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Incidence of Renal stone disease in western region of Nepal: A Tertiary Care hospital based study

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Objectives: Renal stone disease is increasing rapidly in Nepal. It's a global health problem. The study is designed to find out the prevalence and chemical composition of stones which can be useful for the therapeutic management

Methods: This study was carried out in the department of Biochemistry at Manipal Teaching Hospital, Pokhara, Nepal between June 2019 to December 2019. This study was approved by Institutional Ethical Committee. A total of 34 renal stone disease patients were included out of which 18 were males and 16 were females. All the renal stones were analyzed for chemical composition.

Results: Data were analyzed by using Statistical Package for Social Sciences Version 17.0 Data were expressed as count with percentage. The chemical composition of renal stone shows different types of stones. Calcium oxalate was predominantly present (26.5%) followed by Carbonate (11.8%), Newbyrite (14.7%), Cholesterol (14.7%), weddilite (Dihydrate calcium oxalate) 29.4% and ammonium urates 2.9%. Non-vegetarians have higher percentage (73.5%) of renal stone, formation as compared to vegetarians (26.4%).

Conclusions: This study indicates chemical composition of renal stones. Majority of the stone patients shows mixed chemical composition. This study suggests that low protein diet should be recommended for the prevention of stone formation.