



# An Open Label Interventional Study To Assess The Effectiveness Of Homoeopathic Medicine *Aralia Racemosa* In Providing Symptomatic Relief In Cases Of Allergic Rhinitis

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## ABSTRACT:

### Background:

Allergic rhinitis is an IgE mediated immune response of nasal mucosa to certain allergens. It is characterized by symptoms such as nasal congestion, sneezing, rhinorrhea and nasal itching and maybe accompanied by symptoms of allergic conjunctivitis. It is responsible for impaired quality of life of patients

### Aim:

To assess the effectiveness of Homoeopathic medicine *Aralia Racemosa* in providing symptomatic relief in cases of Allergic Rhinitis.

**Methodology:**

Prospective single arm open label interventional study was conducted at the O.P.D/I.P.D. of Dr.Girendra Pal Homoeopathic Hospital & Research Centre Saipura, Sanganer Jaipur (Rajasthan). 100 cases of allergic rhinitis were selected on the basis of inclusion and exclusion criteria. SFAR scores and TEC and IgE levels were used for the assessment of improvement.

**Results:**

The comparative analysis of Pre value of SFAR score (M= 11.20, SD= 2.318) vs. post value of SFAR score (M =4.80, SD=3.25) of *Aralia Racemosa* show significant difference (mean difference- 6.400),  $t(32) =24.172$ ,  $p < .005$  during statistical analysis of SFAR Score. The comparative analysis of Pre value of IgE (M= 588.50, SD= 310.45) vs. post value of IgE (M =298.81, SD=150.63)  $t(32) =13.386$ ,  $p < .005$  of *Aralia Racemosa* show significant difference (mean difference- 289.69) during statistical analysis of IgE values. The comparative analysis of utility of Pre value of TEC (M= 507.79, SD= 118.25) vs. post value of TEC (M =280.61, SD=80.91)  $t(32) =21.810$ ,  $p < .005$  of *Aralia Racemosa* show significant difference (mean difference- 227.18) during statistical analysis in TEC values.

**Conclusion:**

This study proved the effectiveness of *Aralia Racemosa* in management of cases of allergic rhinitis.

**KEYWORDS:** allergic rhinitis, homoeopathy, *aralia racemosa*

**ABBREVIATIONS:**

AR: Allergic Rhinitis

IgE : immunoglobulin E

TEC: Total eosinophil count

OPD: Out Patient Department

IPD: In Patient Department

SFAR : Score for the Allergic Rhinitis

## INTRODUCTION:

Allergic rhinitis (AR) is an inflammatory disorder of nasal mucosa which is characterized by sneezing, nasal congestion, rhinorrhea and nasal itching and is caused due to IgE - mediated immune response of nasal mucosa to airborne allergens<sup>[1,2,3]</sup> According to estimates from the Global Burden of Disease 2015, it has been found that a significant number of people, roughly 400 million worldwide are affected by AR. Globally, its prevalence has increased, especially in low- and middle-income nations. The prevalence of (AR) in Asian countries ranges from 5% to 45%.<sup>[4]</sup> Although boys are more likely than girls to have allergic rhinitis, this tendency reverses in puberty so that, by adulthood, men and women are affected equally<sup>[5]</sup> In children under 3 years old, the prevalence is 5%; in children aged 6-7 years old, it is 8.5%; in children aged 13–14, it is 14.6%; and in adults aged 20–44 years old, it ranges from 11.8% to 46%.<sup>[6]</sup>

A study found that increased susceptibility to allergic rhinitis is strongly correlated with increased alcohol consumption, smoking (current, past, and passive smoking), higher daily computer usage (due to dust trapped on the computer and higher indoor allergens), and decreased sleep hours. Living a stressful life and having a history of depression in the mother (pre and post natal) are strongly associated with AR because these factors can cause the expression of cortisol, which then causes allergic reactions and ups the likelihood of AR <sup>[7,8]</sup>

