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Research Article

Complementary Effects of Finerenone and Dapagliflozin on Renal Outcomes in Patients with Diabetic Nephropathy: a Prospective Observational Comparative Study

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ABSTRACT

Background: Diabetes Mellitus is a chronic metabolic disorder characterized by persistent hyperglycemia and is a major contributor to microvascular complications, particularly diabetic nephropathy. Diabetic Nephropathy is a leading cause of Chronic Kidney Disease (CKD) and end-stage renal disease worldwide. Risk factors such as poor glycemic control, hypertension, obesity, and prolonged duration of diabetes accelerate renal damage. Early assessment of renal and metabolic parameters is essential to prevent disease progression and improve patient outcomes.

Objectives: To assess the Complementary effects of Finerenone and Dapagliflozin on renal outcomes in patients with Diabetic Nephropathy visiting a tertiary care teaching hospital.

Materials and Methods: A prospective observational comparative study was conducted among 368 adult patients diagnosed with diabetic nephropathy attending the Department of Nephrology at a tertiary care teaching hospital. Participants were allocated into two treatment groups according to routine clinical practice: patients receiving dapagliflozin alone and those receiving combined finerenone plus dapagliflozin therapy. Baseline demographic characteristics, clinical parameters, laboratory investigations, estimated glomerular filtration rate (eGFR), urinary albumin-to-creatinine ratio (UACR), glycated haemoglobin (HbA1c), serum creatinine, and serum potassium were recorded and monitored throughout the study period. Statistical analyses were performed using appropriate parametric and non-parametric tests, with a p-value < 0.05 considered statistically significant.

Results: The combination therapy group demonstrated greater improvement in renal outcomes compared with dapagliflozin monotherapy. Patients receiving finerenone in addition to dapagliflozin showed a larger reduction in albuminuria and better preservation of eGFR during follow-up. Improvements in glycaemic control and blood pressure were also observed without clinically significant increases in adverse renal events. Hyperkalaemia occurred infrequently and was managed conservatively. Overall, combination therapy was associated with favourable renal and metabolic outcomes compared with monotherapy.

Conclusion: The complementary use of finerenone and dapagliflozin appears to provide enhanced renoprotective benefits in patients with diabetic nephropathy by reducing albuminuria and slowing renal function decline while maintaining an acceptable safety profile. These findings support the potential role of combination therapy in the management of diabetic kidney disease. Larger multicentre randomized controlled trials with longer follow-up are warranted to confirm these observations.

Keywords: Diabetic Nephropathy, Diabetic Kidney Disease, Finerenone, Dapagliflozin, SGLT2 Inhibitors, Mineralocorticoid Receptor Antagonist, Albuminuria, Chronic Kidney Disease, Renal Outcomes, Type 2 Diabetes Mellitus.

INTRODUCTION

Diabetic Nephropathy (DN) is one of the most common microvascular complications of Type 2 Diabetes Mellitus (T2DM) and a leading cause of Chronic Kidney Disease (CKD) and End-Stage Renal Disease (ESRD) worldwide. Persistent hyperglycemia causes structural and functional alterations in the kidneys, including glomerular hypertrophy, albuminuria, progressive decline in renal function, and increased cardiovascular risk. The global burden of diabetic nephropathy continues to rise due to the increasing prevalence of diabetes mellitus and associated metabolic disorders. Patients with diabetic nephropathy often experience poor quality of life, increased hospitalization, and high healthcare expenditures [1,2]. Type 2 Diabetes Mellitus contributes significantly to renal dysfunction through multiple pathophysiological mechanisms such as oxidative stress, inflammation, activation of the renin–angiotensin–aldosterone system (RAAS), and glomerular hyperfiltration. Current guideline-directed management of diabetic nephropathy mainly includes strict glycemic control, blood pressure management, Renin–Angiotensin System (RAS) blockade, Sodium–Glucose Co-Transporter-2 (SGLT2) inhibitors, and mineralocorticoid receptor antagonists. Recent therapeutic advancements have highlighted the renoprotective and cardioprotective benefits of Finerenone and Dapagliflozin beyond glycemic control [2,6].

Dapagliflozin is an SGLT2 inhibitor initially developed for the management of Type 2 Diabetes Mellitus but has demonstrated significant renal and cardiovascular protective effects. By inhibiting sodium–glucose co-transporter-2 in the proximal renal tubules, dapagliflozin promotes glucosuria, natriuresis, and osmotic diuresis, thereby reducing intraglomerular pressure and slowing the progression of kidney disease. Additionally, dapagliflozin improves glycemic control, reduces blood pressure and body weight, and preserves renal function. Clinical trials such as the DAPA-CKD trial demonstrated a significant reduction in renal disease progression and cardiovascular mortality with dapagliflozin therapy in patients with chronic kidney disease [3]. Finerenone is a novel non-steroidal selective mineralocorticoid receptor antagonist with potent anti-inflammatory and antifibrotic properties in renal and cardiovascular tissues. Unlike conventional steroidal mineralocorticoid receptor antagonists, Finerenone provides effective renal protection with fewer adverse effects. Clinical studies such as FIDELIO-DKD and FIGARO-DKD demonstrated that Finerenone significantly reduced albuminuria, delayed CKD progression, and lowered cardiovascular events in patients with Type 2 Diabetes Mellitus and Diabetic Nephropathy [4,5]. The combined use of Finerenone and Dapagliflozin may provide complementary renoprotective effects through synergistic mechanisms. Combination therapy may therefore provide superior improvement in renal outcomes including reduction in Urine Albumin–Creatinine Ratio (UACR), stabilization of estimated Glomerular Filtration Rate (eGFR), and reduction in albuminuria compared to monotherapy [3,4,5]. However, limited real-world evidence is available regarding the combined efficacy and safety of Finerenone and Dapagliflozin in patients with Diabetic Nephropathy. Hence, the study was undertaken to evaluate the complementary effects of Finerenone and Dapagliflozin on renal outcomes in patients with Diabetic Nephropathy and to assess their efficacy and safety in improving renal and metabolic parameters [6].

