



## **A Cross Sectional Study on Evaluation of Right Ventricular Diastolic Dysfunction in COPD Patients Using Homoeopathic Medicines in 6<sup>th</sup> Potency**

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### **Abstract**

COPD patients are numerically increasing regularly without any sign of arrest. The incidences are so mind-boggling that a time might come when all Indians will become victim of this condition. Considering it urgent to improve community health index (CHI), it was understood that every individual patient must be cured. **Aim:** To establish that COPD can be used as indicative of right ventricular failure and to establish that early detection, proper treatment and management can abort COPD their by minimize R.V.D and to explain “a cross sectional study on evaluation of right ventricular diastolic dysfunction in COPD patient using homoeopathic medicines in 6 potency in context to population and disease in population. **Material and method:** Here in this work 100 patients have been taken up for the study from the OPD of Sri ganganagar Homoeopathic Medical College Hospital and Research Institute. This was primarily cross sectional study then Interventinal study without controlled. **Result-** 30 medicines were prescribed all in 6 CH potency and usually given twice but sometimes 4 times a day. Medicine selected were all used in prefixed potency of 6CH potency considered that this disease bring the general condition of patient is done and less reactive medicine were given from two to four times a day depending on the severity or the recurrence of symptoms. Now we compare the calculated value of test statistics with the tabulated value of test statistics at  $\alpha = 0.05$  and  $df = n-1$  i.e. 1.6604 I see that the calculated value of test 11.11 is greater than the tabulated value, so I reject null hypothesis i.e. homoeopathic medicines is ineffective in patients of chronic obstructive pulmonary diseases. **Conclusion:** This study shows that the patients suffering from COPD developed Right Ventricular Dysfunction at variable stages of illness. It can be concluded that right ventricular dysfunction is not directly related to the span of suffering but on individual responses towards the disease stimulation. Enlargement of right ventricular is not directly related to the age of the patients hence it can

also be safely said that age doesn't play a direct role on right ventricular enlargement in COPD patients. The patients irrespective of age, sex and period of suffering responded to homoeopathic treatment, expressed by clinically well being.

**Key word-** COPD, PFT, ECHO, RVD, Assessment Scale.

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## INTRODUCTION

COPD is one of the leading causes of morbidity and mortality worldwide. The prevalence of COPD across the globe approximately 210 million people has COPD worldwide. However the total burden of COPD is underestimated because the disease is usually not diagnosed until it produces symptoms, which usually occur when the disease is moderately advanced. It is the 3rd largest cause of death in the world and kills nearly 3 million people every year. COPD mortality in females has more than doubled over the last 20 years. According to the 2012 National Health Interview Survey (NHIS) approximately 5 million adults and 1 million children in the United States used homeopathy in 2011. According to the 2014 Italian National Institute of Statistics (ISTAT) survey, homeopathic products have been used by approximately 2.5 million people in Italy in the years 2010–2013 and they have been prescribed by over 20,000 physicians.

Another debated point in homeopathy is its lack of prescribing standards, as a result of which treatments can be highly individualized for a broad variety of symptoms. To address these uncertainties, some recent studies have investigated homeopathic treatment protocols using large cohorts of patients and long follow-up periods, so as to monitor the real-world effectiveness of homeopathic medicine in everyday clinical practice. An observational longitudinal study conducted in Italy between 1998 and 2008 analyzed the socio-demographic features and the outcomes of a pediatric population treated with homeopathic medicine. The results were promising and indicated a positive therapeutic response, especially in children affected by respiratory diseases<sup>1,2</sup>.

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In this study no particular sampling procedure used, 100 minimum sample size used. Bronchial Asthma is defined as a chronic inflammatory disease of airways that is characterized by increased responsiveness of the trachea bronchial tree to multiplicity of stimuli, followed by rise in IgE antibodies when they come in contact with allergens. It is manifested physiologically by a widespread narrowing of the air passages, which may be relieved spontaneously or a result of therapy, and clinically by a paroxysms of dyspnea, cough, and wheezing. Cardinal pathophysiological features of asthma include first, airflow obstruction usually reverses spontaneously or with treatment. Second, airway hyper reactivity, exaggerated broncho constriction to a wide range of non specific stimuli e.g. - exercise, cold air<sup>3,4</sup>. Third, eosinophils, lymphocytes, mast cells, neutrophils, associated oedema, smooth muscle hypertrophy and hyperplasia, thickening of basement membrane, mucous plugging and epithelial damage. The five main objectives of the study are – to study the clinical presentation of bronchial asthma and management of bronchial asthma, to individualize the case of bronchial asthma, to prevent the complications of bronchial asthma and counseling and advice to change the life style. In conclusion, the

basic approach in homoeopathy is to evaluate the disease of Asthma in its whole extent, where by a lot of emphasis is given to the patient as a whole besides minutely studying various detailed aspects of the Asthma<sup>5,-8</sup>.