It is important to recognize and treat moderate-to-severe rhinitis since it is associated with poor asthma management. People with chronic and severe rhinitis have a significant prevalence of asthma. Individuals with allergic rhinitis have additional difficulties with viral colds <sup>[1]</sup> Several associated issues such as allergic conjunctivitis, recurrent sinusitis, rhinosinusitis, nasal polyps, adenoid hypertrophy, hyposmia, Eustachian tube dysfunction, and serous otitis media, can be brought on by nasal allergies. Additionally, these people can have sleep apnea. Additionally, nasal allergies may affect a person's cognitive ability.<sup>[9,10,11]</sup>

Previous homeopathic studies have demonstrated the effectiveness of homeopathic medicines in treating cases of allergic rhinitis. *Aralia racemosa* is a lesser known homoeopathic medicine which is indicated in allergic rhinitis when patient complaints of Smarting soreness of posterior nares, caused by passage of acrid mucus, frequent sneezing, Discharge of salty acrid taste and others. However there is very less study in Homoeopathy on role of *Aralia Racemosa* in management of Allergic Rhinitis.

## AIM

To assess the effectiveness of Homoeopathic medicine *Aralia Racemosa* in providing symptomatic relief in cases of Allergic Rhinitis.

## OBJECTIVES

- To assess the effectiveness of Homoeopathic medicine *Aralia Racemosa* in providing symptomatic relief in cases of Allergic Rhinitis by using the “SFAR” (Score for the Allergic Rhinitis).
- To assess the effectiveness of Homoeopathic medicine *Aralia Racemosa* on IgE value in cases of Allergic Rhinitis.
- To assess the effectiveness of Homoeopathic medicine *Aralia Racemosa* on TEC value in cases of Allergic Rhinitis.

## MATERIALS & METHODOLOGY

**Study design & Setting:** This was a Prospective single arm open label interventional study. The study was conducted at the O.P.D/I.P.D. of Dr.Girendra Pal Homoeopathic Hospital & Research Centre Saipura, Sanganer Jaipur (Rajasthan) for period of one year.

### Inclusion Criteria:

- Patients of all Ages, Both Sexes.
- Diagnosed Cases of Allergic Rhinitis with symptom score >7 in SFAR
- Cases with atleast 5 symptoms from the following Symptoms checklist of *Aralia racemosa*
  1. Smarting soreness of posterior nares, caused by passage of acrid mucus
  2. peculiar soreness of alæ nasi as if fissured.
  3. Hay-fever
  4. frequent sneezing.
  5. Rawness and burning behind sternum.
  6. The least current of air causes sneezing,
  7. copious watery, excoriating nasal discharge,
  8. Discharge of salty acrid taste.

### Exclusion criteria

- Pregnant females and females who were lactating were excluded.
- Cases who refused to give their consent for the study.
- Patient who were suffering from any other systemic illness requiring conventional treatment.
- Patients with advanced pathological conditions and Immunocompromised patients.

### Sample size:

A total of 100 cases were included in the study.

**Intervention:**

Homoeopathic medicine, Aralia racemosa was prescribed.

**Assessment of progress:**

Detailed case taking was done on especially designed case taking proforma. Cases were reviewed after every 7 or 15 days using SFAR score .

**Outcome assessment & result:**

According to the SFAR scores obtained , following formula will be applied after calculating before and after scores.

$$\frac{\text{Baseline Score} - \text{Score at the end}}{\text{Baseline Score}} \times 100\%$$

Following parameters would be fixed according to the type of the response obtained after the treatment –

Marked Improvement	=	75%-100%
Moderate Improvement	=	50%-74%
Mild Improvement	=	25%-49%
Non -significant	=	<25%
Status quo	=	0 %

**WORSE** – When there was no improvement in condition of the patient and instead his/her complaints got worse in respect to SFAR Score. This was assessed in view of Homoeopathic aggravation, disease & medicinal aggravation. Counselling of patient was done accordingly; if aggravation continued for more than 30 days then was considered as worse.

**DROPPED OUT** – When patient discontinues the treatment during the course of study or shows poor compliance.

**Statistical analysis:**

Paired t test was applied to ascertain the statistical result by using pre and post SFAR Score, IgE values and TEC values.

**Research hypothesis:**

**Null Hypothesis (H<sub>0</sub>)** - There is no significant difference in the pre and and post symptomatic score in cases of allergic rhinitis treated with Homoeopathic medicine Aralia racemosa.

