder, J Nucl Med 32: 2273-2274, 1991.