

## A Case of Severe Nephroptosis with Complete Tracer Retention at Standing Position Nuclear Renal Scan

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### Clinical Image

Nephroptosis is the increased mobility of the kidney moving downward out of its normal position when the patient stands up. The condition can lead to intense abdominal pain, nausea, and vomiting when standing, but it may also cause no symptoms at all.

In case of suspected nephroptosis, diagnosis should be based on imaging with the patient both lying down and standing up. The images should reveal the kidney descending down by some centimetres.

We present the case of a forty years old female with right severe flank pain and feeling of heaviness in the abdomen associated with nausea and vomiting when standing only and symptoms relief when lying down.

After physical examination and routine tests, nuclear renal scan was prescribed due to suspected uretero-pelvic junction obstruction/nephroptosis.

Nuclear renal scan was performed with the patient in supine position with finding of dilatative uropathy in mild right nephroptosis, with almost normal renal function (right Split Renal function=40%) (Figure 1A), and slightly delayed tracer clearance. Such findings were found to be unable to explain the patient's symptoms. Thus, patient underwent nuclear renal scan in standing position, with diagnosis of complete right pelvicalyceal uroastasis due to severe nephroptosis and abnormal kidney rotation. Complete tracer renal retention due to right ureteral kinking was confirmed (Figure 1B).

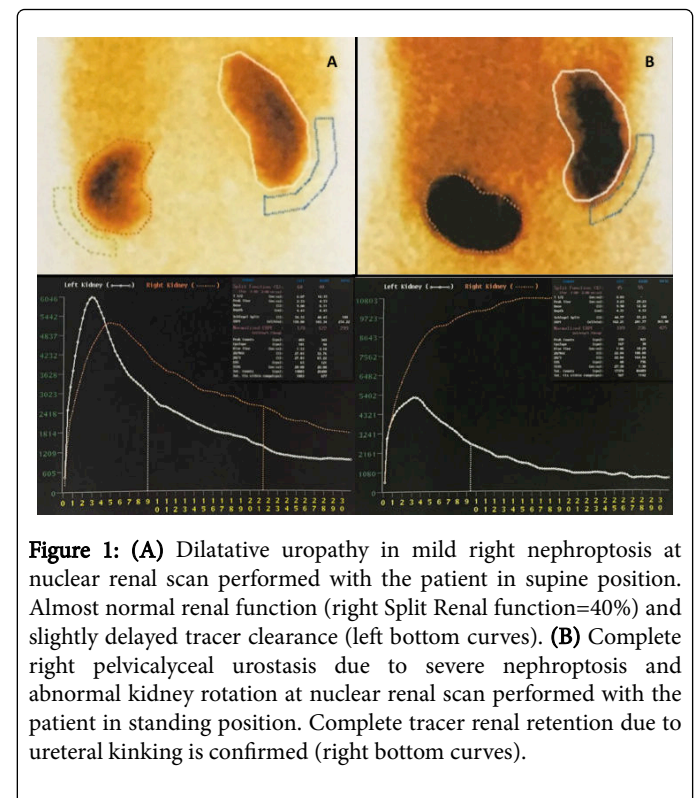
In conclusion, the comparison of supine and standing position findings at nuclear renal scan represent a viable tool in the diagnosis of nephroptosis.

### Conflict of Interest

No conflict of interest with this paper.

### Funding

None.



**Figure 1:** (A) Dilatative uropathy in mild right nephroptosis at nuclear renal scan performed with the patient in supine position. Almost normal renal function (right Split Renal function=40%) and slightly delayed tracer clearance (left bottom curves). (B) Complete right pelvicalyceal uroastasis due to severe nephroptosis and abnormal kidney rotation at nuclear renal scan performed with the patient in standing position. Complete tracer renal retention due to ureteral kinking is confirmed (right bottom curves).