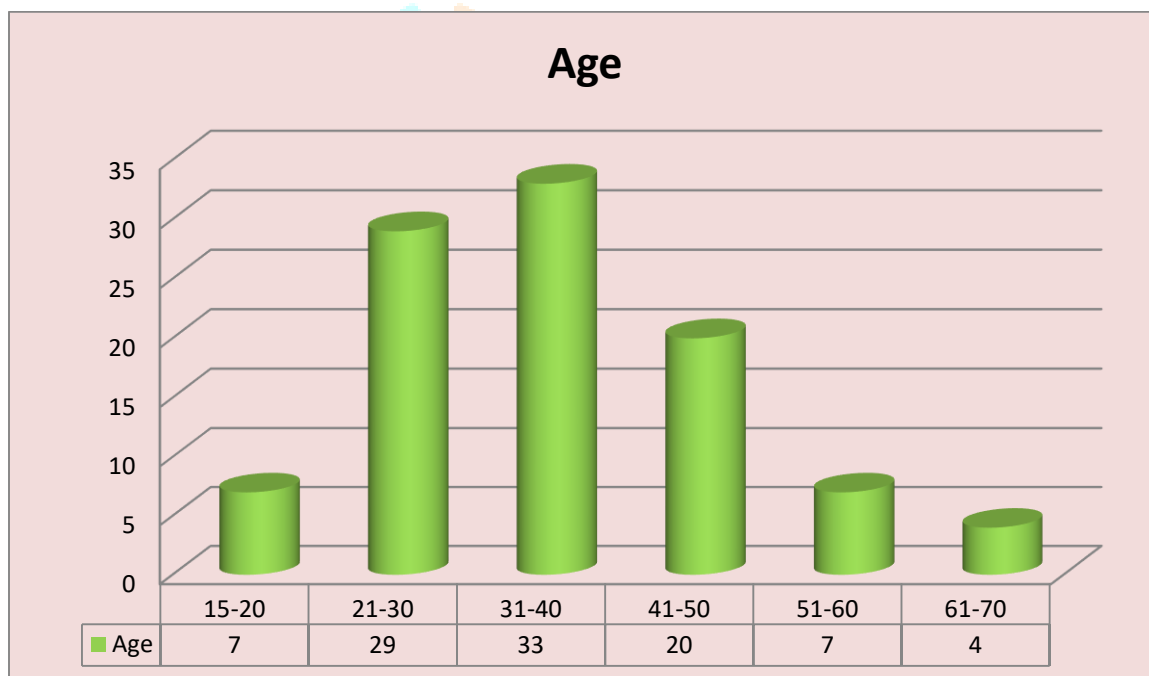
**Alternate Hypothesis (H<sub>A</sub>)** - There is significant difference in the pre and post symptomatic score in cases of allergic rhinitis treated with Homoeopathic medicine *Aralia racemosa*.

### **OBSERVATIONS & OUTCOME:**

The following data was obtained:

