Epidemiology of hospitalized acute pyelonephritis and factors associated with kidney diversion and death: a national cross-sectional study (FUrTIHF 2)

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INTRODUCTION

- Measure the incidence of hospitalized AP in France, particularly with kidney diversion (KD)
- Identify the factors associated with KD / death

METHODS

- Population: patients ≥18 years old, hospitalized in France (public + private healthcare facilities), 2014-2019
- Case definition and selection of AP patients via medico-administrative hospital discharge databases:
  - AP: ICD-10 diagnosis codes – Predictive Positive Value PPV 90.6%
  - KD: French current procedure terminology CCAM codes – PPV 100%, Sensitivity 90.9%
- Factors associated with KD and death identified in the hospital stay resumes (ICD-10 codes for conditions) with logistic regression models, adjusted on the presence of a urinary stone

RESULTS

527,671 patients \( \Rightarrow \) 18.3 / 10,000 inhabitants

Factors associated with KD (fig. 4A):
- Male sex
- Age between 40 and 70 years old
- Comorbidities (Charlson index ≥2)
- Septis

Whereas E. coli was less frequently associated with KD. The same factors were associated with death (fig. 4B)

DISCUSSION

- First population-based study of patients hospitalized AP describing trends in incidence, patterns and factors associated with KD and death.
- With a validated algorithm, this national study based on a large real-life national database from 2014 to 2019 showed an increasing number of AP in hospitalization, along with increasing number of urinary stones and KD.
- Factors associated with KD were identified: sepsis, elderly and comorbidities, also associated with fatality.
- These identified factors could help the urologist to a rapid decision making.

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