Dr. R. Kannan etc. all, it found that LV diastolic dysfunction do play a role in prolonging the symptoms of COPD esp. severe stages of COPD. The mechanisms that might explain the A cross sectional study on evaluation of right ventricular diastolic dysfunction in COPD patients using Homoeopathic medicines in 6th potency 15 presence of left ventricular diastolic dysfunction in COPD patients are many<sup>9-12</sup>. First is, chronic hypoxemia leading to intracellular calcium transport disturbances which might result in abnormalities of myocardial relaxation. This mechanism usually occurs in severe cases of COPD, grade III and IV as shown in this study. Second is the presence of pulmonary hypertension with chronic right ventricular hypertrophy which may develop in COPD patients followed by right ventricle dilatation. During early diastole, the ventricular septum displaces toward the left ventricular cavity and the left ventricle becomes distorted from its circular configuration. The severity of left ventricular and septal deformity depends on the transept pressure gradient. Thirdly,

the presence of emphysema and hyperinflation which has been related to impaired left ventricle filling. This is due to increased intra thoracic pressures which may impair cardiac function by decreasing biventricular preload and increasing left ventricular after load<sup>13,14</sup>.

## METHODS

**Study Setting:** The Study was conducted at O.P.D/I.P.D of Sri Ganganagar Homoeopathic Medical College Hospital & Research Institute, Sri Ganganagar (Rajasthan)

**Study Duration:** The Study duration was 1 Year

**Selection of Sample:** Minimum 100 appropriate cases were selected, randomly from college, OPD/IPD.

### Inclusion Criteria :-

- 100 patients included, after receiving informed consent.
- The patients who were fairly articulate.
- Patients of both sexes.
- Adult patients suffering from COPD.

### Exclusion Criteria:-

- Patients suffering from other debilitating diseases.
- Patients who cannot express fairly.
- Too young and too old patients.
- Non-ambulatory patients.
- Patients suffering from multi-organ failure.

**Study Design:** A Pre - Post study One group pretest-posttest design is a quasi-experimental design that is used quite Often in clinical research. It involves one set of measurements taken before and after treatment on one group of subjects. The effect of treatment is determined by comparing pretest and posttest scores.

**Intervention-** Homoeopathic remedy :- It was prescribed in 6CH potency.

**Doses** - Selection of dose was done according to the nature of case following homoeopathic principles. In forms of Globule Form.

**Selection of tool** - Case taking proforma, Library, Organon of Medicine, Materia medica, Kent Repertory, Encyclopedia, Equipped Laboratory, Electronic search tools, Assessment scale.

Hypothesis was tested by using 't' table and 't' paired test was used to nullify the Null Hypothesis and alternate Hypothesis was established. Alternate Hypothesis was established by analyzing the data with the following graphs: i) Pie ii) Histogram

**Data Collection-** Data collection was done on the basis of the simple randomized sampling Method.

**Statistical Techniques-** Paired T- test is used as a statistical technique.

**Data Analysis** - The data analysis was done on the basis of symptom score before

treatment and after treatment using the Chatterjee's Dyspnoea on Exertion scale.

**Advice** - Supportive dietary advice, auxiliary measures, meditation and yoga were advised as necessary.

**Follow up:** The follow ups of the cases were done at an interval of 7-14 days.

## RESULT

Patient taken were 100. There age spanning between 7 and 80 years, of gender distribution there was 62 (n=100) males and females 38 (n=100) indicating a male predominance; rural 56 (n=100) and urban 44 (n=100); right heart affection - dilatation of right ventricle followed by that of right atrium was found in 33 (n=100); spirometry results on insufficiency with was found (n=100) in patients; improved were 57 (n=100) of course some 10 (n=100) patients short acute aggravation followed by gradual remission; 1 (n=100) patient died cardio respiratory failure though he didn't show signs of congestive cardiac failure. Patients were kept under strict management that gives good result as none developed secondary complications. 30 medicines were prescribed all in 6 CH potency and usually given twice but sometimes 4 times a day. Medicine selected were all used in prefixed potency of 6CH potency considered that this disease bring the general condition of

patient is done and less reactive medicine were given from two to four times a day depending on the severity or the recurrence of symptoms. All patients were pre diagnosed were under the best possible treatment they could manage yet they had been suffering. Therefore their treatment previous to this study was not discontinued. Arsenic Album and Bryonia Alba were the medicines of choice as first prescription. 32 (n=100) patients received medicine at last visit. 76 (n=100) patients continued with treatment and improved up to varying degree during the 10 months. During 11 months study the longest follow was of 15 years old male patient. Placebo was given during the intervening period as the patient show improvement. In all the result was encouraging and inspiring.