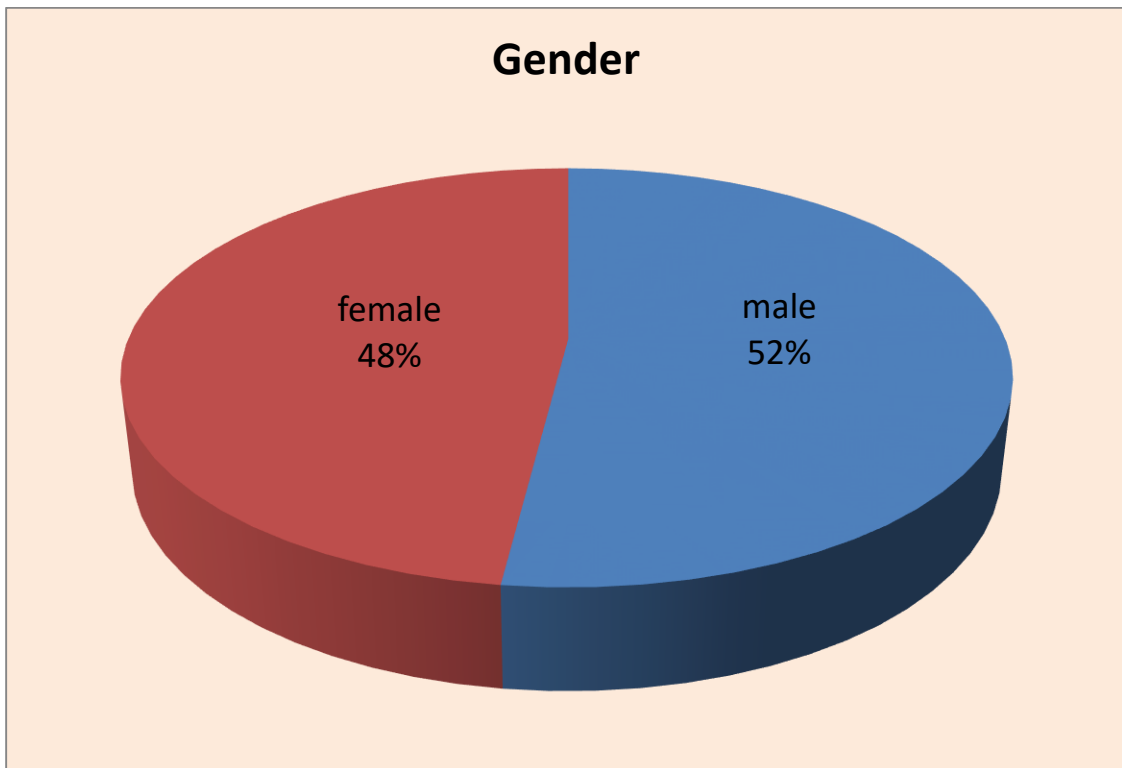
#### **Age distribution:**

Out of 100 cases, maximum cases of Allergic Rhinitis were observed in the age group of 31-40 Years i.e. 33 cases whereas minimum cases were in 61-70 yrs age group i.e. 4 cases 7 cases were observed in the age group of 15-20 yrs, 29 cases were in 21-30 yrs age group. 20 cases were observed in age groups of 41-50 yrs and 7 cases in 51-60 yrs age group.



