

## To Evaluate The Efficacy of Homoeopathic Medicine in Management of Upper Respiratory Tract Infection in Children

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**Abstract:** Objective: To study the efficacy of Homoeopathic Medicine Ambrosia, Aralia racemosa, Arundo, Sticta, Squilla and Wyethia in treatment of URTI. Methods: It was a randomised, controlled, open intervention trial to evaluate the efficacy of Homoeopathic Medicines prescribed in the treatment of Upper respiratory tract Infection in Children. Out of total 1800 patient surveyed 267 were younger than 12 yrs of age. Out of this 267 children surveyed 152 were having symptoms of upper respiratory tract Infection. After initial assessment of case with respect to inclusion and exclusion criteria out of 152 cases 100 cases were registered for study. Result: The study showed that out of 6 medicine prescribed for various Upper Respiratory Tract Infection Sticta proved to be the most effective medicine with 90.48% success rate followed by Wyethia 86.67%, Squilla 80.00%, Ambrosia 78.57%, Aralia 71.43% and Arundo 68.75%. Conclusion: The study concluded that Sticta proved to be most effective medicine with 90.48% in cases of Nasopharyngitis and Sinusitis (Throat raw; Post nasal dropping, Constant desire to blow the nose but no discharge) followed by Wyethia 86.67% in cases of Nasopharyngitis and Pharyngitis (Follicular pharyngitis, Dryness of throat with constant desire to swallow saliva), Squilla 80% in cases of Nasopharyngitis, Pharyngitis and tonsillitis (Child rubs the face with fist, Cough provoked by taking cold drinks), Ambrosia 78.57% in Rhinitis and sinusitis (Watery coryza, Stuffed up feeling on nose and head) Aralia 71.43% in Rhinitis (Sneezing with copious watery, excoriating discharge) and Arundo 68.75%. in Rhinitis and pharyngitis (Burning and itching of palate and conjunctiva). [L Dighe, Natl J Integr Res Med, 2018; 9(3):60-65]

**Key Words:** Upper respiratory Track Infection, children, Effect of Homeopathic medicine, Ambrosia, Aralia R, Arundo, Squilla M, Sticta P, Wyethia

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**Introduction:** Upper Respiratory Tract Infections accounts for 20–40% of outpatient and 12–35% of inpatient attendance in a general hospital. The upper respiratory tract includes the nose and mouth, the paranasal sinuses, ears, mastoids, pharynx and larynx. Upper respiratory tract infections including nasopharyngitis, pharyngitis, laryngitis, Sinusitis, tonsillitis and otitis media constitute the total episodes of respiratory infections. The vast majority of Upper Respiratory Tract Infections are caused by viruses and Viral infections are difficult to treat due to morphology and mutation nature. The use of so called Antibiotics has no place in treatment of Viral Infections and it is the Homoeopathic Medicines which can satisfy the altered susceptibility. The Homoeopathic Medicine like Ambrosia, Aralia, Arundo, Stica, Squilla and Wyethia are some of the important remedy for URTI.

**Objective:** To study the efficacy of Homoeopathic Medicine Ambrosia, Aralia racemosa, Arundo, Sticta, Squilla and Wyethia in treatment of URTI.

### Methods:

1. The study was carried out at O.P.D of Dr. V. H. Dave Homoeopathic Medical College, Anand, Gujarat.
2. It was a randomised, controlled, open intervention trial to evaluate the efficacy of Homoeopathic Medicines prescribed in the treatment of Upper respiratory tract Infection in Children.
3. Out of total 1800 patient surveyed 267 were younger than 12 yrs of age. Out of this 267 children surveyed 152 were having symptoms of upper respiratory tract Infection.
4. Children aged up to 12 years were eligible for participation in the trial if they had had at least one upper respiratory tract infections in the past year.
5. children who had adenoidectomy, tonsillectomy, untreated dental caries; congenital malformation of the respiratory tract or the heart; mental handicap; neurological disorder; history of rheumatic fever, endocarditis, myocarditis, or nephritis were excluded from the study.

6. After initial assessment of case with respect to inclusion and exclusion criteria out of 152 cases 100 cases were registered for study.
7. Each registered case was analyzed with respect to following criteria.
  - a. Causation: Weather, Allergy, Tendency, Family H/O
  - b. Allergy: Cold Drink, Food, Cloth, Sugar & Sweet, Dust, Chocolate, Milk and Milk Product, Ice cream, Banana, Perfume
  - c. Symptoms of URTI
  - d. Frequency of Attack: Seasonal, 1 – 3, 3 – 5, 5 – 10 or Perrinnial.
  - e. Duration of Attack (in days): 3 – 5, 6 – 8, 9 – 11, 12 – 14, >14
  - f. Complication.
8. To quantify the severity of Upper Respiratory Tract Infection we developed a symptoms score as follow:
  - a. Each causation received 1 Mark
  - b. Each Allergy received 1 Mark
  - c. Symptoms of URTI were graded as per intensity Mild, Moderate and Severe and given 1, 2 & 3 Mark.
  - d. Frequency of attack was graded as per increasing order from 1 to 5.
  - e. Duration was graded as per increasing order from 1 to 5.