MATERIALS AND METHODS

Study Design

This study was a prospective observational comparative study conducted to evaluate the complementary effects of finerenone and dapagliflozin on renal outcomes among patients with diabetic nephropathy. The study compared renal function, albuminuria, glycaemic control, and safety outcomes between patients receiving dapagliflozin monotherapy and those receiving combination therapy with finerenone and dapagliflozin under routine clinical practice.

Study Setting and Duration:

The study was carried out in the Department of General Medicine at three tertiary care teaching hospitals in Warangal, Telangana, India, over a period of six months.

Ethical approval:

Approval was obtained after submission of the protocol to the Institutional Humans Ethics Committee (IHEC). The approval number provided was "KIEC-2026/Pharm D-

2021/Project-14" Patients were informed about the study, and informed consent was obtained from each patient in writing after having been informed of all aspects relevant to the study in their local language.

Inclusion Criteria

Patients aged ≥18 years with type 2 diabetes mellitus diagnosed with diabetic nephropathy.
Patients receiving dapagliflozin monotherapy or combination therapy with dapagliflozin and finerenone.
Patients willing to participate and provide written informed consent.

Exclusion Criteria

Patients with Type 1 diabetes mellitus.
Patients with end-stage renal disease (ESRD) requiring dialysis or previous kidney transplantation.
Patients with severe hepatic impairment.

Study Groups

Eligible patients were categorized into two treatment groups based on the prescribed therapy: Dapagliflozin and Finerenone.

Sample Size Determination:

The sample size for the present study was calculated based on the primary renal outcome measures, including changes in estimated glomerular filtration rate (eGFR) and urinary albumin-to-creatinine ratio (UACR). Considering a confidence level of 95%, statistical power of 80%, expected standard deviation obtained from previous literature, and clinically significant mean difference between treatment groups, the required sample size was estimated using the standard formula for comparison of two independent means:

$$n = [(Z\alpha/2 + Z\beta)^2 \times 2\sigma^2] / d^2$$

Data Collection:

Baseline demographic characteristics, medical history, duration of diabetes, comorbidities, concomitant medications, and laboratory investigations were recorded using a structured data collection form. Clinical parameters including blood pressure, body weight, body mass index (BMI), fasting blood glucose (FBG), postprandial blood glucose (PPBG), glycated haemoglobin (HbA1c), serum creatinine, blood urea nitrogen (BUN), estimated glomerular filtration rate (eGFR), urinary albumin-to-creatinine ratio (UACR), serum potassium, lipid profile, and adverse drug reactions (ADRs) were assessed at baseline and during follow-up.

Outcome Measures

The primary outcome was the evaluation of renal outcomes, assessed by changes in estimated glomerular filtration rate (eGFR) and urinary albumin-to-creatinine ratio (UACR).
Secondary outcomes included changes in serum creatinine, glycated haemoglobin (HbA1c), serum potassium, blood pressure, and the incidence of adverse drug reactions (ADRs).

Statistical Analysis:

The collected data were analyzed using GraphPad Prism version 11.0. Continuous variables were expressed as mean ± standard deviation (SD). Comparisons between the two treatment groups were performed using One-way Analysis of Variance (ANOVA). A p-value < 0.05 was considered statistically significant.

RESULTS

Age Distribution:

Table 1. Age Distribution of the Study Subjects

Class Interval	No. Of Patients	Percentage
19-28	0	0.0%
29-38	6	1.6%
39-48	68	18.5%
49-58	129	35.1%
59-68	118	32.1%
69-78	41	11.1%
79-89	6	1. 6%

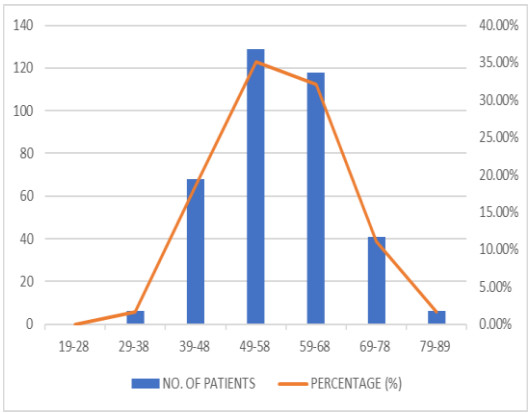

Figure 1. Graphical Representation of Age Distribution

The graph demonstrates a higher prevalence of Diabetic Nephropathy among patients aged 49–58 years and 59–68 years, constituting the majority of the study population. Moderate representation was observed in the 39–48 years and 69–78 years age groups, while minimal cases were noted at the extremes of age, particularly among patients below 30 years and above 79 years. Overall, the findings indicate an age-related increase in the incidence of Diabetic Nephropathy after 50 years of age.