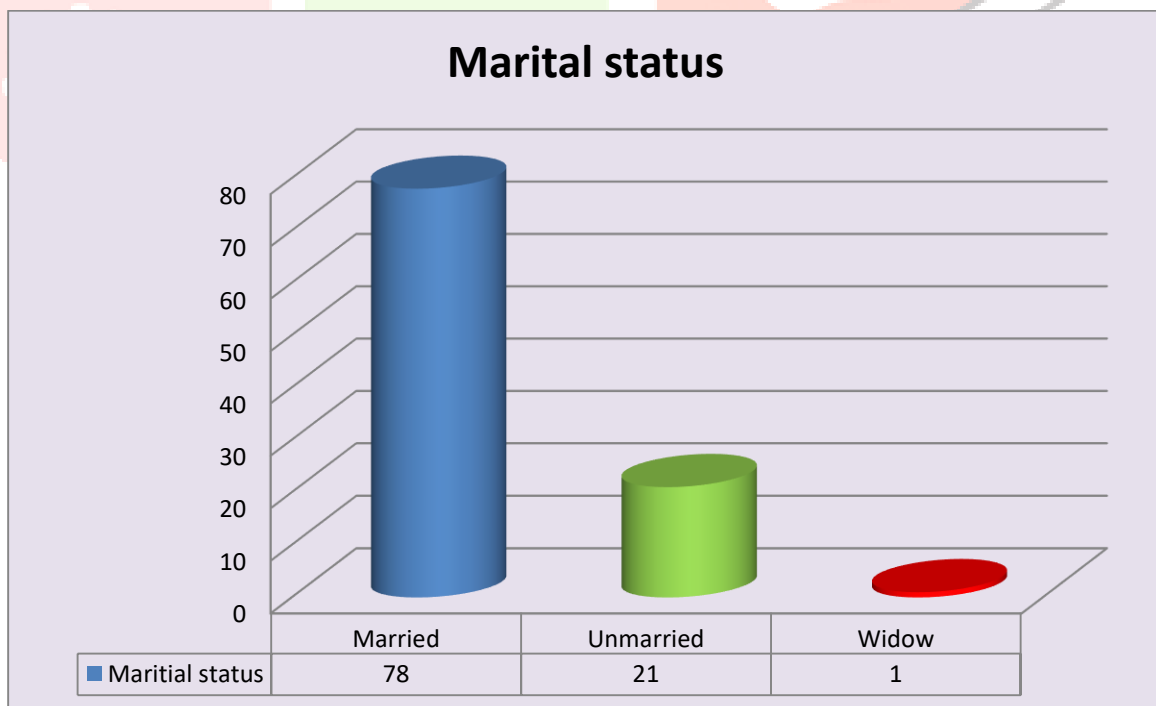
#### **Sex distribution:**

maximum cases of Allergic Rhinitis were observed in male patients i.e. 52 patients in comparison to female patients i.e. 48 cases.



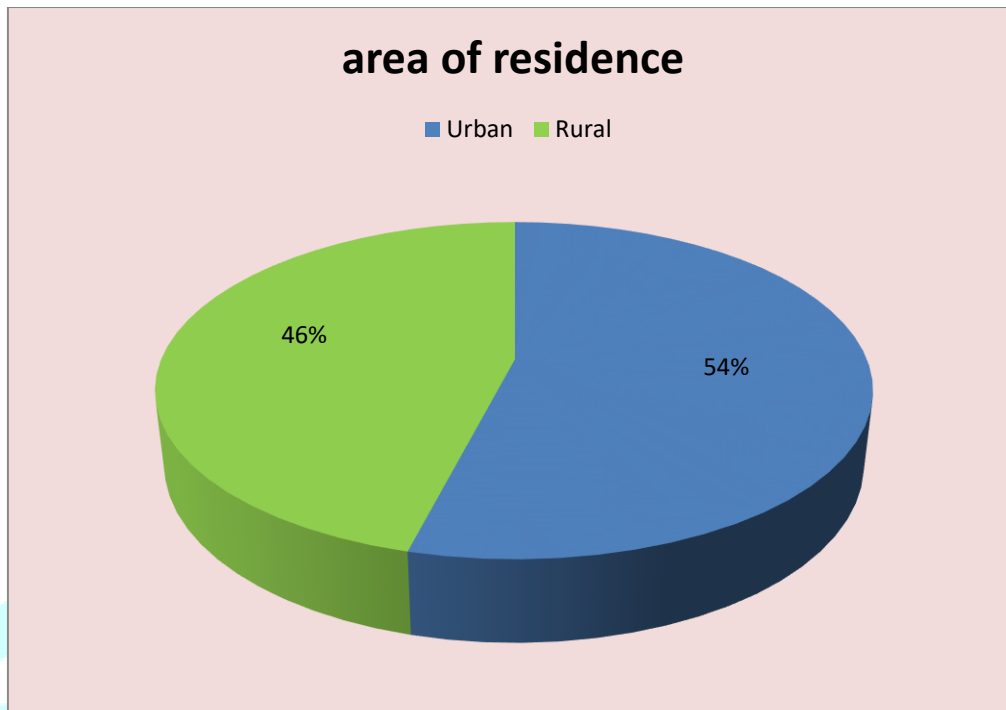
### Marital status

maximum cases of Allergic Rhinitis were observed in married patients i.e. 78 patients and 21 Patients were Unmarried and 1 patient was widow.



