(4) EPIDEMIOLOGY

4.1 EPIDEMIOLOGY OF CKD*u*

Epidemiology of CKDu

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Introduction:

Chronic Kidney Disease (CKD) is an emerging health problem all over the world. CKD of unknown aetiology reported in Sri Lanka shows similarities with that of Balkan endemic nephropathy and even more similarities with nephropathy described in Banana and sugarcane farmers of Nikaragua & Elsalvador.

Aim of the present study is to investigate the epidemiology of CKDu and to study pattern over the last 30 years.

Method & material:

The information on the emergence of the disease was traced back to 32 years (1980-2012) using statistics on live discharges and deaths due to different disease entities of G.H.Anuradhapura. Monthly statistics from 1999-2008 was collected and analyzed to study seasonal variation. Other demographic characteristics & stage of presentation was collected from community renal clinics & nephrology clinic of Anuradhapura.

Results:

The male:female ratio was 2.4 :1 with mean age of 54.7 yrs. 90% of the patients were farmers. 92% had shallow wells as the source of drinking water. 29% of the patients show family clustering with no evidence of any Mendelian inheritance. Hospital based statistics showed an increasing trend in the number of patients with diseases of the genitor urinary system from 1980. CKDu appeared in early nineties for the first time and then the incidence of the disease amplified gradually reaching highest in 2002. The incidence of the disease has been stable but at a

relatively lower level thereafter.Alcoholic liver disease reported to the G.H.Anuradhapura during the same time frame showed a similar distribution. A seasonal variation in mortality rate with peaks in November-January was noted.

Conclusion:

The reason for the male preponderance and lower age at diagnosis could be due to exposure of males to the toxins, more dehydration and exertion in males or sex linked gene like G6PD deficiency. Familial occurrence of CKDu could bedue to exposure of the members of the family to the same aetiological agent than genetic factor.Similarity in the variations of incidence over time in CKD-U, alcoholic liver disease indicates the possibility of common aetiology. Seasonal variation in mortality in last few months of the year indicates the possibility of acute on chronic interstitial nephritis & needs further investigation