Gender Distribution:

Out of 368 patients, 218 (59%) were males, and 150 (41%) were females, as illustrated graphically in the figure 2.

Table 2.Gender Distribution of Study Subjects:

GENDER	SUBJECTS	PERCENTAGE
MALE	218	59%
FEMALE	150	41%

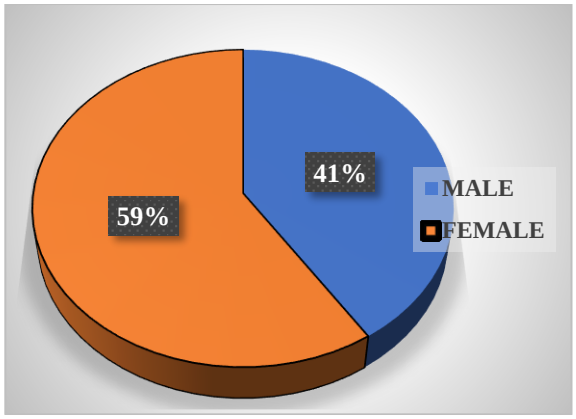

Figure 2. Graphical Representation of the Gender Distribution of the Study Subject

Efficacy Parameters:

Effect of Fasting Blood Sugar (Fbs) Levels Dapagliflozin:

Subjects with Diabetic Nephropathy have an elevated Fasting Blood Sugar Levels (FBS), which indicates persistent hyperglycaemic condition in the body. Table3. represents the comparison of 3 visits of Dapagliflozin which is graphically illustrated in figure 3.

Table 3. Comparison of FBS Levels of Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	146.7±55.9	<0.0001****
Visit-2	128.2±39.2	<0.0001****
Visit-3	114.6±39.1	<0.0001****

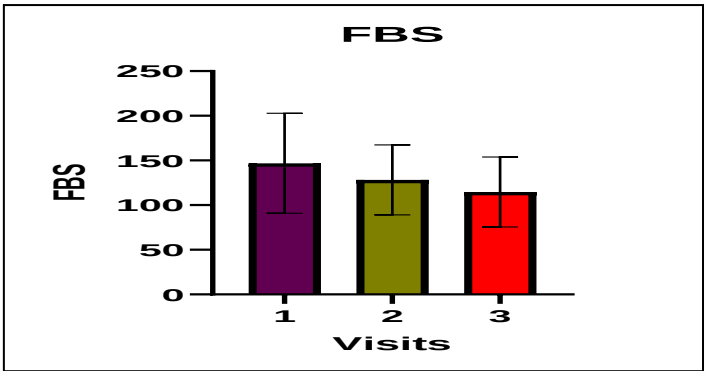

Figure 3. Graphical Representation of Dapagliflozin FBS Levels

Finerenone:

There was a significant change between visit-1, visit-2, visit-3 with P value 0.0007***, <0.0001**** respectively.

Table 4. Comparison of FBS Levels of Finerenone

VISITS	Mean±SD	P Value
Visit-1	135.8± 65.2	<0.0001****
Visit-2	138.7±43.5	0.0007***
Visit-3	124.3±33.6	<0.0001****

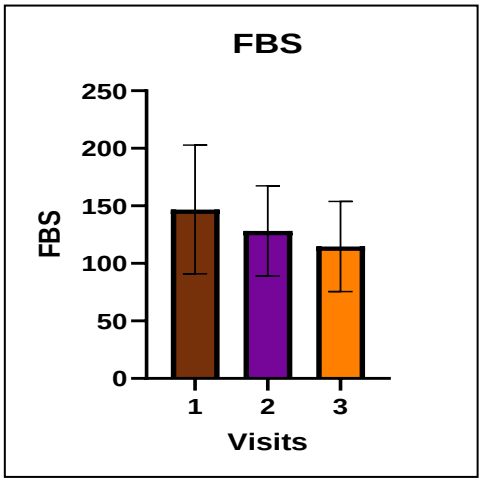

Figure 4. Graphical Representation of Finerenone FBS Levels.

Effect of Post Lunch Blood Sugar levels Dapagliflozin:

Subjects with Diabetic Nephropathy have an elevated Post Lunch Blood Sugar Levels (PLBS), which indicates hyperglycaemia condition in the body. Table represents the comparison of 3 visits of Dapagliflozin.

There was a significant change between visit-1, visit-2 & visit-3 with P value <0.0001****.

Table 5. Comparison of PLBS Levels of Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	228.2±86.4	
Visit-2	192.5±65.5	<0.0001****
Visit-3	171.1±60.1	<0.0001****

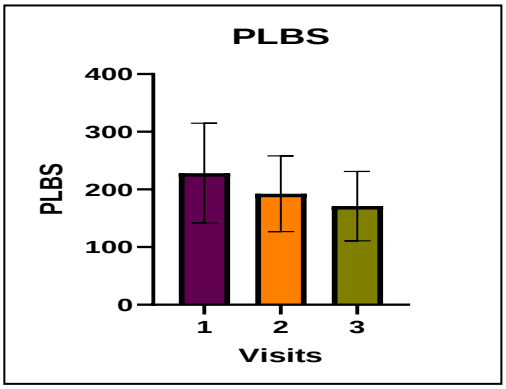

Figure 5. Graphical Representation of Dapagliflozin PLBS Levels.