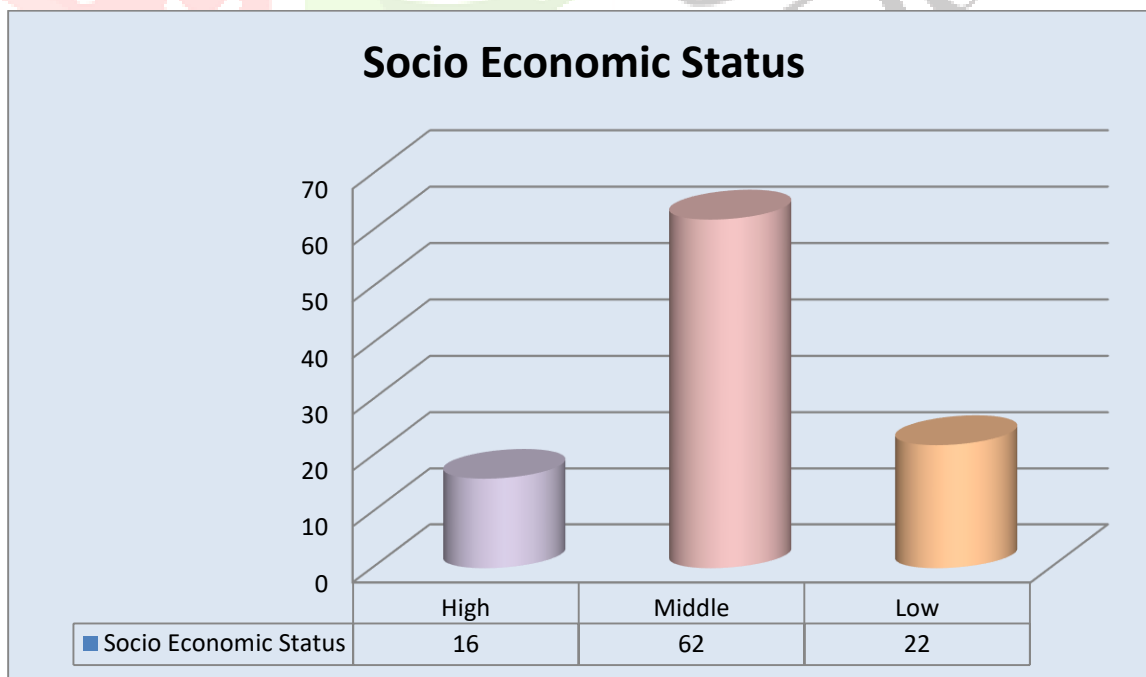
### Area of Residence

Maximum no. of cases i.e. 54 patients were observed from urban area whereas 46 patients were from rural area.



### Socio economic status

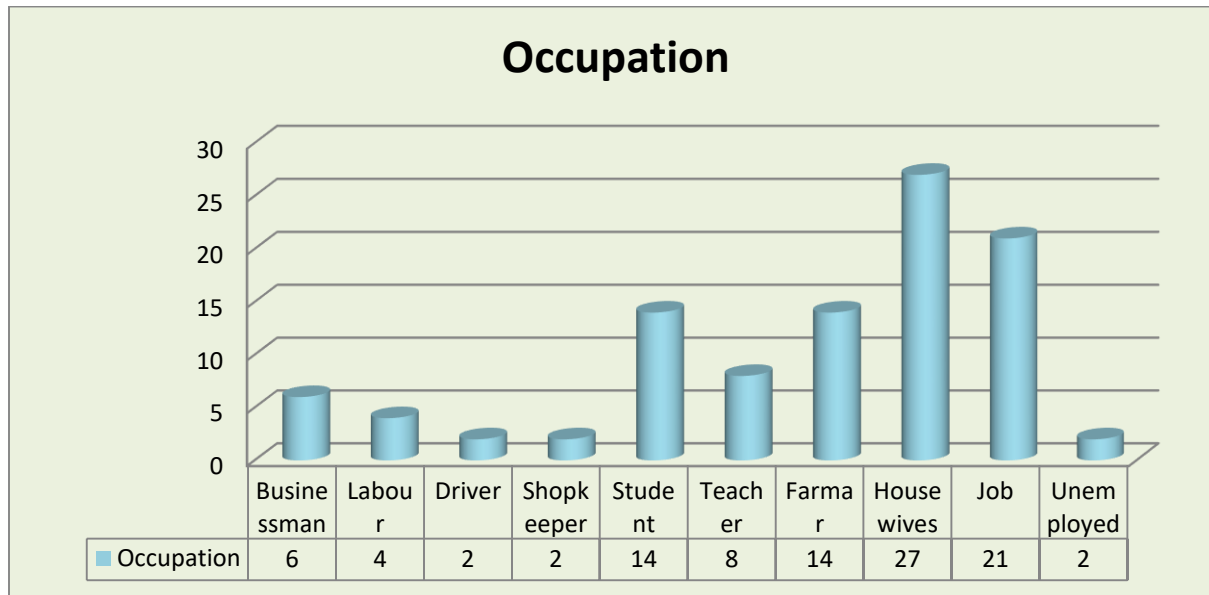
Maximum no. Of cases were observed from middle socio-economic group i.e. 62 patients, followed by lower socio-economic status i.e. 22 patients whereas 16 patients were from high socioeconomic status.





