



Clinical Outcomes of Single Pill Combination Antihypertensive Drugs in General Practice: A Retrospective Study

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BACKGROUND

- Hypertension (HTN) is the major cause of death and is the 4th leading cause of disability-adjusted life years (DALYs) in Saudi Arabia¹⁻².
- non-adherence is a major problem in people with HTN
- Clinical practice guidelines highlighted the importance of single-pill combination (SPC) as a strategy to overcome nonadherence³.
- SPC is associated with a 13% increase in adherence, and a higher prescription refills compared to free pills combination (FPC)⁴.

OBJECTIVES

The purpose of the study is to evaluate Single-Pill Combination (SPC) and Free-Pill Combination (FPC) in regard to:

- Difference in blood pressure control at 6 months
- Degree of clinical inertia during 6 month treatment duration
- Degree of medication adherence at 6 months
- Rate of Healthcare utilization during at 6-month treatment duration

METHODS

01 Observational, Retrospective chart review Study Design

Study Setting KSUMC 02

03 May2015 to Dec2019 Study Period

Data Source eSiHi 04

05 HTN patients aged >18 years and receiving SPC and/or FDC drugs Inclusion/Exclusion

Outcomes Definitions

Index date	First observed prescription fill of SPC or GPC therapy within the observational period
BP Control	Difference in SBP and DBP at 6 months between the two groups
Clinical Inertia	an elevated BP>140/90 mmHg with no increase in antiHTN therapy
Discontinuation rate	any gap >30 days in which the patient had no supply of the index drug
HCU	Unplanned hospitalization or emergency department visits
Medication persistence	$MPR = \left(\frac{\text{Sum of days' supply for all fills in period}}{\text{Number of days in period}} \right) \times 100\%$ $PDC = \left(\frac{\text{Number of days in period "covered"}}{\text{Number of days in period}} \right) \times 100\%$

Statistical Analysis:

- Excel and GraphPad online calculator were used to analyze the data.
- Continuous variables presented as mean and standard deviation.
- Categorical variables presented as frequencies and percentages.
- Paired and unpaired t-test and chi-square to compare between groups as appropriate. Significance level was at $\alpha = 0.05$.

RESULTS

Table 1: Baseline Characteristic (N=220)

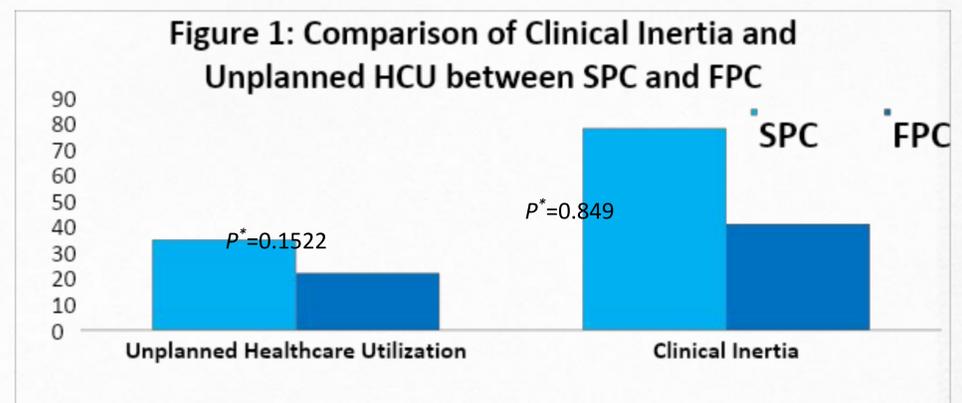
Age (years)	62(12.75)
Females	45%
Comorbidities per patient	3.787(1.973)
Number of medications per patient	10.906(6)

*data presented as mean(SD)

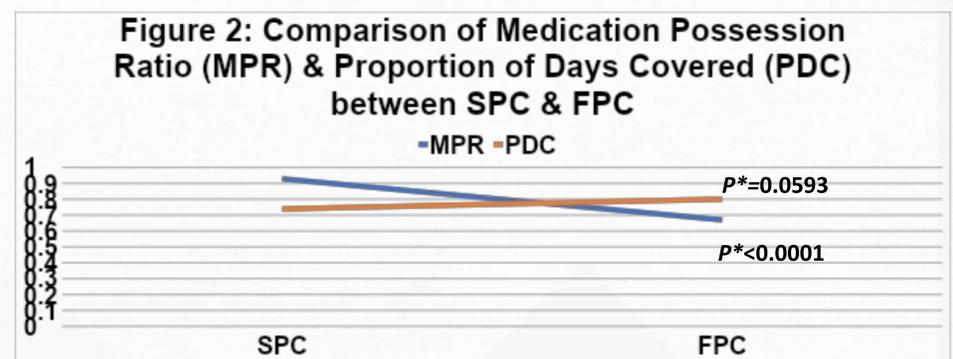
Table 2: Primary Outcome of Blood Pressure Control between SPC & FPC

N	SPC	FPC	P*
	93	47	
Mean(SD) change in SBP	1.14(0.5226)	4(0.1204)	0.3544
Mean(SD) change in DBP	0.46(6956)	4.46(0.0253)	0.0578

* two tailed unpaired t-test



*Chi-square test, level of significance<0.05



*Unpaired t-test

CONCLUSION

Despite SPC had improved MPR, this was not associated with better improvement in BP control. Medication shortages and difficulty in titrating SPC could be contributing factors.

STUDY LIMITATION

Retrospective study design; missing data, small sample size. Many of the included sample lied in the time frame overlapped with COVID pandemic where continuity of care was greatly disrupted.

REFERENCES

