

45F with right flank pain, fever

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A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

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Emphysematous pyelonephritis

Axial NECT abdomen and pelvis demonstrates an enlarged, inflamed right kidney with mottled intraparenchymal gas (arrow).



Emphysematous pyelonephritis

- Renal infection characterized by gas formation within or around the kidney
- High mortality
- Risk factor: DM (90%)
- Organisms: E coli, Klebsiella, Proteus
- Huang-Tseng CT classification:
 - 1: gas in collecting system
 - 2: gas in renal parenchyma
 - 3: gas in renal parenchyma + extrarenal extension:
 - 3a: gas/abscess in perinephric space
 - 3b: gas/abscess in paranephric space
 - 4: bilateral emphysematous pyelonephritis or solitary kidney with emphysematous pyelonephritis
- Treatment: IV antibiotics (mild), nephrectomy (severe)

References

1. Craig WD, Wagner BJ, Travis MD. Pyelonephritis: radiologic-pathologic review. Radiographics. 28 (1): 255-77
2. Woodward S, Elsayes KM, Akhtar AL. Imaging of emphysematous pyelonephritis: self-assessment module. AJR Am J Roentgenol. 2010;194 (6): S70-2