Finerenone:

There was a significant change between visit-1, visit-2, visit-3 with P value 0.0210*, <0.0001**** respectively.

Table 6. Comparison of PLBS Levels of Finerenone

VISITS	Mean±SD	P Value
Visit-1	197.9±94.6	
Visit-2	211.6±71.6	0.0210*
Visit-3	181±64	<0.0001****

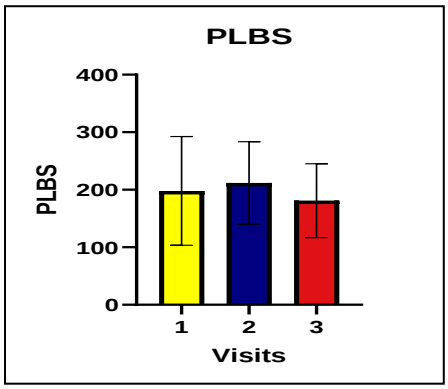

Figure 6. Graphical Representation of Finerenone PLBS Levels

Effect on HbA_1c level

Dapagliflozin:

Subjects with Diabetic Nephropathy have an elevated HbA_1c, which indicates Poor long-term Glycemic control. Table represents the comparison of 3 visits of Dapagliflozin. There was a significant change between visit-1, visit-2 & visit-3 with P value <0.0014**, <0.0001**** respectively.

Table 7. Comparison of Hba_1c Levels of Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	8.3±1.8	
Visit-2	7.7±1.6	<0.0001****
Visit-3	7.3±1.8	0.0014**

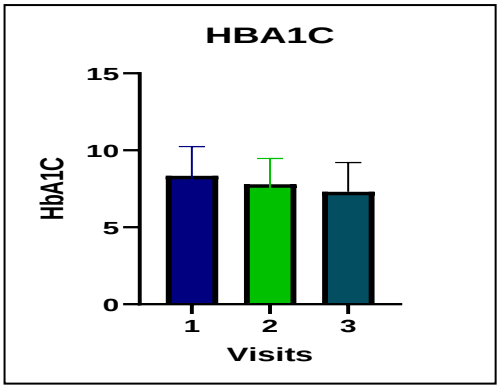

Figure 7. Graphical Representation of Dapagliflozin Hba1c Levels

Finerenone:

Table.8 represents the comparison of 3 visits of levels of HbA_1c in Finerenone.

There was a significant change between visit-1, visit-2, visit-3 with P value <0.0001**, <0.0001**** respectively.

Table 8. Comparison of Hba1c Levels of Finerenone

VISITS	Mean±SD	P Value
Visit-1	60.9±82.7	
Visit-2	8.1±0.8	<0.0001***
Visit-3	1.7±7.5	<0.0001****

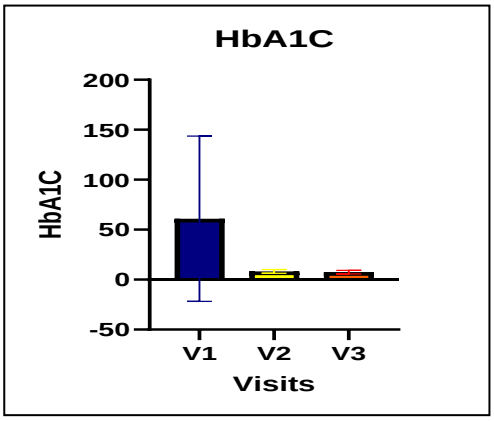

Figure 8. Graphical Representation of Finerenone Hba1c Levels

Effects on Body Weight:

Dapagliflozin:

Subjects with Diabetic Nephropathy have increased body weight. Table represents the comparison of 3 visits of Dapagliflozin which is graphically illustrated in figure 16. There was a significant change between visit-1, visit-2 & visit-3 with P value 0.0373*, 0.0373* respectively.

Table 9. Comparison of Body Weight While Using Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	68±12.5	
Visit-2	66.5±12.1	0.0373*
Visit-3	65±11.7	0.0373*

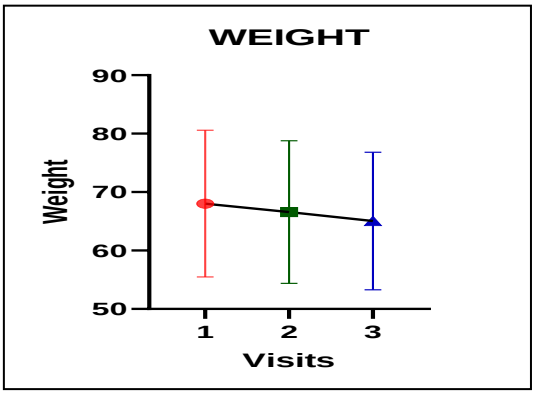

Figure 9. Graphical Representation of Dapagliflozin (Body Weight)

From the graph it is evident that there was reduction in Body Weight during visits 2 & 3 than that of visit 1 but not very significant.

Finerenone:

Table.10 represents the comparison of 3 visits of their Body Weight and shows the difference while using Finerenone which is graphically illustrated in figure 17. There was a significant change between visit-1, visit-2 & visit-3 with P value 0.0310*, 0.0310* respectively.

