

EPIDEMIOLOGICAL REVIEW OF KIDNEY BIOPSY DURING 30 YEARS – SINGLE CENTER EXPERIENCE

Petar S. Djuric¹, Aleksandar Jankovic¹, Milos Mitrovic¹, Jelena Tomic Dragovic¹, Jasmina Lipkovska Markovic², Gordana Basta Jovanovic², Danica Vujic¹, Jovan Ikonovsk¹, Nada Dimkovic^{1,3}

¹Clinical Department for Renal Diseases, Zvezdara University Medical Center, Belgrade, Serbia. ²Medical Faculty, Belgrade University, Institute for pathology, Belgrade, ³Medical Faculty, Belgrade University, Belgrade, Serbia

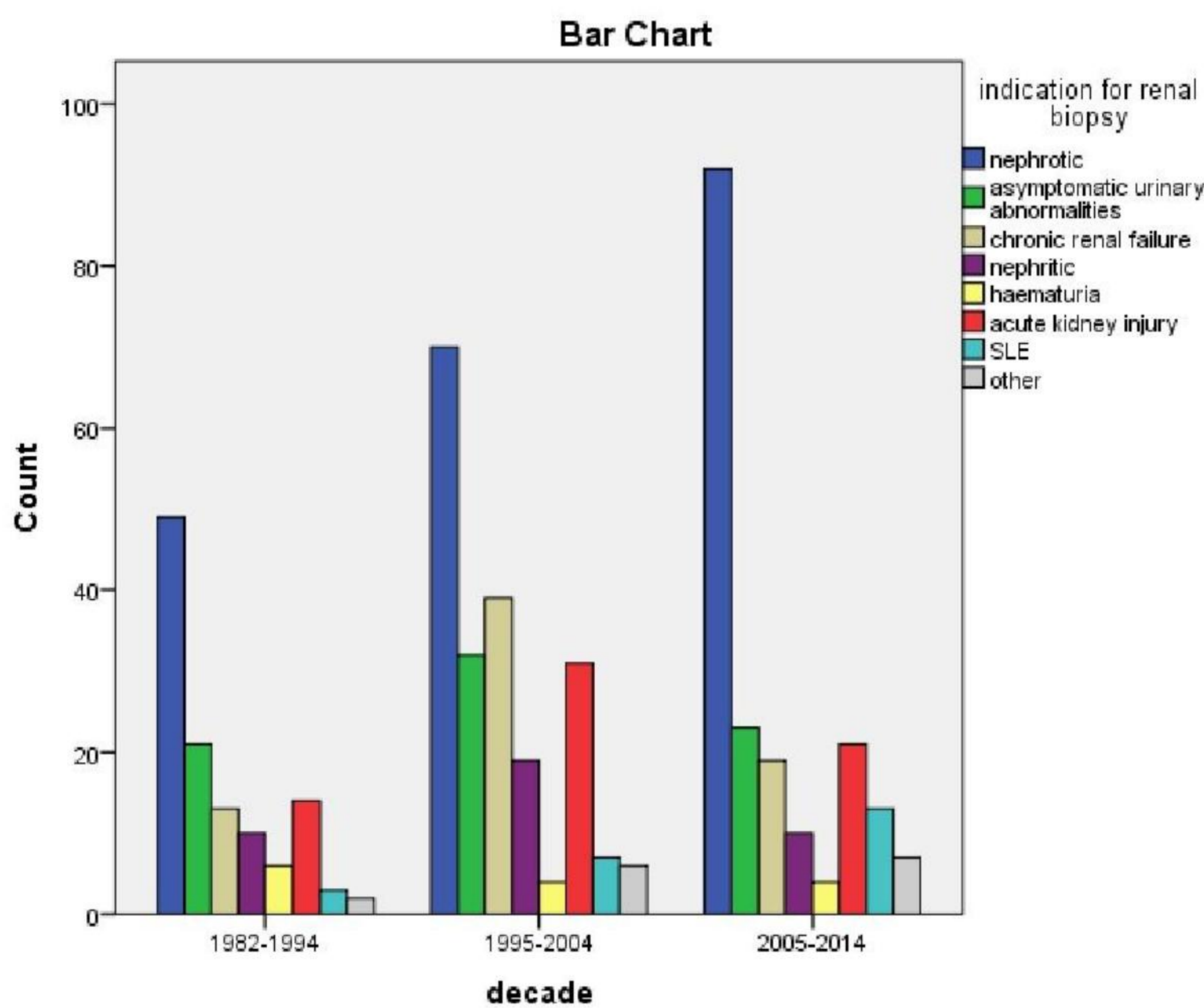


INTRODUCTION AND AIMS: Epidemiological data about biopsy proven kidney diseases are not so well collected in Eastern European Countries. First biopsy in our Center was done in June 1982, but has been performing routinely since 1984. The aim of this study was to report the histopathological features of biopsy proven kidney disease during the past 30 years.

METHODS: During 30 years, 563 biopsies were performed, 530 (94%) were successful. Data about gender, age, clinical syndrome, histopathological finding were collected from the medical records.

RESULTS: The mean age of our patients was 48±11 years, 53% were man (No=272). In the first decade (1984-1994) we performed 118 (mean age 50±13), in second (1994-2004) 208 (mean age 46±14), and in third (2004-2014) 189 biopsies (mean age 50±16). Mean number of glomeruli per biopsy was 18±11. There was only one serious complication. The most common clinical syndromes as indication for renal biopsy were: nephrotic syndrome (40.8%) followed by asymptomatic urinary abnormalities (AUA-14.8%), chronic kidney disease (CKD-13.8%), acute kidney injury (AKI-12.8%), nephritic syndrome (7.6%), systemic lupus erythematosus (SLE-4.5%), haematuria (2.7% of the cases) and other (3.1%). The major histological groups identified were: primary glomerulonephritis (GN) (62.1%), secondary GN (21.2%), and other (16.7% of the cases). Indications for renal biopsy are shown in Figure 1 with statistically significant difference within three decades (χ^2 test=24.8, p=0.03).

Figure 1. Indications for renal biopsy by decades



•Histopathological findings among primary GN are presented in Table 1 and were on the border of statistical significance (χ^2 test=25.1, p=0.06). Interstitial changes were present in 55% of biopsy samples in first, in 66% in second and in 62% in third decade (without statistical significance; p=0.433). Blood vessel changes were present in 39% of biopsy samples in first, in 62% in second and in 72% in third decade with statistical significance (p=0.02).

CONCLUSION: Apart from successful biopsies, there are several aspects to be improved in the future including expanding indications and earlier procedure during the course of CKD. The most frequent finding was mesangioproloferative GN (including IgA GN, altogether 34.8%) followed by FSGS and MN.

Table 1. Histopathological biopsy findings among primary GNs by decades

	primary GN-patohistological finding									Total
	MN	FSGS	IgAGN	MpGN	MCD	Crescentic GN	Postinfec.	Mesangial prolif. non IgA	other	
1982-1994 No	16 18,8%	16 18,8%	12 14,1%	4 4,7%	7 8,2%	5 5,9%	8 9,4%	16 18,8%	1 1,2%	85 100,0%
1995-2004 No	15 11,8%	28 22,0%	29 22,8%	9 7,1%	2 1,6%	13 10,2%	11 8,7%	20 15,7%	0 0,0%	127 100,0%
2005-2014 No	22 19,6%	19 17,0%	20 17,9%	12 10,7%	3 2,7%	14 12,5%	3 2,7%	16 14,3%	3 2,7%	112 100,0%
Total No	53	63	61	25	12	32	22	52	4	324
%	16,4%	19,4%	18,8%	7,7%	3,7%	9,9%	6,8%	16,0%	1,2%	100,0%

