

Therapeutic Efficacy of Some Herbal Unani Drugs in the Treatment of Chronic Sinusitis (Warm-e-Tajaweef Anf Muzmin)-A Preliminary Study

*Dr. Mohammad Azam¹, Dr. Tafseer Ali²

¹Clinical Registrar, Department of Jarahat, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, U.P

²Professor, Department of Jarahat, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, U.P

ABSTRACT: Sinusitis is the acute or chronic inflammation of the lining of the paranasal sinuses and possibly the underlying bone, which may be due to infection, allergy or autoimmune issues. Sinusitis is one of the commonest allergic manifestations all around the world. Chronic sinusitis (Warm-e-Tajaweef Anf Muzmin) is the term used when sinusitis has persisted for longer than 12 weeks. Although commonly known as 'chronic sinusitis' the term 'chronic rhino sinusitis'(CRS) is now being used more frequently, due to the involvement of the entire nasal and sinus passages. CRS causes not only physical suffering, but also impacts psychological well being. Despite its worldwide prevalence and substantial impact on the population, there is no satisfactory treatment. Unani system of medicine promises the cure. Hence the objective of the present study is to evaluate the efficacy of some Unani drugs comprising of Ustukhuddus (*Lavendula Stoechas* Linn.), Aslus-soos (*Glycyrrhiza glabra* Linn.), Gul e Banafsha (*Viola Odorata* Linn.), Zofa e Khushk (*Hyssopus officinalis* Linn.). The study was open single group uncontrolled clinical trial.

In the present study thirty cases of either sex 15-64 years of age who were clinically diagnosed were enrolled in the study for 30 days from Surgery OPD, Ajmal Khan Tibbiya College, Aligarh Muslim University, Aligarh. The patients were treated with the decoction was prepared by soaking Ustukhuddus 5 gm, Aslus-soos 5 gm, Gul e Banafsha 5 gm and Zofa e Khushk 5gm in 400 ml of water and boiled till the water reduced to the half, then filtered and divided into two half doses given in the morning and evening before meals along with simple steam inhalation. All the patients were assessed for subjective and objective parameters. The study revealed that the Unani drugs has given good response on nasal congestion, tenderness, nasal discharge., headache and facial pain. Treatment was well tolerated with no side effects. Hence, this treatment could be recommended for the treatment of Chronic sinusitis (Warm-e-Tajaweef Anf Muzmin).

Key Words: Unani Medicines, Warm e Tajaweef-e-Anf Muzmin, CRS, Paranasal sinuses Ustukhuddus, Aslus-soos, Gul e Banafsha, Zofa e Khushk.

1. INTRODUCTION

The paranasal sinuses are air filled spaces in the bones of the facial skeleton. They comprise the paired maxillary, frontal and ethmoidal sinuses and the unpaired but bisected sphenoid sinus, and form the structure of the adult face.[1] Chronic sinusitis is characterized by symptoms of sinus inflammation lasting more than 12 weeks. Although most cases of sinusitis involve more than one sinus, the maxillary sinus is most commonly involved, followed in frequency by the ethmoid, frontal, and sphenoid sinuses. Each sinus lined with a respiratory epithelium that produces mucus, which is transported by the ciliary action through the sinus ostium into the nasal cavity.[2] Blockage of the ostia due to inflammation in the nose, with retention of mucus and secondary infection, is the presumed mechanism for rhinosinusitis.[1] Rhinosinusitis typically causes a combination of nasal congestion, blockage or discharge, and may be accompanied by facial pain/ pressure or loss of smell. Treatment with topical corticosteroid, nasal decongestants, and regular nasal douching are usually

sufficient and, although bacterial infection is often present, antibiotic are only indicated if symptoms persists more than 5 days.[3]

As far as Unani concept is concerned, Warm-e-Tajaweef-e-Anf (sinusitis) is not found in any of the Unani classical textbook and literature. However most of the signs and symptoms described by the ancient Unani Tabeeb (physician) in various Unani classical texts books under the topic of Nazla wa Zukam (Coryza or common cold), seems to be quite similar to the clinical features of sinusitis.[4] Nazla wa Zukam were used synonymously by most of the Unani physicians, but some of them have difference of opinion, however, in both ailments, the mad'da drips from the brain. Ibn Sina in his treatise "Al Qanoon Fit Tibb", considered Nazla wa Zukam as two separate disease entities. According to him both Nazla wa Zukam exhibit the complex state, i.e. falling of mad'da from the brain.[5] Father of medicine, Buqrat (Hippocrates) had differentiated them by defining Nazla and Zukam.[6] As the Nazla is a condition in which the nasal mucosa gets inflamed and always associated with excessive nasal discharge, while Zukam is a Nazla of nasal mucosal lining.[6],[7] Therefore, while laid down the principles of treatment of Warme-Tajaweef-e-Anf we may take etiopathogenesis of Nazla wa Zukam into consideration and treat this condition accordingly.

