



# 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 Arabia<sup>1-2</sup>.
- 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 nonadherence<sup>3</sup>.
- SPC is associated with a 13% increase in adherence, and a higher prescription refills compared to free pills combination (FPC)<sup>4</sup>.

## 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)

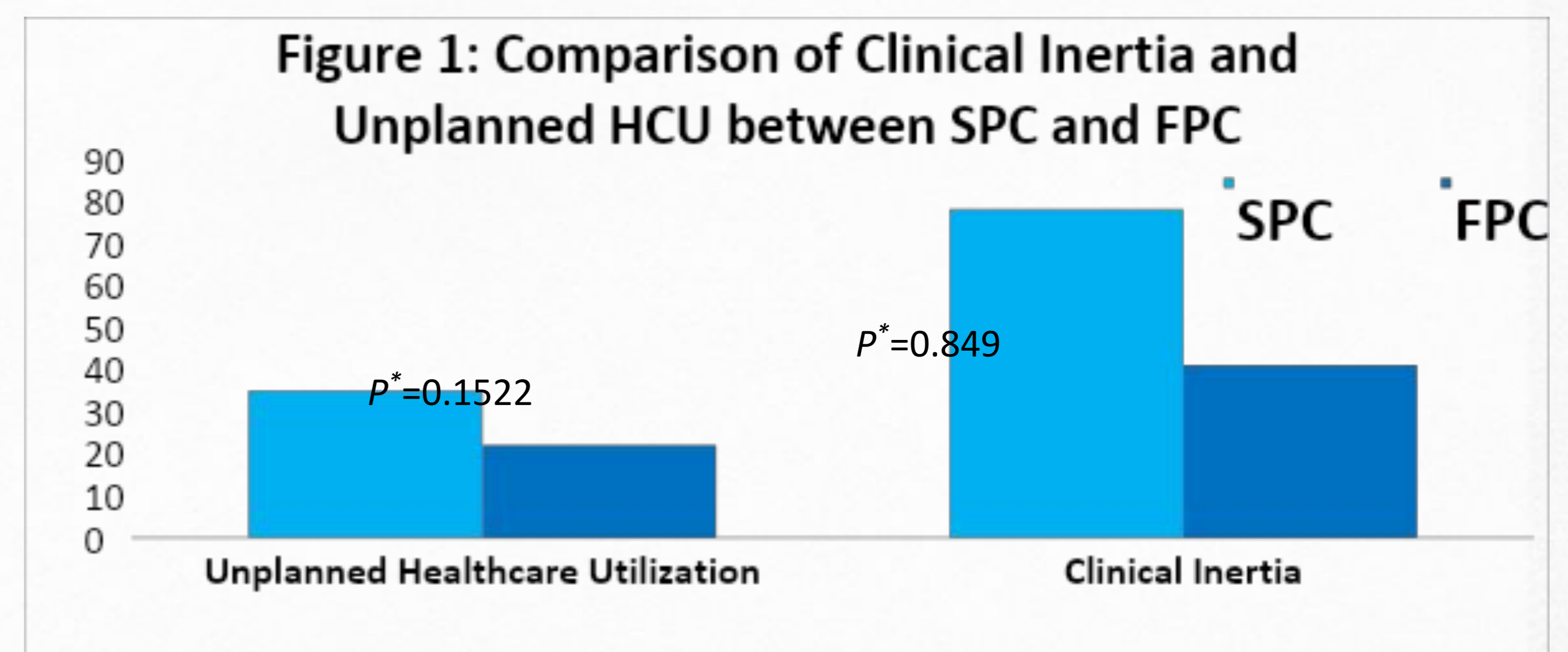
Age (years)	62(12.75)
Females	45%
Comorbidities per patient	3.787(1.973)
Number of medications per patient	10.906(6)

\*data presented as mean(SD)

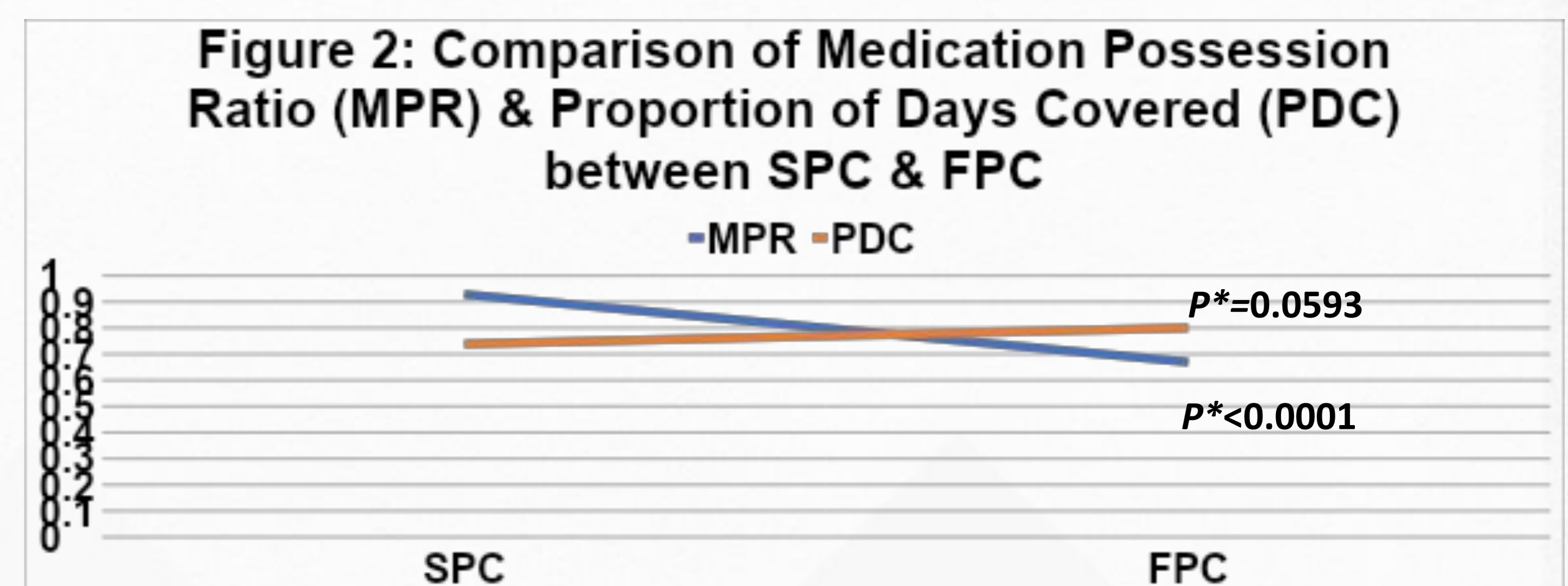
Table 2: Primary Outcome of Blood Pressure Control between SPC & FPC

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

