



POSTER PRESENTATION

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Glomerular filtration (GF) determined by creatinine clearance (CCR) in 24 hours urine and cockcroft & gault (cg) and modification of diet in renal disease (MDRD) equations in a large cohort of HIV+ patients

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Background

The recognition of kidney tubular dysfunction (KTD) in subjects treated with tenofovir (TDF) has prompted to include tubular and glomerular function as part of current HIV monitoring in most patients. Although CCR in 24 h urine is the most reliable method to determine GF, practical issues make CG or MDRD estimates more adequate in a daily basis. The correlation between all these methods used to assess GF, and the possible interference of KTD, has not been examined in the HIV population.

Methods

All consecutive HIV+ patients attending a reference HIV outclinic were assessed for CCR (mL/min) in 24 h urine. Subjects collecting an urine volume <450 mL were excluded. Estimates of CCR by CG and MDRD were calculated for each patient. Intraclass correlation (IC) and greatest survival-agreement plots for 75% of the population (SAP-75) were applied to test CG vs MDRD differences with respect to CCR. Correlation analyses were also performed according to the presence of glomerular impairment (CCR <60 mL/min) or KTD

Table 1

	All	CCR >60 mL/min	CCR <60 mL/min	No KTD ^a	KTD ^b	a vs b [p]
No. of patients (%)	417	393 (94)	24 (6)	337 (86)	54 (14)	
Mean CCR (mL/min)	113	117	47	116	103	0.01
Mean CG (mL/min)	100	101	89	103	90	0.003
Mean MDRD (mL/min)	91	91	76	92	81	<0.001
IC [p]	0.64 [<0.001]	0.66 [<0.001]	0.63 [0.02]	0.59 [<0.001]	0.77 [<0.001]	
SAP-75* [CG minus CCR] (mL/min)	20.3	19.9	24.6	21.1	18.8	
SAP-75** [MDRD minus CCR] (mL/min)	21.3	21.3	20.8	24.1	14.8	
Log-Rank [SAP-75* vs SAP-75**]	0.05	0.04	0.3	0.04	0.38	

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(at least two of the following: glucosuria, hyperaminoaciduria, hyperphosphaturia, hyperuricosuria or beta2-microglobulinuria, being present at least one of the first three).

Results

A total of 417 patients were examined (22% ARV-naïve, mean age 39 years-old, 87% males, mean CD4 count 445 cells/ μ L), Table 1.

Discussion

In HIV+ patients, indirect methods to assess GF show high correlation with calculated CCR. In patients with normal CCR, CG may be more accurate than MDRD to estimate GF. Glomerular dysfunction or KTD do not seem to alter the correlation between CG or MDRD and CCR. Significant reductions in GF, as assessed by CCR, CG or MDRD, are more frequent in patients with than without KTD.

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