Table 10. Comparison of Body Weight While Using Finerenone

VISITS	Mean±SD	P Value
Visit-1	94.3±42.1	
Visit-2	65.5±34.1	0.0310*
Visit-3	64.2±11.9	0.0310*

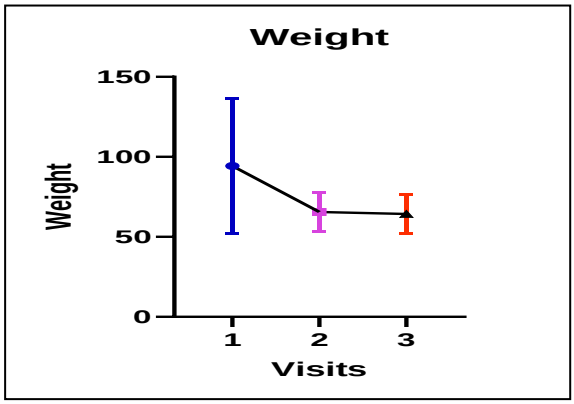

Figure 10. Graphical Representation of Finerenone (Body Weight)

From the graph it is evident that there was reduction in Body Weight during visits 2 & 3 than that of visit 1 but not very significant.

Effects on Blood Pressure
Systolic BP:

Dapagliflozin:
Table.11 represents the comparison of 3 visits of Systolic BP and shows the difference while using Dapagliflozin. There was a significant change between visit-1, visit-2 & visit-3 with P value 0.0100**, 0.0100** respectively.

Table 11. Comparison of Systolic BP While Using Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	131.1±17.0	
Visit-2	128.1±15.9	0.0100**
Visit-3	126.5±15.1	0.0100**

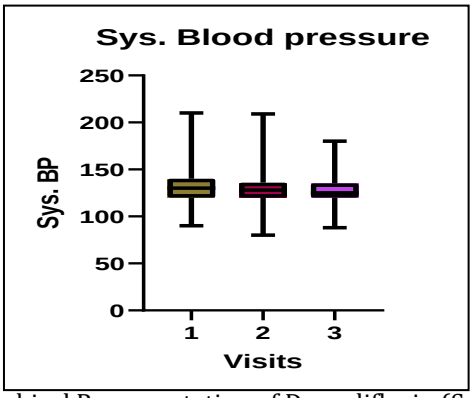

Figure 11. Graphical Representation of Dapagliflozin (Systolic BP)

From the graph it is evident that there was reduction in Systolic BP during visits 2 & 3 than that of visit 1 but not very significant.

Finerenone:

Table.12 represents the comparison of 3 visits of Systolic BP and shows the difference while using Finerenone which is graphically illustrated in figure 12. There was a significant change between visit-1, visit-2 & visit-3 with P value <0.0001****, <0.0001****respectively.

Table 12. Comparison of Systolic BP While Using Finerenone

Visits	Mean±Sd	P Value
Visit-1	106.3±33.9	
Visit-2	110.2±26.6	<0.0001****
Visit-3	108.4±25.5	<0.0001****

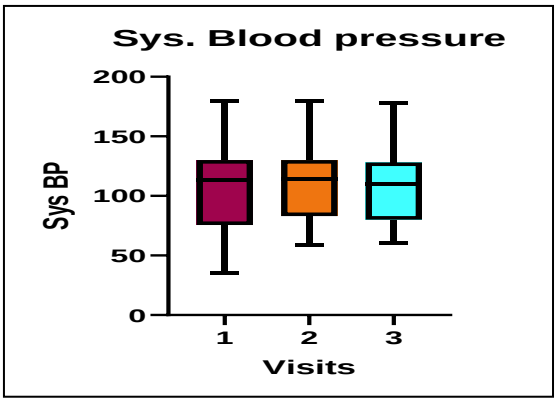

Figure 12. Graphical Representation of Finerenone (Systolic BP)

Diastolic BP:
Dapagliflozin:

Table.13 represents the comparison of 3 visits of Diastolic BP and shows the difference while using Dapagliflozin. There was a significant change between visit-1, visit-2 & visit-3 with P value <0.0001****, <0.0001**** respectively.

Table 13. Comparison of Diastolic BP While Using Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	80.8±10.3	
Visit-2	79.1±11.0	<0.0001****
Visit-3	84.4±12.5	<0.0001****

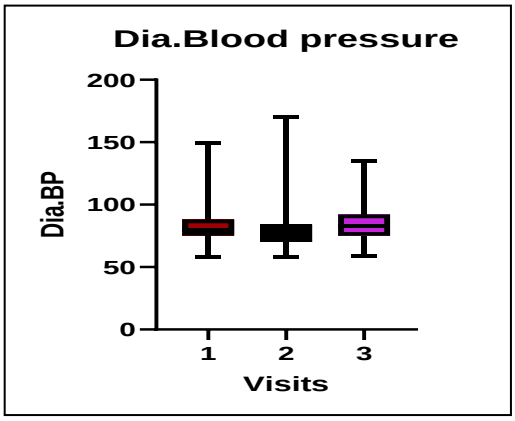

Figure 13. Graphical Representation of Empagliflozin (Diastolic BP)

From the graph it is evident that there was reduction in Diastolic BP during visits 2 & 3 than that of visit 1 but not very significant.

