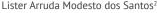


LETTER TO THE EDITOR

Emphysematous pyelonephritis: A rare, severe entity

Pielonefritis enfisematosa: una entidad severa rara

Vitorino Modesto dos Santos¹ Lister Arruda Modesto dos Santos²





- ¹ Universidade Católica de Brasília Department of Medicine Brasília Brazil.
- ² Hospital do Servidor Público Estadual Department of Surgery São Paulo Brazil.

3 Open access

Received: 29/06/2023 Accepted: 18/09/2023

Corresponding author: Vitorino Modestodos Santos. Departamento de Medicina, Universidade Católica de Brasília Brasília Brasil. Email: vitorinomodesto@gmail.com.

Keywords: Pyelonephritis; Diagnosis; Urinary Tract (DeCS).

Palabras clave: Pielonefritis; Diagnóstico; Sistema Urinario (MeSH).

How to cite: dos Santos VM, dos Santos LAM. Emphysematous pyelonephritis: A rare, severe entity, Rev. Fac. Med. 2024;72(1):e109806. English. doi: https://doi.org/10.15446/revfacmed. v72n1.109806.

Cómo citar: dos Santos VM, dos Santos LAM [Pielonefritis enfisematosa: Una entidad severa rara]. Rev. Fac. Med. 2024:72(1):e109806. English. doi: https://doi.org/10.15446/revfacmed. v72n1.109806.

Copyright: ©2024 Universidad Nacional de Colombia. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, as long as the original author and source are credited.



Dear Editor:

We read the article authored by Azañero-Haro et al., which reports the case of a middle-aged woman on hemodialysis, suffering from diabetes, arterial hypertension, hypothyroidism, and bilateral coralliform nephrolithiasis who developed emphysematous pyelonephritis, an ominous condition that requires an early diagnosis and treatment to ensure a good prognosis. According to Azañero-Haro et al., the following was observed in a contrast-enhanced computed tomography (CT) scan: nephrolithiasis, pyelocalyceal dilatation, parenchymal loss, and presence of gas with hydroaeric levels in the right kidney. Despite receiving specialized care, the patient developed septic shock and it was necessary to perform a left nephrectomy, achieving a normal clinical course in the postoperative period, which led to her discharge with indication for outpatient follow-up.

In this regard, the purpose of this letter to the editor is to make brief comments based on studies that have described the presence of cystitis or emphysematous pyelitis, in addition to pyelonephritis.2-5

Ağar et al.² reported the case of an 11-year-old girl with Enterobacter aerogenes urinary tract infection in whom imaging studies identified the presence of emphysematous cystitis and pyelonephritis. Although the patient had no relevant medical history, her left kidney had hypoactive cortical defects in the upper pole and was smaller than the right one. After two weeks on intravenous antibiotics, the patient was asymptomatic and was discharged with indication for antibiotic prophylaxis. The authors of this case emphasized early diagnosis and treatment as the pillars of a favorable outcome.

Likewise, Kono et al.3 described the case of a 65-year-old woman with diabetes who was admitted in a comatose state and in whom emphysematous right pyelonephritis was observed in abdominal imaging studies. According to these authors, the patient underwent laparotomy with right nephrectomy due to septic shock (presence of Escherichia coli in culture studies and infection treated with intravenous meropenem and vancomycin). Three weeks after surgery, the patient was referred to a rehabilitation hospital, highlighting the prompt performance of the nephrectomy for adequate sepsis control.³

In another study, Ojeniyi et al.4 reported the case of a 48-year-old man with left emphysematous pyelonephritis and perirenal involvement, bladder lithiasis, and right hydronephrosis in whom left perinephric drainage and antibiotic therapy were not successful after initial management with nephrostomy catheters, requiring surgery with open cystolitholapaxy and left nephrectomy. These authors stress that, based on what happened in this case, more aggressive procedures should be performed to prevent the occurrence of negative outcomes in individuals with a more extensive form of the disease.4

Finally, Wamsley *et al.*⁵ reported the case of a 66-year-old man with diabetes and emphysematous pyelonephritis confirmed by imaging findings that progressed to septic shock and required bilateral nephrectomy.⁵ In this case, according to the authors, the only option available for saving the patient's life was radical surgery with dependence on dialysis.

In conclusion, the data from the articles cited here can increase the index of diagnostic suspicion for this rare entity, which has a guarded prognosis. Thus, diabetes mellitus, nephrolithiasis, and urinary obstruction are predisposing conditions for emphysematous pyelonephritis. Moreover, a complete study of the urinary tract by means of imaging tests is indispensable.

Conflicts of interest

None stated by the authors.

Funding

None stated by the authors.

Acknowledgments

None stated by the author s.

References

- Azañero-Haro J, Segura-Gago G, Benavides-Samame A, Chiri-nos-Molina T, Soto A. Emphysematous pyelonephritis as a complication of staghorn calculi: A case report. Rev. Fac. Med. 2023;71(3):e102546. https://doi.org/mrfc.
- 2. Ağar BE, Kara A, Gürgöze MK, Eroğlu Y. A rare entity in a pediatric patient: coexistence of emphysematous cystitis and emphysematous pyelonephritis. Turk J Pediatr. 2023;65(1):149-54. https://doi.org/mrfd.
- Kono K, Nagao T, Kanda T, Tomonaga A, Ito K. Surgical source control in a patient with septic shock due to severe emphysematous pyelonephritis. Trauma Surg Acute Care Open. 2023;8(1):e001156. https://doi.org/mrff.
- 4. Ojeniyi SO, Cherukuri SPS, Akharume OM, Kanemo P. A rare case of complicated emphysematous pyelonephritis. Cureus. 2023;15(1):e33941. https://doi.org/mrfg.
- 5. Wamsley CE, Morton A, Roth CG, Izes JK, Li L. Emphysematous pyelonephritis necessitating bilateral radical nephrectomy: A case report and literature review. Urol Case Rep. 2023;47:102376. https://doi.org/mrfh.