

EFFICACY OF SODIUM - GLUCOSE CO TRANSPORTER-2 INHIBITORS IN DIABETIC PATIENTS IN RETARDING THE PROGRESSION OF CHRONIC KIDNEY DISEASE

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INTRODUCTION :

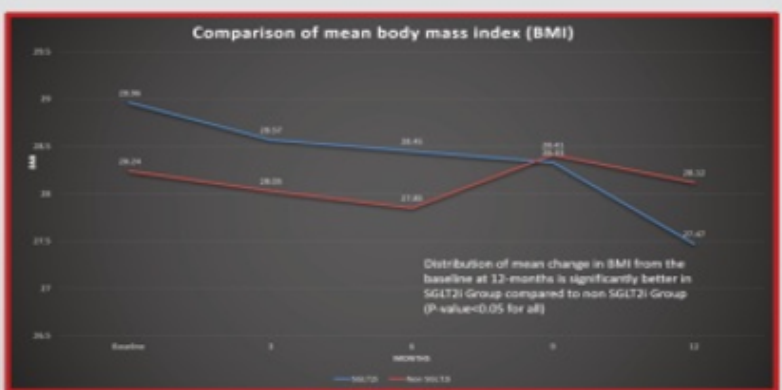
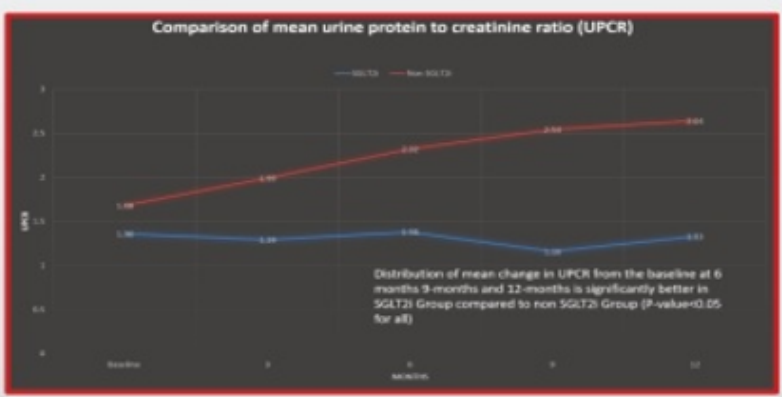
- Sodium-glucose cotransporter 2 inhibitors (SGLT2i) were developed to lower blood glucose levels in patients with type 2 diabetes.
- There is increasing evidence that SGLT2i have reno-protective effects, as demonstrated by recent clinical trials.
- There is however a paucity of Indian data on the effect of SGLT2i in diabetic patients with chronic kidney disease.

OBJECTIVES :

To evaluate the effects of SGLT2i in diabetic patients with chronic kidney disease.

MATERIAL AND METHODS :

- Observational study
- 102 diabetic patients with chronic kidney disease and estimated creatinine clearance (eCrCl) more than 30 ml/min were included in this study.
- 52 patients were on SGLT2i in addition to standard care where as 50 patients were on standard care.
- Patients in both groups were on standard anti hypertensive therapy which included ACEi/ARB in majority.
- These patients were regularly followed up for twelve months
- Important parameters assessed in the study were :
 - Change in body mass index
 - Progression of urine protein to creatinine ratio
 - Decline of the estimated creatinine clearance



RESULTS :

- Of the 52 cases in the SGLT2i group, 11 were lost to follow-up
- Of the 50 cases in the non SGLT2i group, 5 were lost to follow-up
- Thus, we had 41 cases and 45 cases for analysis in the two groups respectively.

BASELINE CHARACTERS :

VARIABLE	Group 1 [SGLT2i]		Group 2 [Non-SGLT2i]	
	n	Mean	n	Mean
Creatinine clearance (ml/min)	52.64	17.32	40.19	12.77
Urine protein to creatinine ratio (UPCR)	1.36	0.94	1.68	1.45

CONCLUSIONS:

- Patients receiving SGLT2i had greater reduction in their body mass index (BMI) as compared to the group not receiving the drug.
- The progression of urine protein to creatinine ratio (UPCR) was significantly slower in the group receiving SGLT2i.
- Use of SGLT2i in patients with diabetic nephropathy was associated with slower rate of decline in renal function.
- The two groups had similar blood pressure and glycemic control thus suggesting that the nephroprotection observed was secondary to SGLT2 inhibition.