The symptom score was prepared from the entry point of case and at the end.

Improvement was calculated using formula:

$$\text{Improvement} = \frac{\text{Baseline Score} - \text{Score At End}}{\text{Baseline score}} \times 100$$

10. Changes were graded as cured (100% improvement), marked improvement (75 to < 100% improvement), moderate improvement (50 to < 75% improvement), mild improvement (25 to < 50% improvement), not significant improvement (< 25% improvement), static (no change), and worse (increase in symptoms score with complication).
11. In each the prescribed medicine was recorded and the symptom totality was also recorded on the basis of improvement. Remedy profile of each remedy was prepared on the basis of symptoms it has relieved.

**Observation and Results:**

**Table 1: Distribution of Cases of URTI as per Age Incidence**

Age Group (In Years)	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.	Percentage (%)
< 3	51	07	09	11	13	78.43
3 – 6	24	04	05	06	07	91.66
6 – 9	16	03	02	04	02	68.75
9 – 12	09	02	02	01	02	77.77
Total	100	16	18	22	24	80.00

**Table 2: Distribution of Cases of URTI as per Gender Incidence**

Gender	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.	Percentage (%)
Male	053	10	09	13	14	86.79
Female	047	06	09	09	10	72.34
Total	100	16	18	22	24	80.00

**Table3: Distribution of Cases of URTI as per causation**

Causation	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.	Percentage (%)
Weather	52	10	08	14	10	80.76
Allergy	23	03	04	04	07	78.26
Tendency	29	03	04	04	07	62.06
Family H/O	04	00	02	00	00	50.00

**Table 4: Distribution of Cases of URTI as per Allergy**

Allergy	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.	Percentage (%)
Cold Drink	25	07	03	04	05	76.00
Food	11	02	00	01	03	54.54
Cloth	01	00	00	00	01	100.00
Sugar & Sweet	07	01	00	01	03	71.42
Dust	35	04	02	06	05	48.57
Chocolate	40	01	10	08	04	57.50
Milk & Milk Product	04	00	01	00	01	50.00
Ice Cream	08	00	01	01	00	25.00
Banana	03	01	00	00	01	66.66
Perfume	07	00	01	01	01	42.81

**Table 5: Distribution of Cases of URTI as per Symptoms**

Symptoms	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.	Percentage (%)
Itchy, watery eyes	16	03	03	03	03	75.00
Nasal Discharge	43	03	06	09	12	69.76
Nasal Congestion	28	04	03	04	03	50.00
Sneezing	37	06	03	09	10	75.67
SoreThroat	23	02	04	05	06	73.91
Cough	56	14	06	10	11	73.21
Headache	19	03	03	04	06	84.21
Fever	24	04	04	03	03	58.33
Malaise	07	01	02	03	00	85.71
Fatigue	02	00	01	00	00	50.00
Weakness	06	00	02	00	02	66.66
Myalgia	10	03	02	01	02	80.00
Coryza	50	18	10	12	05	90.00

**Table 6: Distribution of Cases of URTI as per Frequency**

Frequency	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.	Percentage (%)
Seasonal	65	15	10	13	14	80.00
1 – 3	21	01	06	06	05	85.71
3 – 5	08	00	02	00	03	62.50
5 – 10	02	00	00	01	00	50.00
Perennial	04	00	00	02	02	100.00
Total	100	16	18	22	24	80.00

**Table 7: Distribution of Cases of URTI as per Duration**

Frequency	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.	Percentage (%)
3 – 5 days	13	05	06	00	00	84.61
6 – 8 days	05	01	01	01	01	80.00
9 – 11 days	01	00	00	01	00	100.00
12 – 14 days	01	00	00	00	00	00.00
> 14 days	80	10	11	20	23	80.00
Total	100	16	18	22	24	80.00

**Table 8: Distribution of Cases of URTI as per change in Severity Score**

Score	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.
0 – 13	00	16	08	06	00
14 – 26	00	00	10	10	07
27 – 39	36	00	00	06	10
40 – 52	22	00	00	00	07
53 - 65	42	00	00	00	00
Total	100	16	18	22	24

**Table 9: Distribution of Cases of URTI as per Medicine Prescribed**

Remedy	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.	Percentage (%)
Ambrosia	14	01	04	03	03	78.57
Aralia R.	14	01	03	03	03	71.43
Arundo	16	01	03	04	03	68.75
Squilla M.	20	03	02	07	04	80.00
Sticta P.	21	06	05	01	07	90.48
Wyethia	15	04	01	04	04	86.67
Total	100	16	18	22	24	80.00