The present study was carried to see the efficacy of Unani drugs in Warm-e-Tajaweef-e-Anf with regards to amelioration of symptoms and signs. Although many pharmacological agents are available in modern medicine to treat the sinusitis but these agents having its own side effects, so limited their role in the treatment of sinusitis. Therefore, we felt the necessity to find an alternative treatment in traditional system of Medicine, which could be used for a prolong interval of time without any serious complication.

2. MATERIAL AND METHODS

This study was open single group uncontrolled clinical trial, conducted on the OPD patients of Department of Jarahat (Surgery), Ajmal Khan Tibbiya College and Hospital, Aligarh Muslim University, Aligarh from June 2016 to July 2017. A written and well informed consent was taken from the patients before participation into the study. The thirty patients of either sex between the age group 15 to 64 years were selected whose presenting complaint was headache, facial pain, tenderness, nasal discharge, nasal congestion and anosmia for more than 12 weeks. Only the patients of open type frontal and maxillary sinusitis without fever were included in this study. All the patients were subjected to a comprehensive general physical, systemic examination as well as the local examination of nose and paranasal sinuses. X Ray PNS (Water's view) was done to confirm the diagnosis. Those patients suffering from Fever, Diabetes Mellitus, Features of toxemia, complications of sinusitis or who had taken any form of treatment especially antibiotics within 15 days and patients presenting any congenital or acquired structural abnormality of the nasal cavity were excluded from the study.

Mode of treatment

Patients were given decoction of Ustukhuddus (*Lavendula Stoechas* Linn.), Aslus-soos (*Glycyrrhiza glabra* Linn.), Gul e Banafsha (*Viola Odorata* Linn.) and Zofa e Khushk (*Hyssopus officinalis* Linn.). The decoction was prepared by soaking Ustukhuddus 5 gm, Aslus-soos 5 gm, Gul e Banafsha 5 gm and Zofa e Khushk 5 gm in 400 ml of water and boiled till the water reduced to the half, then filtered and divided into two half doses given in the morning and evening before half an hour meals. Patients were also advised for simple steam inhalation two times a day. During this period patients were also advice not to take other systemic antibiotics, antihistamines and decongestants.

Assessment of efficacy

At every visit, patients were assessed about the progression or regression in their symptoms and subjected for examination to assess clinical findings. The assessment of efficacy of drugs was based on subjective and objective parameters. The subjective parameters were assessed and local examination was done at every visit, while X-Ray PNS and all routine tests were carried out at baseline and after the completion of trial. At the end

of the study, X ray PNS was taken and compared with baseline. As and when require opinion of radiologist was also sought.

Follow up

Thirty (30) days study was divided into 2 visits of follow up which were made at an interval of 15 days. At every visit, patients were asked about the progression or regression in their symptoms and subjected for examination to assess clinical findings.

3. RESULTS AND OBSERVATIONS

**TABLE NO. 1- Distribution of Patients according to age and sex
Total Number of Patients (30)**

Age group (in years)	Number and % age of Males	Number and % age of Females	Total number and % age
15-24	8(26.66)	3(10)	11(36.66)
25-34	5(16.66)	2(6.66)	7(23.33)
35-44	3(10)	3(10)	6(20)
45-54	2(6.66)	2(6.66)	4(13.33)
55-64	1(3.33)	1(3.33)	2(6.66)
Total	19(63.33)	11(36.66)	30 (100.0)

During the course of study, patients were divided into five age groups viz. 15-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years. It was observed that maximum number of cases i.e. 11 cases (36.66%) belong to the age group 15-24 years. 7 cases (23.33%) fell in the age group 25-34 years, 6 cases (20%) in the age group 35-44 years, 4 cases (13.33%) in the age group 45-54 years and 2 cases (6.66%) in the age group 55-64 years.

Among the thirty patients 19 cases (63.33%) were males, while 11 cases (36.66%) were females.

**TABLE NO. 2- Distribution of Patients According to their Occupation
Total Number of Patients (30)**

Occupation	Number of Patients	Percentage
Student	10	33.33
Service Housewife	9	30
Labour	4	13.33
Business	3	10
Service	4	13.33
Total	30	100

Patients were divided into five categories according to their occupation, student, housewife, labour, business and service. The number of cases falling in each category was 10(33.33%), 9(30%), 4(13.33%), 3(10%) and 4(13.33%) respectively. Thus it was observed that maximum number of patients belong to students followed by housewives.

TABLE NO. 3-Distribution of Patients According to Site of Infection
Total Number of Patients (30)

Site	Number of Patients	Percentage
Frontal	16	53.33
Maxillary	10	33.33
Frontal+Maxillary	4	13.33
Total	30	100.0

Patients were divided into three groups on the basis of site of infection, frontal, maxillary, frontal and maxillary both. Maximum cases were found of frontal sinusitis i.e. 16 cases (53.33%) followed by 10 cases (33.33%) of maxillary sinusitis and 4 cases (13.33%) of frontal accompanied with maxillary sinusitis.