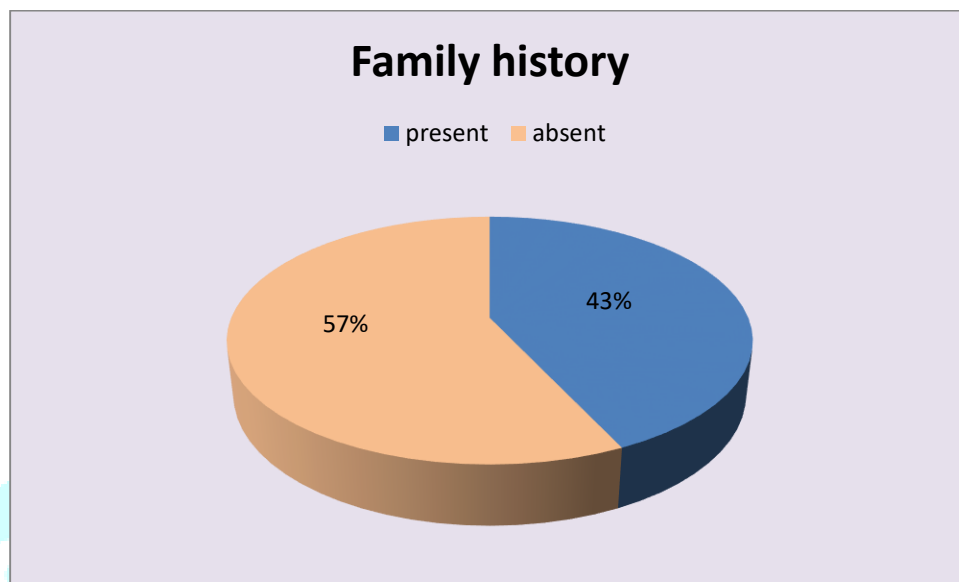
**Occupation:**

Out of 100 cases, 27 patients suffering with Allergic Rhinitis were housewives; 14 patients were Farmers; 21 patients were from Job; 4 patients were labors; 2 patients were unemployed; 8 patients were teacher; 14 patients were in Students; 6 patients were businessman; 2 patients were driver; 2 patients were shopkeeper.