**Table 10: Distribution of Cases of URTI as per Medicine Prescribed Chi Square Test**

Remedy	Success	Failure	No. Of Cases
Ambrosia	11 (11.2)	03 (2.8)	14
Aralia R.	10 (11.2)	04 (2.8)	14
Arundo	11 (12.8)	05 (3.2)	16
Squilla M.	16 (16)	04 (4)	20
Sticta P.	19 (16.8)	02 (4.2)	21
Wyethia	13 (12)	02 (3)	15
Total	80	20	100

O	E	O – E	O – E  <sup>2</sup> / E
11	11.2	0.2	0.003571
03	02.8	0.2	0.014285
10	11.2	1.2	0.128571
04	02.8	1.2	0.514285
11	12.8	1.8	0.253125
05	03.2	1.8	1.012500
16	16.0	0.0	0.000000
04	04.0	0.0	0.000000

19	16.8	2.2	0.288095
02	04.2	2.2	1.152380
13	12.0	1.0	0.083333
02	03.0	1.0	0.333333
			3.783478

**Table 11: Distribution of Cases of URTI as per Diagnosis**

Diagnosis	No. Of Cases	Cured	Ma. I.	Mo. I.	Mi. I.	(%)
Rhinitis	27	04	03	05	09	77.78
Nasopharyngitis	21	04	04	06	02	76.19
Pharyngitis	17	02	03	04	05	82.35
Tonsillitis	10	01	03	01	02	70.00
Sinusitis	25	05	05	06	06	88.00
Total	100	16	18	22	24	80.00

**Discussion:** This was a randomised, controlled, open intervention trial to evaluate the efficacy of Homoeopathic Medicines prescribed in the treatment of Upper respiratory tract Infection in Children. This study included children who suffered from Upper Respiratory Tract Infection irrespective of whether it was allergic, non-allergic or infectious, based on the symptomatic picture of URTI, since presentation is virtually similar.

The children in our study presented with varying severity of symptoms within onset of disease The cases selected were enrolled in the OPD during the year 2012 – 2013. The follow-ups were also well maintained in 100 cases which were analyzed for the study.

1. The study showed that out of 100 cases enrolled for the study 51 were less than 3 year old, 24 were between 3 – 6 year old, 16 were 6 – 9 year old and 9 cases were between 9 – 12 years of age. The age group 3 – 6 year showed improvement ranging from Cure to Mild Improvement in total 91.66% cases followed by 78.43% improvement in age group less than 3 years, 77.77% in age group 9 -12 and least improvement was observed in age group 9 -12 years. This is attributed to immune apparatus maturing up to 3 years and secondary dentition starts on during the age group 9 -12 years.
2. Out of 100 cases observed in the study 53 were male children and 47 were female children. The

success rate (ranging from cure to Mild Improvement) was observed in 86.79% cases in Male children and 72.34% cases in Female Children.

3. The study showed that out of 100 cases observed for Upper Respiratory Tract Infection 52 had weather as a causative factor, 23 had allergy as a causative factor, 29 had Tendency of getting URTI and 4 had Family H/O URTI. The success rate was highest for weather i.e. 80.76% followed by Allergy in 78.26%, Tendency in 62.06 and least 50% for Family History. It is well known that as the child grows the exposure to environment increases which may be the responsible for incidence as well as success rate.
4. The increasing incidence of Upper Respiratory Tract Infection in Children is mostly attributed to Allergy which is next to Weather observed in this study. There were various allergy observed among the children but most frequently observed allergy was of Chocolate, Dust and Cold drink. As the cloth allergy was observed in one case improvement was there but other than that Cold drink and Sugar & Sweet showed success with Homoeopathic Medicine in 76% and 71.42% cases respectively.
5. The study showed that out of 13 symptoms of URTI, cough, coryza, Nasal Discharge, Sneezing, Nasal Congestion, Fever, Sore throat were observed in maximum cases. The improvement rate was observed maximum for Coryza, Malaise, Headache, Myalgia, Sneezing, Itchy; watery eyes and sore throat.
6. The study showed that out of 100 cases 65 had seasonal attacks of Upper Respiratory Tract Infection. The improvement was observed 100% in perinial cases, 85.71% in 1 – 3 attacks and 80% in Seasonal Attacks of URTI.
7. The study showed that out of 100 cases of URTI 80 cases had more than 14 day duration resulted into 80% improvement. The cases with 9 – 11 day duration showed 100% improvement whereas case with 12 – 14 day duration did not showed any change after Homoeopathic medicine.

