Kidney disease in Italian HIV patients: something more than HIVAN

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INTRODUCTION

HIV population is expanding worldwide.

The latest data of HIV Italian registry (last update at the end of 2012) show an incidence of 6,5 cases over 100.000 people. Antiretroviral Therapy (ART) improves survival and long term outcomes, but exposes HIV individuals to non HIV associated complications, with an increased cardiovascular, metabolic and renal risk.

In the European area HIV Associated Nephropathy (HIVAN) has a smaller impact on the epidemiology of kidney disease, while HIV Immune Complex Glomerulonephritis (HIVIC GN) remains a less defined pathologic entity.

In this study **we retrospectively reviewed renal biopsies performed on HIV patients** in our centre to better understand the **distribution of pathologic patterns** in our population.

RESULTS

A total of **46 biopsies** were performed on HIV individuals in our center between 2003 and 2013. Descriptive data of the population are reported in Table 1.

13 biopsies were performed on **kidney transplant grafts**, almost equally distributed between acute rejection, Chronic Allograft Nephropathy and CNI toxicity.

The remaining **33 biopsies** were performed on **native kidneys**. Pathology showed (Table 2 and Chart) chronic advanced glomerulosclerosis as the most frequent diagnosis (n=7), followed by Membranoproliferative glomerulonephritis (MPGN) (n=6) and Mesangial GN (n=4). Only 3 cases showed HIVAN, the same for IgA Nephropathy.

CONCLUSIONS

In our population the **high rate of chronic advanced glomerulosclerosis** reveals a **need for a prompter diagnosis for CKD in HIV subjects**.

MPGN is the most represented glomerular diseases associated with HIV. This is a consequence of the **high prevalence of HIV/HCV** coinfection among these patients (46%). The wide spread of pathologic patterns in this population could only in part be expression of the polymorphism of HIVIC GN.

We can conclude that in a HIV positive population with a low prevalence of African subjects, renal biopsy is mandatory to understand the nature of kidney disease. As a consequence, a nephrologic evaluation is recommended at the first signs of renal dysfunction to ensure a prompt diagnosis and an effective treatment.

MATERIALS and METHODS

We evaluated **renal biopsies** performed in our center on HIV subjects **between 2003 and 2013** to establish the frequency of different histological patterns.

We also considered **clinical and laboratory variables** (age, sex, serum creatinine, African race, eGFR (CKD-EPI), urinary protein/creatinine ratio, blood pressure, HCV/HBV coinfection) **at the moment of the biopsy**.

Variable	Mean/SD or n(%)
Total	n=46
Sex (M/F)	35/11
Age (years)	47.3±8.4
African	10 (22%)
HCV+	21 (46%)
HBsAg+	6 (13%)
Serum Creatinine (mg/dl)	2.8±2.0
eGFR (ml/min)	28.4±18.5
Urinary Protein/Creatinin (mg/mg)	3.9±5.5
Systolic Blood Pressure (mmHg)	134.9±17.7
Dyastolic Blood Pressure (mmHg)	79.4±8.6

