

Diagnostic Management of Suspected Acute Cyst Complication in Patients with Autosomal Dominant Polycystic Kidney Disease

Marie Neuville ¹, Roland Hustinx ², Jessica Jacques³, Jean-Marie Krzesinski ¹ and François Jouret ¹



Divisions of (1) Nephrology, (2) Nuclear Medicine and (3) Medico-Economic Information, University of Liège Hospital (ULg CHU), Liège, Belgium

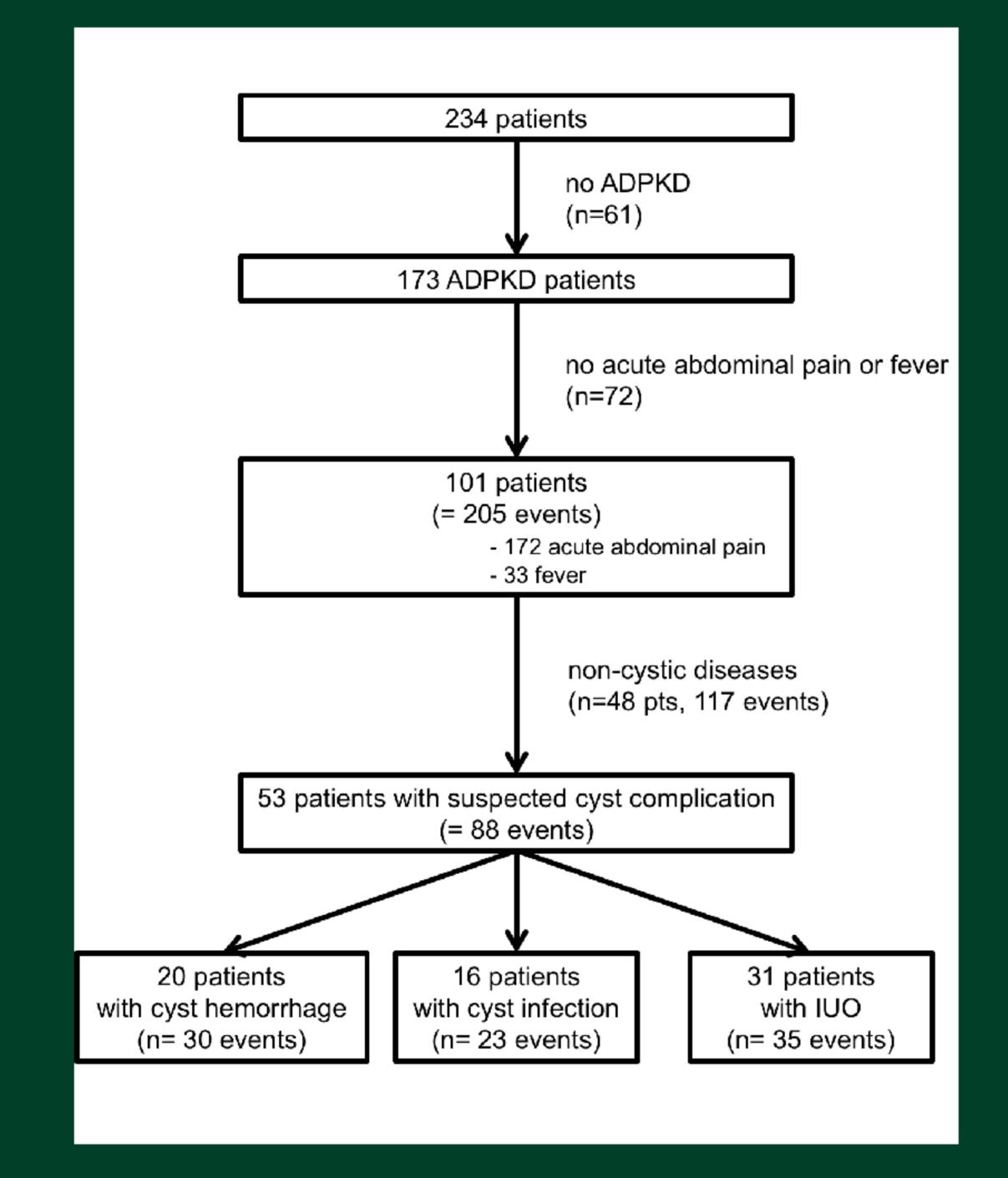
Background and Objectives

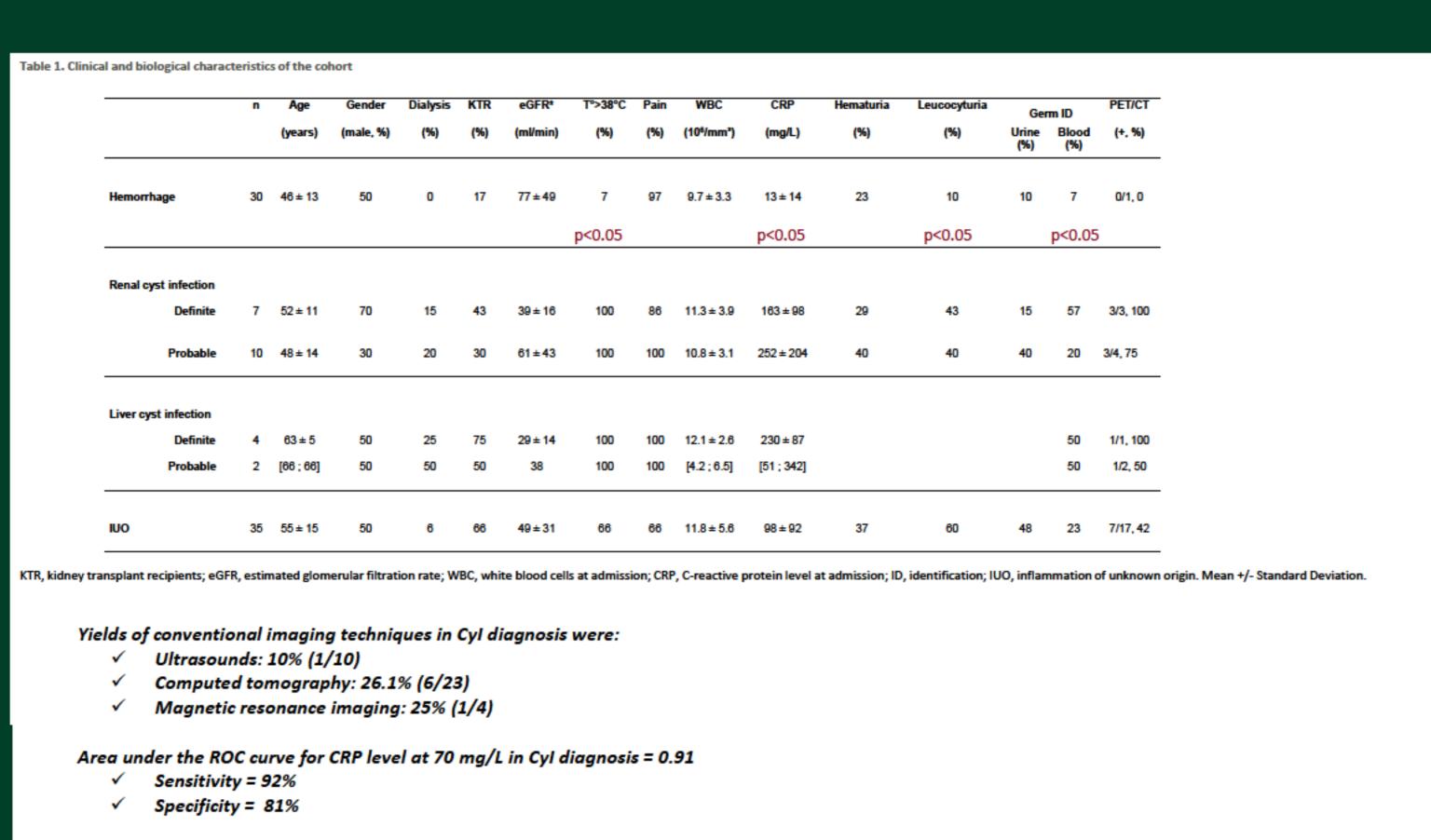
- Two main types of acute cyst complication in patients with autosomal dominant polycystic kidney disease (ADPKD):
- ✓ cyst infection (Cyl)
- ✓ cyst hemorrhage (CyH)
- Double diagnostic challenge:
- ✓ differentiating acute cystic from non-cystic diseases
- ✓ distinguishing Cyl from CyH
- Prominence of an accurate diagnosis to target the treatment:
- ✓ Cyl: 6-week antibiotic therapy (and cyst puncture)
- ✓ CyH: antalgics and watchful waiting
- Recent suggestion of diagnostic criteria, with debated clinical relevance

This monocentric 10-year retrospective study aims at challenging clinical, biological and imaging criteria in order to propose a diagnostic algorithm in the management of suspected acute cyst complication

Demographics of the Cohort

- Retrospective identification of ADPKD patients presenting with abdominal pain and/or fever between January 2005 and June 2015 in a prospective computerized database
- Stepwise and systematic review of all medical files
- Diagnostic criteria:
 - ✓ CyH: intracystic density above 50 Hounsfield units on CT
 - ✓ Cyl:
 - ~ "definite" by cyst fluid analysis showing bacteria or neutrophils
 - "probable" in case of concomitant presence of:
 - 1. temperature >38°C for 3 days
 - 2. loin or liver tenderness
 - 3. CRP plasma level >50 mg/L
 - 4. no CT evidence for CyH
 - ✓ IUO: episodes out of criteria for CyH or Cyl