Finerenone:

Table.14 represents the comparison of 3 visits of Diastolic BP and shows the difference while using Finerenone. There was a significant change between visit-1, visit-2 & visit-3 with P value 0.8661***, 0.8661***respectively.

Table 14. Comparison of Diastolic BP While Using Finerenone

VISITS	Mean±SD	P Value
Visit-1	94.2±25.9	
Visit-2	93.7±26.2	0.8661***
Visit-3	92.6±25.9	0.8661***

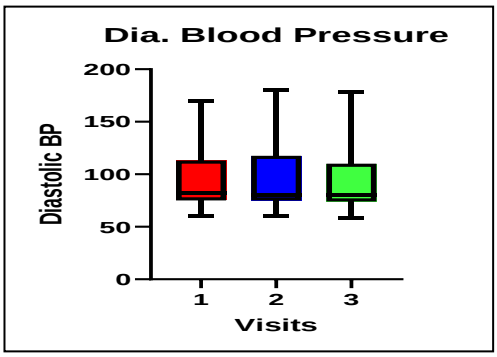

Figure 14. Graphical Representation of Finerenone (Diastolic BP)

Effect on eGFR
Dapagliflozin:

Table 15. Comparison of Egfr Levels of Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	67.8±33.5	
Visit-2	65.0±33.5	0.2407****
Visit-3	62.4±33.3	0.2407****

Subjects with Diabetic Nephropathy have an elevated eGFR, which indicates Impaired kidney function in the body. There was a significant change between visit-1, visit-2 & visit-3 with P value 0.2407**** and 0.2407**** respectively.

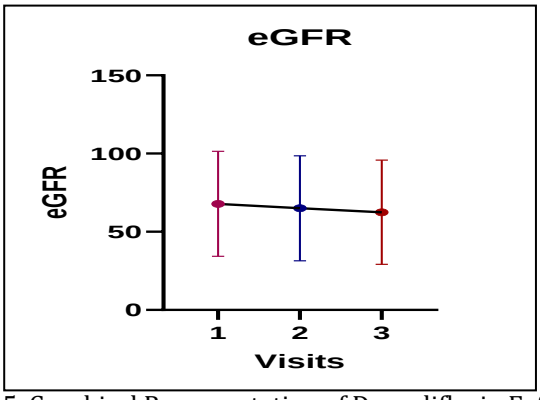

Figure 15. Graphical Representation of Dapagliflozin Egfr Levels

From the graph it is evident that there was significant reduction in eGFR values during visits 2 & 3 than that of visit 1.

Finerenone:

Table.16 represents the comparison of 3 visits of levels of eGFR in Finerenone. There was a significant change between visit-1, visit-2, visit-3 with P value 0.0019**, 0.0019**** respectively.

Table 16. Comparison of Egfr Levels of Finerenone

VISITS	Mean±SD	P Value
Visit-1	89.3±116.5	
Visit-2	65.9±27.1	0.0019****
Visit-3	62.4±27.6	0.0019****

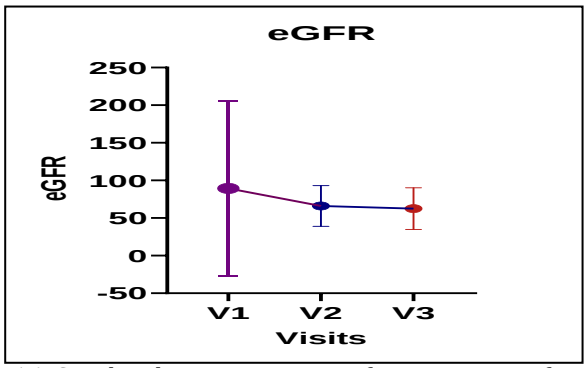

Figure 16. Graphical Representation of Finerenone Egfr Levels

Effect on UACR

Dapagliflozin:

Subjects with Diabetic Nephropathy have an elevated UACR, which indicates albuminuria and glomerular damage in the body. Table represents the comparison of 3 visits of Dapagliflozin which is graphically illustrated in figure 17.

There was a significant change between visit-1, visit-2 & visit-3 with P value 0.4566**, 0.4566**** respectively.

Results obtained shown significant increase in the UACR levels of Dapagliflozin.

Table 17. Comparison of UACR Levels of Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	121.8±167.2	
Visit-2	135.0±182.9	0.4566****
Visit-3	143.6±200.3	0.4566**

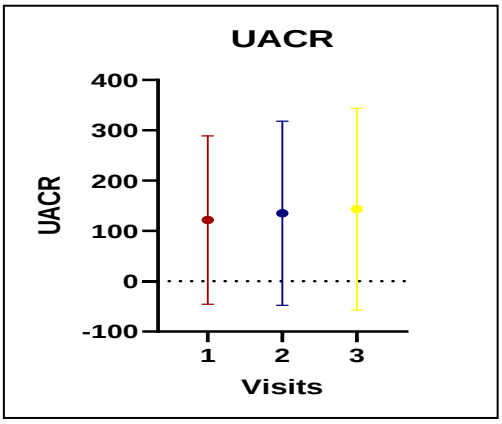

Figure 17. Graphical Representation of Dapagliflozin UACR Levels

Finerenone:

Table.18 represents the comparison of 3 visits of levels of UACR in Finerenone which is graphically illustrated in figure 18.

There was a significant change between visit-1, visit-2, visit-3 with P value <0.0001**, <0.0001**** respectively.