## DISCUSSION

Chronic obstructive pulmonary disease patients were studied to understand possible right ventricular changes and response to medicine. 100 patients of different disease and both sexes were studied with their consent. As all patients were pre diagnosed, their previous treatment was not discontinued. Patients were taken up between January and October as the prevalence of condition is more during spring and autumn. All these patients were observed for 10 months. All of them were directed to report as and

when they felt it necessary. Although average interval between two follow-up was 15 days. Spirometry and Right ventricle study was done outside Hospital. It was found that the span of illness and involvement of right ventricle mismatched. As the history suggested and echocardiographically assessed that many patients suffering from COPD for long this didn't developed right ventricle dysfunction. All patients were called for at least five follow ups. 23 patients were left follow up without reporting. At least three patients needed oxygen support of which one patient expired of respiratory failure. 51 patients reportedly improved. This work in general will bring up hope that an extensive study will bring health to the patients and peace of mind to their relatives in common and in society in general.

### CONCLUSION

The study was conducted on patients across the villages and township of Sri Ganganagar, centered at Sri Ganganagar Homoeopathic Medical College and Research Institute. This study continues for one year. It shows that the patients suffering from COPD developed Right Ventricular Dysfunction at variable stages of illness. It can be concluded that right ventricular dysfunction is not directly related to the span of suffering but on

individual responses towards the disease stimulation. Enlargement of right ventricular is not directly related to the age of the patients hence it can also be safely said that age doesn't play a direct role on right ventricular enlargement in COPD patients. The patients irrespective of age, sex and period of suffering responded to homoeopathic treatment, expressed by clinically well being. It leaves a wide space for further investigation so as to bring cure to the suffering humanity.

### REFERENCES

1. Frew AJ, Holgate ST. Respiratory disease. In: Kumar P, Clarke M, Editors. Clinical Medicine. 7th ed. Spain: Saunders Elsevier Limited; 2009. 11
2. Rossi E, Crudeli L, Garibaldi D. Cost-benefit evaluation of Homoeopathy versus conventional therapy in respiratory diseases. Homoeopathy 2009; 98:2-10.
3. Pearce N, Ait-Khaled N, Beasley R, et al. Worldwide trends in the Prevalence of asthma symptoms: phase III of the International Study of Asthma and Allergies in Childhood (ISAAC). Thorax. 2007; 62: 758-66.
4. Expert panel report 3: Guidelines for the diagnosis and management of Asthma. National asthma education

- and prevention program. *J Allergy Clin Immunol* 110: 141, 2002. Pp.11
5. ACCP Pulmonary medicine board review book, 26th ed. 2015, p.81- 82.
  6. Shah Siddhartha N. Dr Annand P.M. API Text book of physician, 10th Ed. 2015, p. 291-295.
  7. Goldman: Cecil Textbook of Medicine, 25th ed. 2015, p 434-435.
  8. Harrison's principles of internal medicine 18th ed. rev 2015, p.711-715.
  9. McPhee Stephen J, Papadakis M.A. Current Medical Diagnosis & Treatment, 49th Edition. U.S.A, 2015, p 206-208.
  10. Clarke & Kumar Clinical Medicine 8th ed 2015, p. 912,917-918.
  11. Organon of medicine by Samuel Hahnemann 6th ed. Sec.9 and 10, Sec 7 & 8.
  12. Hahnemann Samuel, Organon of Medicine, Hahnemann's Own Written Revision, translated by William Boericke, Sixth edition, ed. 2005, p. 8, 94, 114, 119.
  13. Gupta V K, CCRH Quarterly Bulletin, Vol 8(1-4), 1986, Indian Journal Of Research in Homoeopathy 2013, 7(4), 181-83.
  14. Tyler Gina, Miasms- Understanding & classifying miasmatic symptoms, Hpathy Ezine, April 20, 2014-15.
  15. Chattopadhyaya, Narendra Narayan, Chatterjee, Namita, Kavishwar, Ajinkya, Biostatics and Research methodology in homœopathy, 1<sup>st</sup> edition, N. C. Chatterjee, Shree apartment south circular road, Abohar (152116), Fazilka, Punjab, India.
  16. Chaurasia, B. D., B. D. Chaurasia's Human Anatomy, Volume 1, Upper Limb, & Thorax, 4<sup>th</sup> Edition, Satish kumar jain for CBS Publishers & Distributers, 4596/1-A, 11 Darya Ganj, New Delhi-110002 ( India), Page no. 181-263.

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