Early Detection Matters: Bridging Evidence and Practice, a Call for Enhanced Cardiovascular Screening in ADPKD

To the Editor: With 15 years of experience as a referral center for autosomal dominant polycystic kidney disease (ADPKD) and having treated about 2000 patients across Italy,[1] we strongly agree that early cardiovascular involvement in ADPKD significantly impacts disease prognosis.[2]

However, despite strong evidence, there is a concerning gap between recommended early interventions to prevent cardiovascular complications and their implementation in routine care, particularly in primary health care settings.

Hypertension affects 50% to 70% of adults with ADPKD, often developing before noticeable decline in kidney function,[2] with a higher prevalence in men than in women. It can present as early as childhood, with rates between 10% and 35%. Left ventricular hypertrophy is common, seen in 20% to 40% of patients, with some studies reporting high rates in children and adults.[2,3] Even in normotensive patients, renin-angiotensin-aldosterone system activation contributes to cardiovascular complications, sometimes with specific *ACE* gene variations such as the DD genotype, linked to worse outcomes.[4] As the authors highlighted, longitudinal studies on patients with ADPKD over the past decade have demonstrated a decline in hypertension, left ventricular hypertrophy, and kidney failure progression.[2] Early intervention with angiotensin-converting enzyme inhibitors or angiotensin 2 receptor blockers, has been shown to reduce the incidence of left ventricular hypertrophy , thus emphasizing the critical importance of timely treatment.[2]

Regarding intracranial aneurysm, our experience showed a prevalence consistent with literature,[3] even without a known family history, underscoring the need for broader screening strategies to detect high-risk patients.

This raises a question: how effective can early intervention be when symptoms are still subclinical? Despite strong evidence, many patients do not receive timely cardiovascular evaluations. Cardiovascular assessments, especially blood pressure management with angiotensin-converting enzyme inhibitors or angiotensin 2 receptor blockers, should begin by the third decade of life but are often delayed, leading to complications. Given that ADPKD is seen as an adult disease, renal and cardiovascular screenings are frequently postponed.

If widespread early management is not feasible, targeted interventions for patients with truncating *PKD1* mutations—who have worse outcomes[5]—are crucial from a young age.

In conclusion, cardiovascular issues in ADPKD, particularly in younger patients are often underestimated. Timely interventions for those with high-risk mutations are essential for improving both renal and cardiovascular outcomes. This message should be emphasized in pediatric and primary care settings, even before referral to specialists.

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Martina Catania[1], Liliana Italia De Rosa[1], Kristiana Kola[1], Matteo Brambilla Pisoni[2], Paolo Manunta[1,2], Giuseppe Vezzoli[1,2] and Maria Teresa Sciarrone Alibrandi[2]

[1]Vita Salute San Raffaele University, San Raffaele Scientific Institute, Milan, Italy; and [2]O.U. Nephrology and Dialysis, San Raffaele Scientific Institute, Milan, Italy

Correspondence: Martina Catania, Vita-Salute San Raffaele University, 20132 Milano, Italy. E-mail: catania.martina@hsr.it

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