Bacteriological Documentation

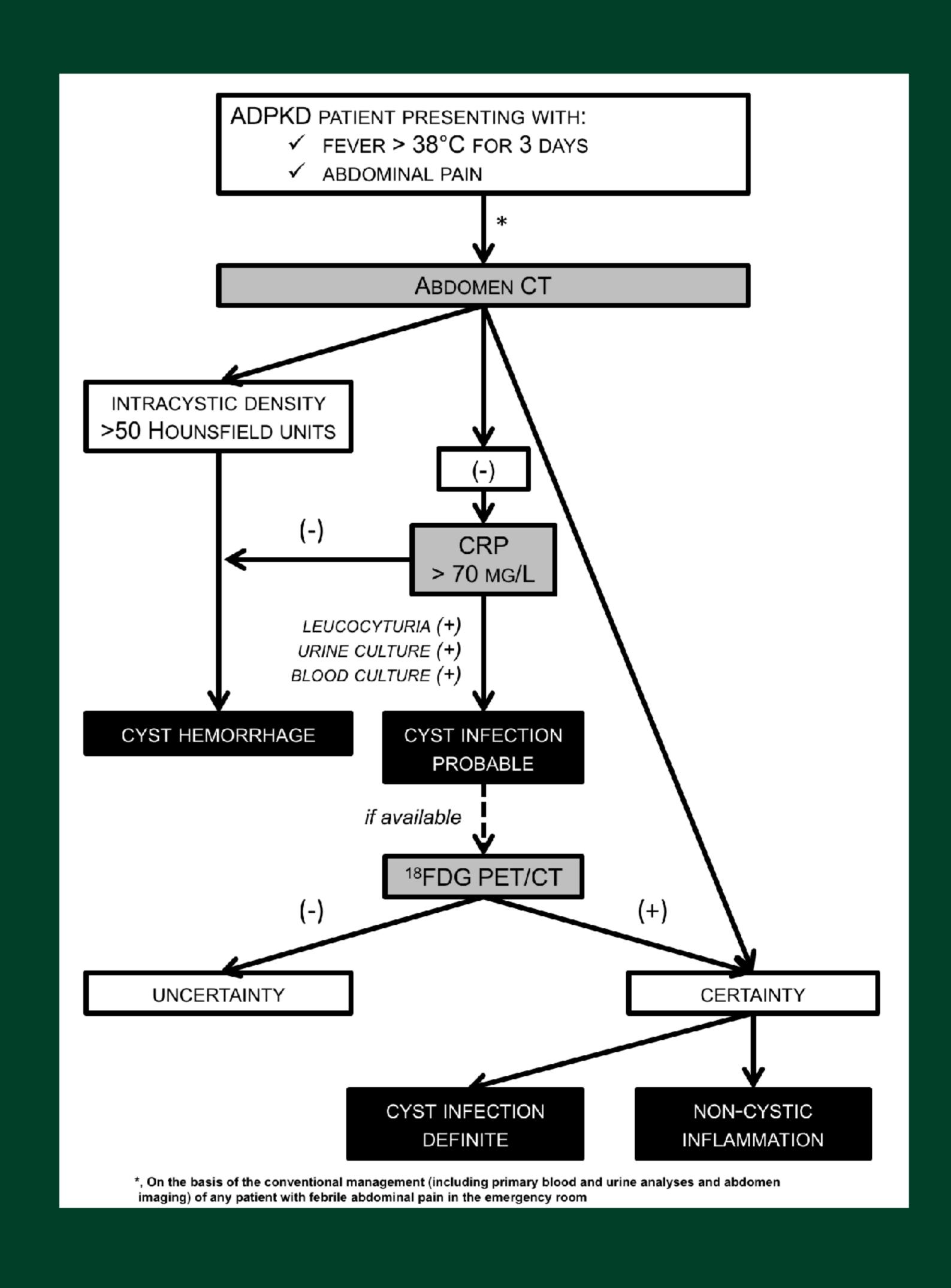
	n	Pathogen ID (%)	Blood (+, %)	Blood Strains	Urine (+, %)	Urine Strains
Hemorrhages	30	10	7		10	E. coli (n=1)
Renal cyst infection						
Definite	7	60	57	E. coli (n=2)	15	E. coli (n=1)
Probable	10	50	20	E. coli (n=2)	40	E. coli (n=4)
Liver cyst infection						
Definite	4	50	50	E. coli (n=2)	0	
Probable	2	50	50	Ecoli (n=1)	0	
IUO	35	55	23	E.coli (n=4)	50	E. coli (n=11)

Discussion

This monocentric 10-year retrospective study including 88 episodes of suspected acute cyst complication in 53 ADPKD patients highlights:

- the usefulness of clinical, i.e. fever, and biological, i.e. CRP levels, criteria to distinguish Cyl from CyH;
- the limitations of bacteriological and conventional radiological investigations;
- the yield of ¹⁸FDG-PET/CT imaging in the diagnosis of Cyl.

Diagnostic Algorithm



contact: francois.jouret@ulg.ac.be



ePosters

supported by

F. Hoffmann-La

Roche Ltd.