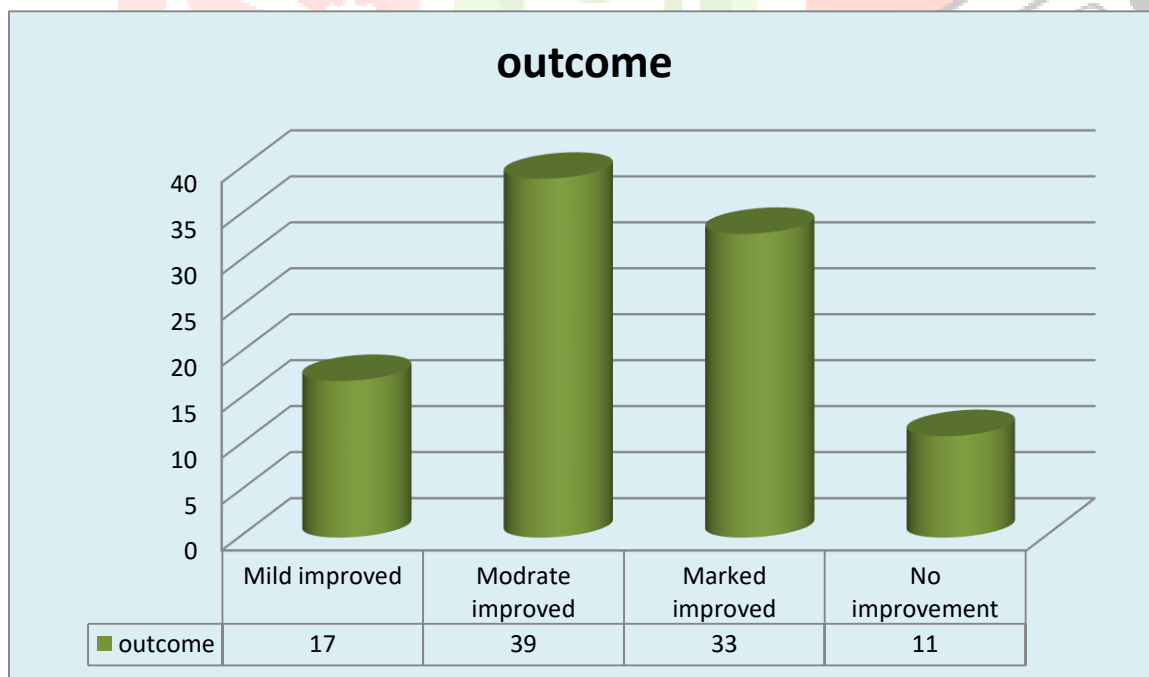
### Family history

Family history was positive in 43 cases and negative in 57 cases.



### Outcome

Out of 100 cases, In 33 cases Marked Improvement was seen. In 39 cases Moderate Improvement was seen. In 17 cases Mild Improvement was seen. In 11 cases no improvement was recorded in the study.



## Statistical analysis and result

Paired t test was applied to ascertain the statistical result by using pre and post SFAR Score, IgE values and TEC values.

Paired sample t-test result to assess the effect of *Aralia Racemosa* on Allergic Rhinitis a post-treatment (M= 4.80, SD= 3.250), compared to pre-treatment (M=11.20, SD= 2.318); shows difference of mean = 6.400,  $t(32) = 24.172$ ,  $p < .005$ , by SFAR score analysis. Lower score indicate that Allergic Rhinitis was significantly relived by *Aralia Racemosa*.

Paired sample t-test result to assess the effect of *Aralia Racemosa* on IgE Value in Allergic Rhinitis a post-treatment (M= 298.81, SD= 150.630), compared to pre-treatment (M=588.50, SD= 310.450); shows difference of mean = 289.693,  $t(32) = 13.386$ ,  $p < .005$ , by IgE value analysis. Lower score indicate that IgE value in cases of Allergic Rhinitis was significantly relived by *Aralia Racemosa*.

Paired sample t-test result to assess the effect of *Aralia Racemosa* on TEC value in Allergic Rhinitis a post-treatment (M= 280.61, SD= 80.911), compared to pre-treatment (M=507.79, SD= 118.258); shows difference of mean = 227.180,  $t(32) = 21.810$ ,  $p < .005$ , by TEC value analysis. Lower score indicate that TEC value in cases of Allergic Rhinitis was significantly relived by *Aralia Racemosa*.

## Discussion:

In this study it was observed that the maximum cases of Allergic Rhinitis were in the age group of 31-40 years i.e. total 33 cases. Males were more affected than females. It was observed that maximum cases were married i.e. 78 and 21 cases were unmarried and 1 case of widow. Maximum cases i.e. 57 had no family history of Allergic Rhinitis and in 43 cases family history was positive. In this study before treatment Mean SFAR score was  $11.20 \pm 2.318$  (Mean  $\pm$  SD) and after treatment it reduced to  $4.80 \pm 3.250$  (Mean  $\pm$  SD). These changes showed significant relief in symptoms. Before treatment Mean IgE value was  $588.50 \pm 310.450$  (Mean  $\pm$  SD) and after treatment it reduced to  $298.81 \pm 150.63$  (Mean  $\pm$  SD). These changes showed significant relief in post IgE values. In study before treatment Mean TEC value was  $507.79 \pm 3118.25$  (Mean  $\pm$  SD) and after treatment it reduced to  $280.61 \pm 80.91$  (Mean  $\pm$  SD). These changes showed significant relief in post TEC values.

## Conclusion:

Allergic rhinitis is a very common ailment due to various environmental, genetic factors. But people doesn't pay much attention to its symptoms and often ignore taking treatment which leads to decreased quality of life of patients and various complications such as asthma, sinusitis, sleep apnea and others. Through this study we saw that homoeopathic medicine, *Aralia Racemosa* shows statistically significant result in Allergic Rhinitis cases, Not only in SFAR score but also helped to reduce the IgE and TEC level of cases. These results needs to validated by conducting randomized clinical trials with large sample size.

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