



EMPHYSEMATOUS PYELONEPHRITIS: A TWO YEAR EXPERIENCE FROM A TERTIARY CARE CENTRE IN SOUTH INDIA

Veena Manjari S, Indhumathi E, Jayakumar M

Department of Nephrology, Sri Ramachandra Institute of Higher Education and Research



BACKGROUND

- Emphysematous pyelonephritis (EPN) is an acute necrotizing infection of the renal parenchyma associated with gas formation
- A majority of cases occur in patients with diabetes mellitus
Early aggressive medical treatment may avoid nephrectomy

AIM

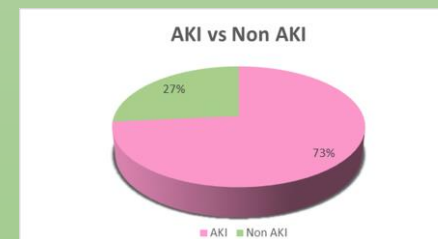
This study aimed to determine the prevalence of EPN, clinical characteristics, treatment modality and the influence of prognostic factors on the outcome

METHODOLOGY

- Retrospective study done in a tertiary care center in South India (Sri Ramachandra Institute of Higher Education and Research)
- The medical records of all patients admitted and treated for emphysematous pyelonephritis from December 2018 to December 2020 were analyzed
- Hospital records reviewed for clinical, laboratory, radiological, microbiological findings, treatments given and outcome
- Diagnosis of emphysematous pyelonephritis was made by computed tomography
- Data were analyzed to identify the prognostic variables that could predict morbidity and mortality of patients with EPN
- Risk factors for EPN and outcome was determined

RESULTS

- Among 49 adults, 33 (67%) were females and 16 (33%) were males
- Mean age : 59 years
- 46 (94%) patients had diabetes mellites
- Among diabetics 36 (78%) presented with AKI (P = 0.003)
- Renal calculi: 13 (26.5%)
- Urine culture positive (51%)
 - E.coli – 16 patients



- Among 36 patients with AKI, 13 required RRT
- Among patients presenting with AKI: 28 (70%) patients required minimally invasive surgical intervention

RESULTS : OUTCOME

Renal recovery was noted

- 10 (45.5%) pts with AKI
- 12 (54.5%) pts without AKI

Among patients with AKI who underwent minimally invasive procedure: Renal recovery was noted in 8 (29%) patients, renal function did not recover in 20 (71%) patients

PROGNOSTIC PREDICTORS OF EPN:

- AKI (0.001)
- Hyponatremia (P – 0.017)
- Hyperkalemia (P – 0.013)
- RRT requirement (P - 0.011)

CONCLUSION

- Diabetes is a major risk factor for EPN
- Acute kidney injury occurs commonly
- Treatment with antibiotics and minimally invasive surgery has significantly reduced the number of patients undergoing nephrectomy