Table 18. Comparison of UACR Levels of Finerenone

VISITS	Mean±SD	P Value
Visit-1	226.8±91.2	
Visit-2	124.5±91.7	<0.0001***
Visit-3	53.8±110.3	<0.0001****

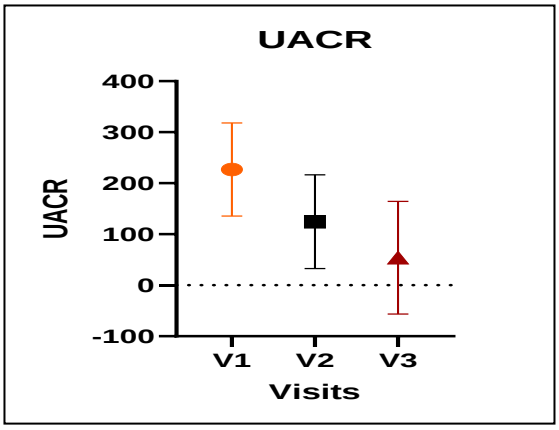

Figure 18. Graphical Representation of Finerenone UACR Levels

Effect on Serum Potassium

Dapagliflozin:

Subjects with Diabetic Nephropathy have an elevated serum potassium, which indicates impaired renal potassium excretion in the body.

Table represents the comparison of 3 visits of Dapagliflozin which is graphically illustrated in figure 19. There was a significant change between visit-1, visit-2 & visit-3 with P value <0.0001**, <0.0001**** respectively.

Table 19. Comparison of Serum Potassium Levels of Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	4.6±0.5	
Visit-2	4.8±0.5	<0.0001****
Visit-3	4.9±0.5	<0.0001****

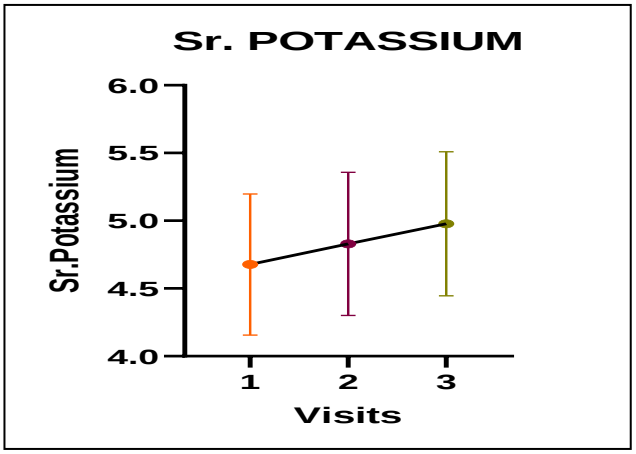

Figure 19. Graphical Representation of Dapagliflozin Sr. K^+ Levels

Finerenone:

Table.20 represents the comparison of 3 visits of levels of Serum Potassium in Finerenone which is graphically illustrated in figure 20. There was a significant change between visit-1, visit-2, visit-3 with P value <0.0001**, <0.0001**** respectively.

Table 20. Comparison of Serum Potassium Levels of Finerenone

VISITS	Mean±SD	P Value
Visit-1	23.1±32.8	
Visit-2	4.7±0.5	<0.0001***
Visit-3	4.9±0.5	<0.0001****

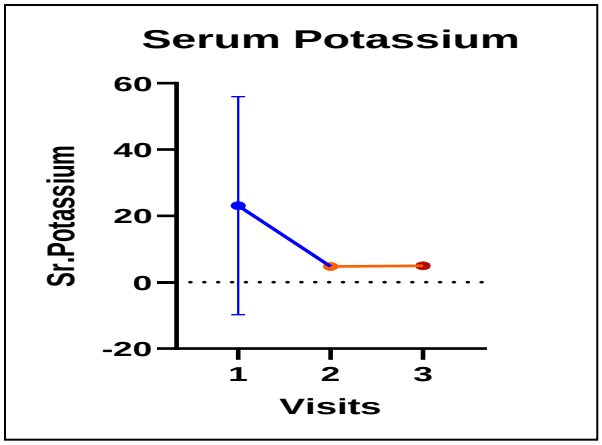

Figure 20. Graphical Representation of Finerenone Sr. K^+ Levels

From the graph it is evident that there was significant reduction in Serum Potassium values during visits 2 & 3 than that of visit 1.

Effect on Serum Creatinine

Dapagliflozin:

Subjects with Diabetic Nephropathy have an elevated Serum Creatinine, which indicates reduced kidney filtration function in the body. Table represents the comparison of 3 visits of Dapagliflozin which is graphically illustrated in figure 21. There was a significant change between visit-1, visit-2 & visit-3 with P value <0.0001**, <0.0001**** respectively.

