

## Comparative study of vitamin D among diabetic and non-diabetic chronic kidney disease patients

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**Background:** Chronic kidney disease (CKD) is a major health problem in Bangladesh. Diabetes mellitus is the most common cause of this pathology. Among individuals with CKD, vitamin D deficiency is very much prevalent. But there are not enough studies comparing vitamin D status of diabetic and non-diabetic CKD patients.

**Aim:** This study aimed to compare the 25(OH) D levels between these two groups.

**Materials & Methods:** This cross-sectional comparative study was carried out in the Department of Biochemistry and the Department of Nephrology, Chattogram Medical College Hospital from June 2013 to May 2014. Fifty (50) diabetic CKD patients and fifty (50) age sex matched non-diabetic CKD patients of 18-85 years fulfilling the required enrolment criteria were purposively selected to form two comparing groups. Patient-profiles were completed by history and physical examination. Anthropometric and clinical parameters were analyzed along with fasting and two hours after breakfast plasma glucose, serum creatinine, eGFR, serum calcium, serum phosphate and 25(OH) D. Data were analyzed by computer-based statistical software. The confidence level was fixed at 95% and p-value of <0.05 was considered significant. **Results:** In the study, all patients in both groups had hypovitaminosis D and the vitamin D deficiencies in diabetic and non-diabetic CKD patients were 100% and

84% respectively. Mean 25(OH) D was significantly lower in the diabetic group (5.48+0.39 ng/mL) compared to non-diabetic one (9.08+0.75 ng/mL), but the severity of vitamin D deficiency did not seem to correlate with CKD stages.

**Conclusion:** In conclusion, this study establishes the high prevalence of vitamin D deficiency in both diabetic and non-diabetic CKD patients, but the deficiency was more severe in diabetic ones.

### Biography

Dr Ryhan has completed his Medical graduation from Institute of Applied Health Science in 1996, there after he completed his post-graduation, specialized in Internal Medicine in 2004. He has published more than 22 papers in reputed journals and has been serving as an editorial board member of reputed journals. He is member of Society of Medicine of Bangladesh, Bangladesh Society Critical Care Medicine; Bangladesh Society of Emergency Medicine; Indian Society of Critical Care Medicine, Asia Pacific Association of Critical Care Medicine. He is working as a Professor & Head of Internal Medicine of BGC Trust Medical College & Hospital, Bangladesh. Beyond the Medicine he has interest & specialist on Critical Care. He is also a course coordinator of Mechanical Ventilation in Medical Centre Training Academy, Bangladesh.