

Case	(365) Radiologist's role in a urological emergency like the pyonephrosis.
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CASE PRESENTATION

A 42 year old female with repetitive nephritic colic was presented with fever, chills and dysuria for a few days. Physical examination revealed a left costovertebral angle knocking pain.

Laboratory examinations showed leukocytosis and numerous white blood cells in urinalysis. Abdominal ultrasonography revealed ecographic findings of pyonephrosis: an enlarged right kidney with a dilated pelvis filling (hydronephrosis grade III) with internal echoes in the collecting system.

Some days later CT images showed findings of pyelonephritis too: hypertrophy of the kidney, hypodense areas in the cortex in relation to microabscesses, delay in the uptake and elimination of contrast and hydronephrosis grade III with normal size ureter (ureteropelvic junction obstruction/stenosis).

DISCUSSION

Pyonephrosis is characterized by accumulation of purulent debris and sediment in the renal pelvis and urinary collecting system as result of an infection with a urinary tract obstruction.

In young adults, obstruction is usually due to stenosis of the ureteropelvic junction or to lithiasis, whereas malignant cause must be ruled out in elderly patients.

Ultrasound has a high specificity in the urgent diagnosis. The typical findings are: enlarged kidney, dilatation of the collecting system with mobile detritus (with or without liquiddetritus levels), gas in the collecting system and calculations.

Contrast material enhanced computed tomography (CT) is used later to identify the level and cause of the obstruction as well as the degree of renal involvement.

CONCLUSION

Pyonephrosis is an urological emergency caused by a pyeloureteral obstruction. It is convenient to know the echographic aspect typical of pyonephrosis for a rapid diagnosis in the urgency that does not delay the urological treatment of these patients because it can lead to renal and perinephric abscesses, sepsis and even death of the patient

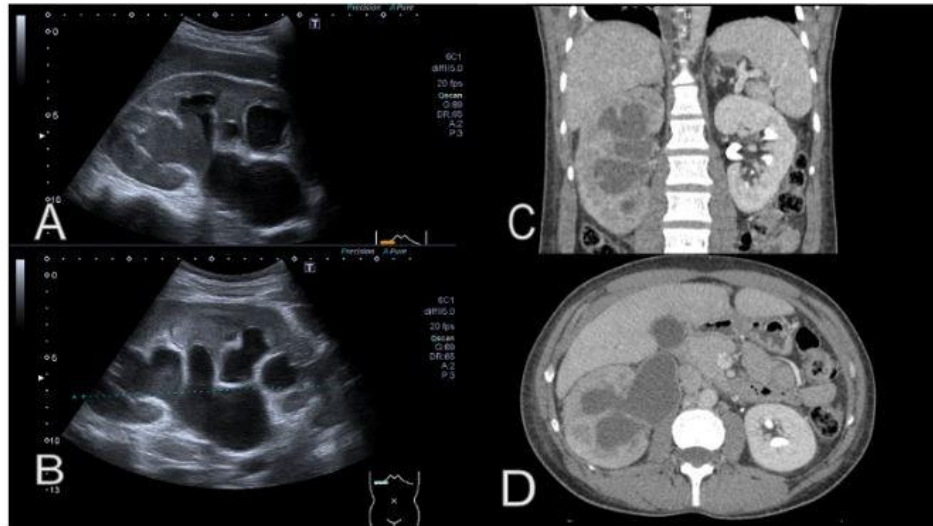


Figure A, B: US images show an enlarged right kidney with a dilated pelvis filling (hydronephrosis grade III) with echogenic debris in the collecting system.
Figure C, D: Contrast-enhanced CT coronal reconstruction and axial section respectively show right cortical microabscesses, right hydronephrosis grade III and slowing in the uptake and excretion of contrast by the right kidney.

BIBLIOGRAPHY

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