The subjective parameters viz. Headache, Facial pain, Tenderness, Nasal discharge, Nasal congestion and Anosmia were taken into consideration during the study. Out of 30 cases, Facial pain, Tenderness, Nasal discharge, Nasal congestion and Anosmia was found in 22(73.33%) cases, 16(53.33%) cases, 19(63.33%) cases, 8(26.66%) cases and 3(10%) cases respectively, while Headache was the main complaint in 28(93.33%) cases. At the end of study, it was observed that Headache, Facial pain, Tenderness, Nasal discharge, Nasal congestion and Anosmia was improved by 64.28% (18 cases), 50% (11 cases), 62.50% (10 cases), 73.68% (14cases), 87.50% (7cases), 33.33% (1 cases) respectively. **TABLE NO. 4**

TABLE NO. 4- Effects of Drugs on Subjective Parameters
Total Number of Patients (30)

Subjective Parameters	Follow-Up (in days)				
	Before Treatment	After Treatment			
	0 day	15th day		30th day	
	Total No. of Patient	No. of Patients	Improved % age	No. of Patients	Improved % age
Headache	28	16	42.85	10	64.28
Facial Pain/Pressure	22	14	36.36	11	50
Tenderness	16	11	31.25	6	62.50
Nasal Discharge	19	10	47.36	5	73.68
Nasal Congestion	8	4	50	1	87.50
Anosmia	3	3	0	2	33.33

TABLE NO. 5- Effects of Drugs on X-ray PNS Parameters
Total Number of Patients (30)

X-ray PNS Parameters	Before Treatment No. of Patients	After Treatment No. of Patients	Improved % age
Fluid Level	9	4	55.55
Partial Opacity	15	7	53.33
Total Opacity	6	4	33.33

The X-ray PNS parameters viz. Fluid Level, Partial Opacity, and Total Opacity were taken into consideration during the study. Out of 30 cases, Fluid Level, Partial Opacity, Total Opacity was found in 9(30%) cases, 15(50%) cases, and 6(20%) cases respectively. At the end of study, it was observed that Fluid Level, Partial Opacity, and Total Opacity was improved by 55.55% (5 cases), 53.33% (8 cases), 33.33% (2 cases) respectively.

4. DISCUSSION

In the present study, the efficacy of Unani Drugs was evaluated over a period of 30 days on the basis of improvement in the subjective parameters and X-ray PNS parameters.

While analyzing the age group the patients were divided into five age groups. It was observed that maximum number of cases i.e. 11 (36.66) belong to age group 15–24 years. Our finding corroborated with the fact of (Ballyntyne,1978), who reported that Sinusitis usually starts in the adolescent age group.[8]

During the study, students dominated followed by housewives. It may be due to high level of awareness among the students about this disease and secondly our hospital is located in the vicinity of university campus. Housewives get exposed to dust and various allergens while doing house hold work, which may triggers the development of Sinusitis[9].

While distributing the patients according to site of infection, cases of frontal sinusitis were more than the maxillary sinusitis. Our findings contrary to the findings of the classical text in which maxillary sinusitis is more common than frontal. (Maqbool, 2002), (Kasper,et al., 2005)[2],[10].

When the distribution of patients according to their clinical presentation was studied, it was found that the most consistent presentation was headache in 28 cases while facial pain in 22 cases, Nasal discharge in 19 cases, Tenderness in 16 cases and Nasal congestion in 8 cases and Anosmia in 3 cases was recorded.

At the end of study, maximum benefit was observed in the nasal congestion i.e. 87.50% improvement. This improvement in nasal congestion might be due to the Muhallil Auram (Anti-inflammatory) property of Ustukhuddus[11],[12],[13], Aslusoos[14] Banafsha and Zofa khushk[14],[15],[20]. Research shows, glycyrrhizin, isolated from *Glycyrrhiza glabra*, exerts an anti inflammatory action similar to hydrocortisone and other corticosteroid hormones.

There was 73.68% improvement in the patients of Nasal discharge, which might be due to the antiseptic property of Ustukhuddus [16],[18], Aslusoos[17],[18]

This improvement in nasal congestion and nasal discharge may also be due to the direct use of Ustukhuddus, Aslusoos, Banafsha and Zofa khushk in Nazla wa Zukam (Coryza or common cold) [15],[20].

The headache, facial pain and tenderness were improved by 64.28%, 50% 62.50% respectively at the end of study. Analgesic property of Ustukhuddus, Aslusoos may be attributed to this effect of drugs[19]

The X-ray PNS parameters viz. Fluid Level, Partial Opacity, and Total Opacity were taken into consideration during the study. At the end of study, it was observed that Fluid Level, Partial Opacity, and Total Opacity was improved by 55.55% (5 cases), 53.33% (8 cases), 33.33% (2 cases) respectively. This improvement might be due to Mufatteh Sudad (Deobstruent) property of Ustukhuddus, Zofa khushk[15],[20], which removes the obstruction within the sinus cavity and facilitates the export of fluids from the cavity, resulting good sinus drainage and proper sinus ventilation.

CONCLUSION

This study showed marked improvement in clinical features of patients suffering from chronic sinusitis. The drugs were well accepted by the participants in this study and no noticeable side effects were detected. This study suggests that this treatment could be recommended for chronic rhino sinusitis. Further data are warranted and extensive research is obligatory to comment on the long-term course of the patients with this regimen.

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