International Journal of Healthcare Sciences ISSN 2348-5728 (Online)
Vol. 3, Issue 2, pp: (311-313), Month: October 2015 - March 2016, Available at: www.researchpublish.com

A Comparative Study of the Safety and Efficacy of Salmetrol Inhalers in Patients with Bronchial Asthma and Chronic Obstructive Pulmonary Disease in a Tertiary Care Hospital

DR. V. LEKSHMANAN

MBBS

Abstract: **To study the safety, efficacy of Salmetrol and the incidence, severity and outcome of the effects of the Prescribed Medicine. METHODS-This study includes 60 patients altogether among which 30 patients with Bronchial Asthma and remaining 30 patients with COPD. The prognosis were documented with the help of clinical symptoms and Pulmonary Function Tests (PFT).RESULTS: Our study showed that most of the patients with Bronchial Asthma respond well rather than Chronic Obstructive Pulmonary Disease (COPD). CONCLUSION-The results concluded that the drug works better for Bronchial Asthma rather than Chronic Obstructive Pulmonary Disease (COPD).**

Keywords: **Salmetrol, Pulmonary Function Tests, Bronchial Asthma, Chronic Obstructive Pulmonary Disease.**

1. INTRODUCTION

Bronchial Asthma is a common respiratory disease charecterised [1] by chronic inflammation of the airways, variable recurring symptoms, brochospasm, wheezing, cough, chest tightness and shortness of breath [2]. It is assessed by the forced expiratory volume in one second (FEV 1). Chronic Obstructive Pulmonary Disease is charaterised by chronically Poor air outflow, shortness of breath [3][4].The diagnosis is based on the poor air Outflow in the Pulmonary Function Tests (PFT)[6]. Salmetrol is long acting Beta 2 adrenergic agonist drug used in the maintanence and preventing Asthma and COPD symptoms [7].

Pulmonary Function Tests involves measuring the capacity of the lungs to Make large volumes of air in airways to assess the extent of obstruction[5].The Spirometry device is used to generate pneumotacograph that help to assess the Lung conditions[8][9].

2. STUDY OBJECTIVES:

To study the safety and efficacy of Salmetrol, assess the outcome of the effects in patients,to improve the prognosis of the patients.

3. METHODOLOGY

STUDY DESIGN: It is an open labeled, prospective, Observational study.

STUDY POPULATION: Patients with COPD and Bronchial Asthma Attending Pulmonary Medicine Out Patient Department (OPD).

STUDY SIZE: 60 Patients.

STUDY DURATION: 30 days.

INCLUSION CRITERIA:

1. Age –- 20-50 years

2. Patients who are taking Salmetrol .

3. Patients who are willing to give Written Informed Consent.

EXCLUSION CRITERIA:

1. Patients above the age of 50 years and below 20 years.

2. Patients who are not willing to give Written Informed Consent.

3. Patients who are taking other Bronchodilators.

STUDY PROCEDURE:

After getting approval from the Institutional Ethical Committee. The study was conducted in our Institution Karpaga Vinayaga Institute of Medical Sciences and Research Centre , Madhuranthagam , Kanchipuram District . The patients are adviced about the study procedure, disease outcomes; Medications used the possible adverse drug reactions in their local language .Written informed consent was obtained from the patients who are willing for the study procedure. If the patient was not able to understand their Relatives/Attenders were explained and Written Informed Consent is obtained from them.

In the Pulmonary Medicine OPD the patients presenting With complaints of shortness of breath, dyspnea were selected for the study. The clinical history, past history, family history, occupation, previous treatment History were asked and assessed and the condition was diagnosed. After this they are advised to undergo Pulmonary Function Tests and the results were obtained from the Tests. After this procedure they are advised to undergo treatment with Salmetrol in first group of 30 patients with Bronchial Asthma and the second group of patients with COPD.

4. RESULTS

The PFT Values obtained are measured:

1. before administration of the drug (baseline)

2. After administration of the drug 3 minutes,10 minutes.

3. Criteria for assessing FEV1, FVC , FEV1/FVC (%).

	Time(min)	FEV1 (L)	FVC (L)	FEV1/FVC (%)
Asthma	Baseline	1.46±0.48	2.69±0.73	54.29±10.70
-n=30	3	1.70±0.53	3.02±0.76	56.53±11.65
	10	1.82±0.57	3.11±0.82	56.69±11.93
COPD	Baseline	1.16±0.52	2.11±0.62	50.61±10.57
-n=30	3	1.24±0.46	2.39±0.59	50.93±12.12
	10	1.27±0.48	2.46±0.58	50.57±12.05
-p value		<0.001	<0.001	

The above table shows the values of FEV1 , FVC , FEV1/FVC in patients with asthma and copd.The data explains the better outcome of the patients with asthma rather than copd during treatment and respond well.

5. DISCUSSION

The patients with copd didn't respond as well as asthma patients in Treatment with salmetrol during treatment. Hence for copd patients Combination therapy is advised for the good prognosis, outcome of the patient. Bronchial asthma patients are advised to continue the treatment as they were advised earlier. In copd patients they are added with additional drugs for the Good clinical outcome of the patient.

6. CONCLUSION

The results conclude that salmetrol works better for Bronchial asthma Rather than copd and hence salmetrol alone is a single effective drug For the treatment rather than the copd which requires combination Therapy.

REFERENCES

[1] NHLBI Guidelines 2007 pp 11-12

[2] "Factors accounting for asthma variability: achieving optimal symptom control for individual patients."*Primary care Respiratory Journal* 17(3):"

[3] Vestbo,Tergen (2013)."*Definition and overview"*(PDF).*Global Strategy for the diagnosis, management and prevention of Chronic Obstructive Lung Disease"*.Global Initiative for Chronic Obstructive Lung Disease.pp1-7

[4] Decramer M.Janssens W, Miravittles M(April 2012)."*Chronic Obstructive Lung Disease*".Lancet 379(9823):1341-51

[5] Natheli L, Natheli M, Malmberg D,Larsson K(2007)."*COPD diagnosis related to different guidelines and spirometry techniques".Respir.Res*8(1):89

[6] Pulmonary terms and symbols : a report of the ACCP-ATS Joint Committee on Pulmonary Nomenclature.*Chest* 67:583,1975

[7] "Global initiative for chronic obstructive disease"(PDF) *goldcopd:* org. Retreived 30 october2014

[8] "National Asthma Education and Prevention Program". Retrieved 30 0ctober 2014.