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Primary glomerular diseases in Brazil (1979 – 1999): is the frequency of focal and segmental glomerulosclerosis increasing?

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Key words
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Abstract. Aims: Different patterns of glomerulonephritis (GN) are reported from all over the world and the occurrence of primary GN is changing in the course of time. We report the frequencies of primary GN in a major teaching hospital in Brazil, from 1979 – 1999. Methods: The case files of renal biopsies of primary GN were reviewed. The included patients were > 14 years of age, with native kidneys, and the specimens were examined with at least light and immunofluorescence microscopy. We excluded biopsy results of patients with any kind of known secondary glomerular involvement. Differences in proportions of diagnoses between the periods over time were evaluated using Chi-square test for trend. Results: We considered 943 patients for the analysis. Focal and segmental glomerulosclerosis (FSGS) was the most common lesion (n = 279), followed by membranous GN (n = 140), membranoproliferative type I GN (n = 109) and IgA nephropathy (n = 109). FSGS (32.1%) was the most frequent diagnosis among nephrotic patients whereas IgAN (29.4%) predominated in non-nephrotic ones. The occurrence of FSGS increased from the earlier to the later periods: 22.3% (1979 – 1983), 23.7% (1984 – 1988), 35.7% (1989 – 1993), 33.9% (1994 – 1999), $p < 0.05$. The increase in frequency of FSGS was proportionally higher in non-nephrotic patients and FSGS became as common as IgA nephropathy in this group (31.6% and 28.0%, respectively) from 1994 – 1999. Conclusions: FSGS was the most common pattern of primary glomerulonephritis and its relative frequency seems to be increasing in biopsied patients over time. The reasons for this behavior are unclear and warrant further investigations.

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Introduction

Glomerular diseases are the most common cause of end-stage renal failure in Brazil, accounting for 27.5% of all patients receiving renal replacement therapy (RRT) [Noronha et al. 1997]. They are also the leading diagnosis in patients accepted for dialysis in Australia and New Zealand (35.0%), Japan (55.4%), Shanghai, China (60.6%) and Latin America (23.5%) [Guanyu et al. 2000, Maisonneuve et al. 2000, Mazzuchi et al. 1997, Research Group 1999]. In the United States and Europe, glomerular diseases are the 3rd cause of nephropathy in patients receiving RRT (15.5% and 12.4%, respectively) [Maisonneuve et al. 2000].

Different patterns of diagnosis of glomerulopathies are described around the world. In Western Europe, Australia/New Zealand and some countries in Asia [Maisonneuve et al. 2000, Research Group 1999, Rivera et al. 2002, Schena 1997, Simon et al. 1994, Tiebosch et al. 1987, Woo et al. 1999], IgA nephropathy (IgAN) is the most common biopsied glomerulonephritis. In America, however, data from the United States [Braden et al. 2000, Haas et al. 1995, 1997], Brazil [Cruz et al. 1996], and Uruguay [Mazzuchi and Di Martino 1997] show that focal segmental glomerulosclerosis (FSGS) is the most frequent pattern diagnosed. The occurrence of primary glomerulonephritis (GN) is changing over time. The incidence of type I membranoproliferative glomerulonephritis (MPGN) has been reported to be lower in the last decades in Europe [Rivera et al. 2002, Schena 1997, Stratta et al. 1996] and the fre-