8. The study showed that out of 100 enrolled patient 42 has severity score ranging from 53 - 65, whereas at the end of treatment this score comes down between 0 – 26 in 57 patients which showed the efficacy of Homoeopathic Treatment.
  9. The study showed that out of 6 medicine prescribed for various Upper Respiratory Tract Infection Sticta proved to be the most effective medicine with 90.48% success rate followed by Wyethia 86.67%, Squilla 80.00%, Ambrosia 78.57%, Aralia 71.43% and Arundo 68.75%.
  10. As such URTI includes Rhinitis, Rhinopharyngitis, Pharyngitis, sinusitis, tonsillitis, Laryngitis and otitis. As such in case of URTI this diagnosis are interchanging i.e. at given time patient had rhinitis later on it may be Pharyngitis or sinusitis and so on. The cases taken under study showed Rhinitis, Nasopharyngitis, Pharyngitis, Tonsillitis and Sinusitis as their diagnosis at the time of presentation.
  11. The cases which were either status quo or worse showed complications like Pneumonia, Bronchitis, Congestive Headache and otorrhoea.
  12. Rhinitis, Nasopharyngitis and Sinusitis were the 73% of the total observed cases of URTI and same received more than 80% improvement with Homoeopathic Treatment.
3. Although Upper Respiratory Tract Infection can occur round the year, change of season had been important factor for higher incidence rate among children. The research place was in temperate climate zone where change of season and humidity allow the virus to multiply and infect the susceptible individuals.
  4. Allergy, Tendency to and Family H/O of URTI had been found to be responsible for Upper Respiratory Tract Infection in children.
  5. The Chocolate, Dust and Cold drink are the commonly observed substance causing allergic URTI among children.
  6. The commonly observed symptoms of URTI are as followed.
    - cough,
    - coryza,
    - Nasal Discharge,
    - Sneezing,
    - Nasal Congestion,
    - Fever,
    - Sore throat
  7. The Homoeopathic Medicine if prescribe as per totality of symptoms can reduces the duration of illness and can also reduces frequency of Upper Respiratory Tract Infection in over all 80% patients.

**Summary And Conclusion:** This was a randomised, controlled, open intervention, prospective trial to evaluate the efficacy of Homoeopathic Medicines prescribed in the treatment of Upper respiratory tract Infection in Children draw following conclusions.

1. Age is important factor altering susceptibility in children make them vulnerable to various infections and allergy especially Upper Respiratory tract. It coincides with literature that Children have approximately 3-8 viral respiratory illnesses per year. Effectiveness of Homoeopathic Medicine indicates that they can satisfy the altered susceptibility.
2. The literature showed that Nasopharyngitis, Laryngitis and laryngotracheitis have high incidence rate among male in comparison to female. The study also showed the similar pattern for incidence as well as success higher in male.
3. The Medicine Indicated in 100 cases of Upper Respiratory Tract Infection and out of this 100 cases successful 80 cases showed following list Symptom to be improved.
9. As such Upper Respiratory Tract Infection comprises various diagnosis like Rhinitis, Nasopharyngitis, Pharyngitis, Tonsillitis and Sinusitis. This diagnosis depends on the stage at which patient approached for the treatment because the above stated diagnosis may be changing as per the disease advancement.

**Ambrosia:**

- Watery Coryza
- Sneezing
- Stuffed up feeling of nose and head
- Irritation of trachea
- Wheezy cough

**Aralia R:**

- Sensitiveness to draughts
- Sneezing with copious watery, excoriating nasal discharge.
- Cough worse after first sleep.

**Arundo:**

- Burning and itching of palate and conjunctive
- Coryza with loss of smell.
- Sneezing.
- Cough

**Squilla M:**

- Fluent coryza
- Sneezing with coughing.
- Throat irritated
- Short, Dry cough.
- Child rubs the face with fist during cough.
- Cough provoked by taking cold drinks.
- Cough < change from warm to cold air.

**Sticta P:**

- Constant desire to blow the nose, but no discharge.
- Incessant Sneezing.
- Throat raw, Post nasal dropping.
- Dry cough < night.
- < Sudden change of temperature.

**Wyethia:**

- Follicular Pharyngitis.
- Constant clearing and hemming.
- Throat feels swollen.
- Difficulty in swallowing.
- O/E Uvula Elongated.
- Tickling in throat excites cough..
- Dryness of throat with constant desire to swallow saliva.

10. Rhinitis, Nasopharyngitis and Sinusitis comprises 73% of total number of cases studied and out of this more than 80% cases showed improvement with Homoeopathic Medicines. As URTI having acute nature or acute exacerbation which is due to heightened susceptibility can be effectively satisfied with Homoeopathic Medicine.

This study points to the usefulness of homeopathic medicines in the management of URTI of children, as well as the more probable homeopathic remedies to be prescribed in this regard. This study reflect the

actual conditions of everyday clinical practice, however, controlled studies should still be carried out to investigate the aspects of efficacy and effectiveness before definite conclusions can be established and recommendations be made.

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