Correlates of rapid progression in a retrospective ADPKD Cohort in South Africa: Preliminary results

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Abstract

Stratifying ADPKD patients according to their risk of disease progression is crucial. A few scoring systems exist but rely on MRI measurement of TKV and genetic analysis which are not easily accessible. Hence, we aimed to identify clinical predictors of progression.

Methods: We reviewed the electronic medical records of patients seen at the nephrology department of the Inkosi Albert Luthuli Central Hospital from 2002 to 2023. We are reporting on 57 patients with a proven diagnosis of ADPKD on ultrasound criteria. We extracted demographic, clinical, and paraclinical data. We divided the population into rapid progressors (ESKD before the age 50, reduction of eGFR > 5ml/min on measurements at least two years apart) and slow progressors. We performed logistic regression analysis to find any association with disease severity.

Results: We observed a female predominance (61.4%), with an average age at presentation of 45 ± 12 years. Black Africans and Indians were the most predominant racial groups. Kidney failure (38.6%) was the most common context for ADPKD diagnosis, followed by abdominal or flank pain (17.5%) and incidental imaging (14%). The prevalent complications were intracystic haemorrhage (26.3%) and haematuria (17.5%). The most frequent extra-renal manifestations were liver cysts (35.1%), followed by hernias (14%). Comorbidities included Type 2 Diabetes Mellitus (15.58%), dyslipidaemia (19.3%), and HIV (10%). A majority presented with ESKD at the first visit (43%) and the median eGFR at the first visit was 33 ml/min [2.51-121]. Follow-up duration ranged from 1 to 20 years. Logistic regression analysis indicated that ADPKD presenting with liver cysts increased the risk of haematuria, although this association was not statistically significant after adjusting for eGFR.

Conclusion: ADPKD patients with liver cyst involvement may face a greater risk of complications, such as haematuria, but disease progression does not seem to differ significantly from those with kidney cysts alone.