

Management of declining eGFR and/or rising UPCR when on daily HIV PrEP

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Background/Purpose

Emtricitabine/tenofovir disoproxil fumarate (F/TDF) is prescribed as HIV pre-exposure prophylaxis (PrEP), and TDF is associated with a reduction in glomerular filtration rate (GFR) and proximal tubular toxicity. Guidelines may suggest discontinuing PrEP in individuals with an eGFR of < 60 ml/min and/or uPCR >30mg/mmol. Here we outline our management protocol when faced with declining eGFR but > 60ml/min and/or raised uPCR 20-30mg/mmol for early preservation of renal function.

Approach

We developed an **HIV PrEP kidney function flowchart**

1. Patients with an eGFR 60-80ml/min and/or urinary protein: creatinine (uPCR) between 20-30mg/mmol on two consecutive occasions are reviewed by a registered nurse for further investigation* before being referred to a nurse practitioner or registrar to discuss PrEP alternatives and renal health.
2. Patients with an eGFR < 60ml/min and/or uPCR >30mg/mmol on two consecutive occasions are reviewed by a nurse practitioner or registrar, to discuss PrEP alternatives and referral to a renal specialist.

*renal investigations: blood pressure, uPCR, urine albumin: creatinine ratio, blood and urine glucose, serum phosphate, serum bicarbonate.

Impact

Preventing HIV transmission is of utmost importance to our patients and clinicians. Equally maintaining renal function with long term PrEP use and/or in an aging population is a priority.

This flowchart streamlines and optimises the monitoring of kidney function for HIV negative patients on daily F/TDF PrEP, through early detection of tubular and glomerular function decline and involvement of a multidisciplinary team.

Off label alternatives to traditional daily F/TDF PrEP, that are less renal toxic 1) on-demand dosing of F/TDF, 2) daily/on demand F/tenofovir alafenamide or 3) long-acting injectable cabotegravir, can be discussed with patients.

Innovation and Significance

Our flowchart optimises the monitoring of kidney function of HIV negative patients on daily F/TDF PrEP, while supporting the prevention of HIV transmission in patients with impaired kidney function.