

## 4.4 PREVALENCE OF CHRONIC KIDNEY DISEASE IN TWO TERTIARY CARE HOSPITALS :HIGH PROPOTION OF CASES WITH UNCERTAIN AETIOLOGY

### Prevalence of chronic kidney disease in two tertiary care hospitals: high proportion of cases with uncertain aetiology

The prevalence of chronic kidney disease (CKD) is rising globally, and is attributed to the epidemic of type 2 diabetes mellitus [1]. This trend in developing countries appears to be due to chronic glomerulonephritis and diabetes, both contributing significantly to increasing end-stage renal disease [2]. In Sri Lanka, a systematic assessment on CKD is lacking, although the available literature points to a rising trend in hospital admissions and deaths due to CKD [3]. This study attempts to document some features of CKD and describe cases with an uncertain aetiology observed at two teaching hospitals in Kandy and Anuradhapura between 2000 and 2002.

We conducted a retrospective, descriptive study of CKD patients (n = 492), using information collected from clinic records (Nephrology Unit, Kandy, NUK =146, Renal Clinic, Anuradhapura, RCA = 246). When further information was required, verbal consent was obtained by the research officer who administered the questionnaire. The

diagnosis of CKD was based on KDQOI of National Kidney Foundation of USA criteria [4]. The study commenced at NUK and was then extended to RCA, since a high number of CKD patients from the North Central Province (NCP) was noted (table 1).

The cohort was observed to be in different stages of CKD varying from mild, moderate, severe to end-stage (table 2). The majority (61%) of patients at NUK were in late stages (severe and end-stage) of the disease whilst most (79%) at RCA were in early stages. A fair number of patients from RCA (9%) were from Medawachchiya. The key finding in this study was that the cause of CKD was not identifiable in the majority of patients in both clinics (NUK = 54%, RCA 82%). These patients were categorized into a separate group as "uncertain aetiology" (UA). In contrast, the world literature shows that the prevalence of UA among CKD patients less than 65 years old varies from 6.2-14.7% [5].

Table 1. Demographic characteristics of patients at Nephrology Unit, Kandy and Renal Clinic, Anuradhapura (2000 – 2002)

		<i>Nephrology Unit, Kandy (NUK)</i>	<i>Renal Clinic, Anuradhapura (RCA)</i>
		<i>% (n = 146)</i>	<i>% (n = 246)</i>
Sex	Male	66 (97)	79 (195)
	Female	34 (49)	21 (51)
Age (yrs)	12 - 18*	14 (21)	10 (24)
	19 - 39	27 (39)	36 (88)
	40 - 64	44 (65)	46 (114)
	>64	14 (21)	8 (20)
Province	NP	-	34 (14)
	NCP	21 (32)	86 (212)
	CP	35 (51)	-
	W	17 (25)	-
	SB	11 (16)	-
	others	22 (16)	-
Occupation	Farmer	44 (64)	70 (173)

NP- Northern Province (Vavuniya); NCP- North Central Province;

CP - Central Province; WP - Wayamba Province; SB - Sabaragamuwa Province

\*The study population was from adult clinics and patients were >12 years old.

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**References**

1. Nahas AMEI, Belle AK. Chronic kidney disease: the global challenge. *The Lancet*, 2005; **365**: 331-40.
2. Codreanu I, Perico N, Sharma SK, Schieppati A, Remuzzi G. Prevention programmes of progressive renal disease in developing nations. *Nephrology* 2006; **11**: 321-28
3. Abeysekera DTDJ, Kaiyoom SAA, Dissanayake SU. Place of peritoneal dialysis in the management of renal failure patients admitted to General Hospital Kandy. *Kandy Society of Medicine 18th Annual Academic Conference* 1996: 19.
4. National Kidney Foundation: K/DOQI Clinical practice guidelines for chronic kidney disease: evaluation, classification and stratification. *American Journal of Kidney Disease* 2002; **39**: S1-S266 (Supplement).
5. Wing AJ. Causes of end-stage renal failure. In: Davison MA, Cameron JS, Grünfeld JP, Ponticelli C, Ritz E, Wincars EG eds. *The Oxford Textbook of Clinical Nephrology* 1st edition Oxford University Press, 1992; **2**: 1227-35.
6. Ceovic S, Hrabar A, Saric M. Epidemiology of Balkan endemic nephropathy. *Food and Chemical Toxicology* 1992; **30**: 183.
7. Wanigasuriya KP, Peiris-John RJ, Wickremasinghe R, Hittarage A. Chronic renal failure in North Central Province of Sri Lanka: an environmentally induced disease. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 2007; **101**(10): 1013-7.
8. Levey AS, Bosch JP, Lewis JB, Greene T, Rogers N, Roth D. A more accurate method to estimate glomerular filtration rate from serum creatinine: a new prediction equation. *Annals of Internal Medicine* 1999; **130**: 461-70.

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