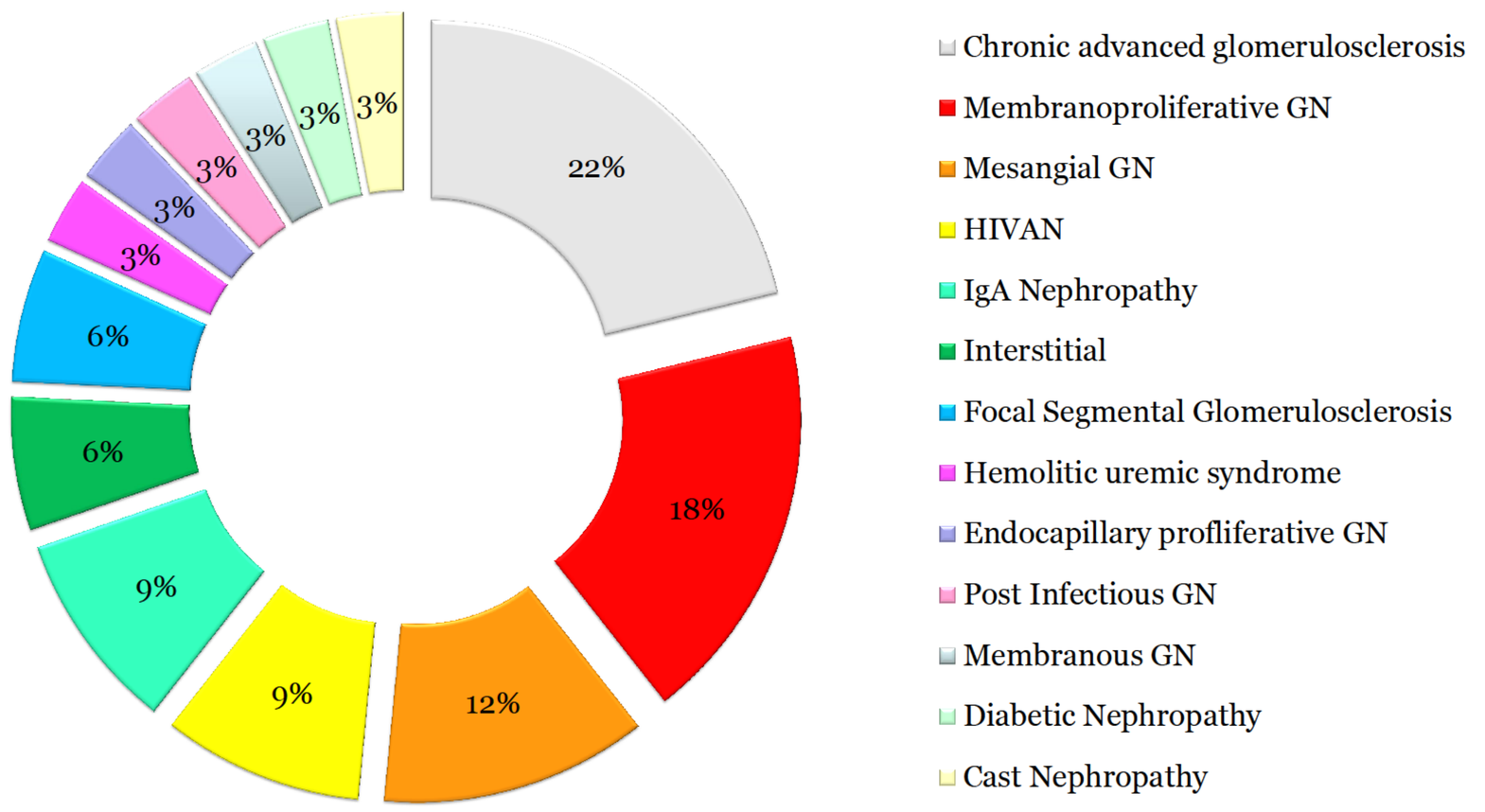
Table 1: Population descriptive variables at the time of renal biopsy

Diagnosis	n/%
Transplantation	13 (28.3%)
Chronic advanced glomerulosclerosis	7 (15.2%)
Membranoproliferative GN	6 (13%)
Mesangial GN	4 (8.7%)
HIVAN	3 (6.5%)
IgA Nephropathy	3 (6.5%)
Interstitial	2 (4.3%)
Focal Segmental Glomerulosclerosis	2 (4.3%)
Hemolitic uremic syndrome	1 (2,2%)
Endocapillary profliferative GN	1 (2,2%)
Post Infectious GN	1 (2,2%)
Membranous GN	1 (2,2%)
Diabetic Nephropathy	1 (2,2%)
Cast Nephropathy	1 (2,2%)
Total	46 (100%)

Table 2: Renal biopsy results

Chart:

Renal Biopsy Results (native kidneys only). Keys are in clockwise order beginning from Chronic advanced glomerulosclerosis (upper right quadrant), labels refer to relative frequency.



DOI: 10.3252/pso.eu.51era.2014