Table 21. Comparison of Serum Creatinine Levels of Dapagliflozin

VISITS	Mean±SD	P Value
Visit-1	0±0	
Visit-2	1.39±0.4	<0.0001****
Visit-3	1.4±0.5	<0.0001**

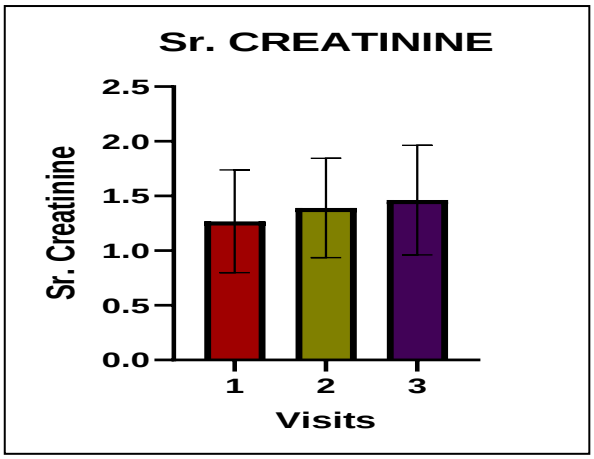

Figure 21. Graphical Representation of Dapagliflozin Sr. Cr Levels

From the graph it is evident that there was significant increase in Serum Creatinine values during visits 2 & 3 than that of visit 1.

Finerenone:

Table.22 represents the comparison of 3 visits of levels of Serum Creatinine in Finerenone. There was a significant change between visit-1, visit-2, visit-3 with P value <0.0001**, <0.0001**** respectively.

Table 22. Comparison of Serum Creatinine Levels of Finerenone

VISITS	Mean±SD	P Value
Visit-1	3.67±2.5	<0.0001****
Visit-2	0±0	
Visit-3	1.1±0.2	<0.0001**

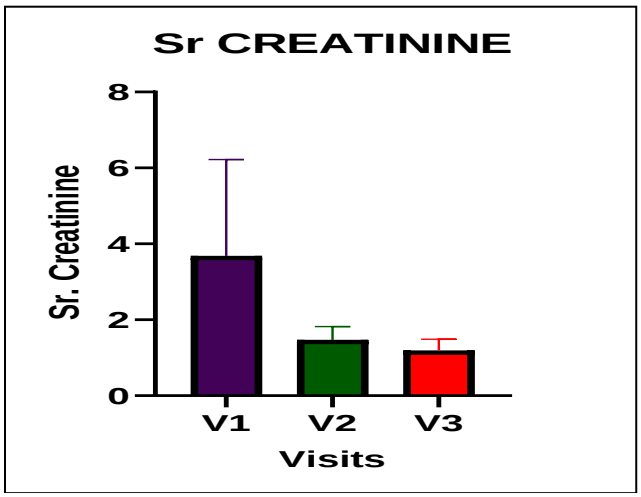

Figure 22. Graphical Representation of Finerenone Sr. Cr Levels

DISCUSSION

Diabetic nephropathy is a major microvascular complication of type 2 diabetes mellitus and a leading cause of chronic kidney disease and end-stage renal disease worldwide. The present prospective observational comparative study evaluated the complementary effects of finerenone and dapagliflozin on renal outcomes in patients with diabetic nephropathy. The findings suggest that combination therapy was associated with better preservation of renal function and greater reduction in albuminuria compared with dapagliflozin monotherapy.

The study also observed improvements in glycaemic control, reflected by reductions in HbA1c levels. Although the glucose-lowering effect is primarily attributed to dapagliflozin, finerenone may indirectly contribute to improved metabolic and cardiovascular outcomes by reducing renal inflammation and preserving kidney function.

The safety profile of combination therapy was acceptable throughout the study period. Most adverse drug reactions were mild and manageable, and no unexpected safety concerns were observed. Hyperkalaemia, a known adverse effect of mineralocorticoid receptor antagonists, was monitored carefully and remained within clinically manageable limits in the study population.

The findings of the present study are in agreement with landmark clinical trials evaluating the individual renoprotective effects of dapagliflozin and finerenone. The DAPA-CKD trial demonstrated that dapagliflozin significantly reduced the risk of kidney disease progression and cardiovascular events in patients with chronic kidney disease. Similarly, the FIDELIO-DKD and FIGARO-DKD trials reported that finerenone reduced albuminuria and slowed the progression of diabetic kidney disease while lowering cardiovascular risk. The present study supports these findings and suggests that combining both agents may provide additional clinical benefits in routine practice.

However, this study has several limitations. It was conducted at a single tertiary care center with a relatively short follow-up period, which may limit the generalizability of the findings. As an observational study, treatment allocation was not randomized, and residual confounding cannot be completely excluded. Larger multicentre randomized controlled trials with longer follow-up are required to further establish the long-term efficacy and safety of combination therapy.

Overall, the present study provides real-world evidence supporting the use of finerenone in combination with dapagliflozin for improving renal outcomes in patients with diabetic nephropathy. These findings may help clinicians optimize treatment strategies to delay disease progression and reduce the burden of diabetic kidney disease.

CONCLUSION

The present prospective observational comparative study demonstrated that the combination of finerenone and dapagliflozin was associated with superior renal outcomes compared with dapagliflozin monotherapy in patients with diabetic nephropathy. Combination therapy resulted in better preservation of renal function, greater reduction in albuminuria, and improved glycaemic control while maintaining an acceptable safety profile.

The complementary mechanisms of action of finerenone and dapagliflozin support their combined use as an effective therapeutic strategy for slowing the progression of diabetic kidney disease. Although the findings are encouraging, further large-scale multicentre randomized controlled trials with longer follow-up are required to confirm these observations and evaluate long-term renal and cardiovascular benefits.

The results of this study suggest that combination therapy may represent a promising approach for improving clinical outcomes and reducing disease progression in patients with diabetic nephropathy.

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