

## RENAL PAPILLARY NECROSIS: RETROSPECTIVE POST-MORTEM STUDY

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### SYNOPSIS

Retrospective study of post-mortem records of General Hospital, Kuala Lumpur was done to determine the incidence of renal papillary necrosis. No renal papillary necrosis was found. The possible reasons for the absence of renal papillary necrosis are discussed.

### INTRODUCTION

Various studies have been conducted to determine the incidence of papillary necrosis in necropsies. In a prospective study conducted in Brisbane through 1964, in 507 adult necropsies, there were 42 cases with severe papillary damage (1). In a study in Melbourne in 1968, papillary necrosis of the analgesic type was seen in 36 out of 641 hospital necropsies and in 15 of 538 coroners' necropsies (2). The highest incidence was found in the summer months. In a similar study in Brisbane conducted three years later (3), 66 cases of intermediate or total papillary necrosis were seen in 726 hospital necropsies and 42 cases in 861 coroners' necropsies. This confirmed previous suggestions of a particularly high incidence in Brisbane.

Most of the studies on analgesic nephropathy have been conducted in Australia, Europe and America. No studies have been conducted in Asia and the purpose of this study is to see if renal papillary necrosis occurs in Malaysia.

## MATERIALS AND METHODS

Post-mortem records of all the necropsies done in General Hospital, Kuala Lumpur from 1977 to 1981 were reviewed.

## RESULTS

A total of 3,487 autopsies were performed during the period from 1977 to 1981 and of these 973 were chosen for study as they had a full examination including the kidneys done. Table 1 shows the distribution of the number of autopsies done and the number of autopsies chosen for study by year. The autopsies were done on all races, namely Malays, Indians, Chinese and others which included Pakistanis, Eurasians and Europeans (Table II). All age groups were included. There were 16 cases whose ages were not known.

Papillary necrosis was not found on macroscopic examination of all the kidneys. Microscopic examination of the kidneys was done mainly on those suspected of poisoning (15 cases). In these no changes of papillary necrosis were found.

TABLE I  
Post-Mortem Done in General Hospital,  
Kuala Lumpur, 1977 — 1981

Year	Total No.	No. Chosen for Study
1977	715	214
1978	681	132
1979	681	150
1980	682	234
1981	728	216
Total	3,487	973

## DISCUSSION

Macroscopic examination of the kidneys done in all 973 cases and microscopic examination done in 115 cases did not show evidence of papillary necrosis. This however does not exclude the possibility of the existence of renal papillary necrosis as firstly, microscopic examinations were not done in all the cases and hence early and intermediate necrosis could have been missed. Secondly the lack of awareness of the condition may have led to cases of renal papillary necrosis being missed.

Clinical (4) and radiological (5) studies do indicate that renal papillary necrosis does exist in the Malaysian community. In a prospective study performed on patients admitted to the medical and renal wards of General Hospital, Kuala Lumpur, 12 new cases of analgesic nephropathy were documented (4). In a retrospective radiological study done in the Nephrology Unit, General Hospital, Kuala Lumpur, of the 1011 intravenous Urograms reviewed, 20 showed evidence of renal papillary necrosis (5). In a survey conducted on three different groups of population in Malaysia, it is found that 0.5 to 2.0% of the people surveyed had consumed more than 2 kg. of analgesic, an amount sufficient to cause renal papillary necrosis (6). With the increasing consumption of analgesics by the local population and with better awareness of the condition, it is anticipated that in the future renal papillary necrosis may be found. Further studies are therefore required and currently a prospective post-mortem study is being performed.

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TABLE II  
Post-Mortems Done in General Hospital,  
Kuala Lumpur, 1977 — 1981

	MALAY		INDIAN		CHINESE		OTHERS		TOTAL
	M	F	M	F	M	F	M	F	
10 yrs.	7	3	14	5	9	14	3	—	55
11 — 20 yrs.	21	—	25	19	76	20	2	—	163
21 — 30 yrs.	47	2	62	14	102	24	3	1	255
31 — 40 yrs.	9	1	37	7	52	15	—	—	121
41 — 50 yrs.	5	1	29	3	44	8	2	—	92
51 — 60 yrs.	7	—	54	9	30	10	1	2	113
61 — 70 yrs.	—	1	38	2	39	18	2	—	100
70 yrs.	—	—	15	—	35	8	—	—	58
Age Unknown	—	216	—	5	3	4	1	2	1
TOTAL	96	8	279	62	391	118	15	4	973

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