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RESEARCH ARTICLE

A CASE STUDY ON THE THERAPEUTIC EFFECT OF MALLA SINDOOR AND SHRING BHASMA IN THE ELEVATED ABSOLUTE EOSINOPHIL COUNT.

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Abstract

Background: Allergic rhinitis is one of the most common chronic conditions with a significant impact on the quality of life. The association between eosinophils and allergic disease has been known for many years. Allergic rhinitis patients are at risk of development of Asthma. The patients may also have peripheral eosinophilia and bronchial hyper reactivity. Absolute eosinophil count was correlated with bronchial hyper reactivity. As per Ayurveda, allergic rhinitis is compared with *Vata-KaphajaPratishyay*. The concept of *Ama*, *Asatmya* and *ViruddhAahara* also predict the allergic conditions.

Aims & Objectives: To evaluate the therapeutic effect of *MallaSindoor* and *ShringBhasma* in the elevated absolute eosinophil count

Materials and Methods: In the present study a 71 year old women presented with clinical features indicative of Allergic rhinitis were examined; a clinical diagnosis was made in the OPD of Regional Ayurveda Research Institute for Drug Development (RARIDD) Gwalior and then confirmed with the help of X-ray and pathological examination. After confirmation of allergic rhinitis on basis of increased absolute eosinophil count, patient was considered for this case study. This case of allergic rhinitis with elevated absolute eosinophil count was managed by Ayurvedic Intervention of *MallaSindoor* 125 mg and *ShringBhasma* 250 mg thrice a day with Honey for 17 days at the outpatient department level.

Result: The response of the treatment was found highly significant by symptomatic and pathological investigation. At the end of treatment period of 17 days as compared with baseline, a significant change in clinical symptoms was observed and significant reduction in AEC.

Conclusion: *MallaSindoor* and *ShringBhasma* administered together in above-mentioned dose were found very effective and safe in patient of allergic rhinitis with increased absolute eosinophil count.

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Introduction:-

Allergic rhinitis patients are at risk of development of Asthma. These patients will have Bronchial hyper reactivity¹. Bronchial hyper reactivity (BHR), one of the hallmarks of Bronchial Asthma, is a risk factor for the development of Asthma^{2,3}. In non-atopic Asthma a relationship between the peripheral blood eosinophil count and the FEV1 has been observed and the Eosinophil count is considered useful in monitoring disease activity⁴. Various studies have attempted correlating Nasal Smear Eosinophilia (NSE) and Absolute Eosinophil Count (AEC) in peripheral blood in patients of allergic rhinitis, though very little is known about correlation of symptoms and severity of clinical score with NSE and peripheral blood AEC⁵.

Allergic rhinitis is seasonal or perennial. With an appropriate history and detailed examination, the diagnosis is usually not problematic. However, it is found that the common symptomatology of rhinitis congestion, sneezing, nasal itching, and rhinorrhea show significant overlap with non-allergic rhinitis (NAR)⁶. Treatment with inhaled sodium cromoglycate produces a small reduction in bronchial hyper reactivity⁷. Remission of bronchial hyper reactivity occurred more frequently in subjects treated with intranasal corticosteroids^{8,9,10}.

As per Ayurvedic context, Allergic rhinitis is compared with *Vata- KaphajaPratishyay*. The concept of *Aama*, *Asatamya* and *ViruddhAahara* also predict the allergic conditions. *Ama* is the product of impaired digestion and metabolism. It affects *Rasa and RaktaDhatu* leading to manifestation of *Pratishyaya*. Wrong food combinations (*Viruddhaahara*) having antagonist properties like fish with milk, fruit juice with milk, clarified butter with honey, ice cream after night meals, etc. leads to allergy¹¹.

MallaSindoor is one of such medicament indicated mainly in diseases such as *Shwasa*, *Kasa*(respiratory disorders), and is thought to be an effective drug in combating *Vedana*and *Vatarogahara*property¹².

Shringbhasma is used in Ayurvedic medicine for treating *Hikka* (Hiccup), *Kasa* (cough), *Swasa* (difficult breathing including asthma), *Hrtsula* (cardiac colic), *Urastoya* and *Parshvashoola* (abdominal distension and intestinal rumbling)^{13,14}.

Aim And Objective:-

To evaluate the therapeutic effect of *MallaSindoor*and *ShringBhasma*in the elevated Absolute Eosinophil Count

Material and Methods:-

The patient presented with clinical features indicative of allergic rhinitis was examined; a clinical diagnosis was made in the OPD of Regional Ayurveda Research Institute for Drug Development (RARIDD) Gwalior and then confirmed with the help of X-ray and pathological examination. After confirmation, patient having allergic rhinitis with increased Absolute Eosinophil Countwere considered for this case report. The demographic profile, associated allergic rhinitis symptoms such as rhinitis congestion, sneezing, nasal itching, dyspnoea and rhinorrhea were noted. Laboratory investigations like blood and radiological report were also documented. Purpose and effect of the Ayurvedic medicines were explained to the patient. *MallaSindoor*and *ShringBhasma*were prescribed to the patient willing for medication. Patient outcomes were also analyzed.

Study Design:-

*MallaSindoor*125 mg and *ShringBhasma*250 mg were prescribed to take orally thrice a day with honey for the duration of 2-3 weeks to the patient.

Case Report:-

A 71 years old female having complaints of breathlessness, chest pain, cough, indigestion and weakness since 1 year. She had taken some modern medical treatment for the same problem and did not get relief for the same. She was interested to take Ayurvedic treatment for the same problem. Patient visited OPD of Regional Ayurveda Research Institute for Drug Development (RARIDD), Gwalior on 9th Dec. 2016 vide registration no 3494. Initially some Ayurvedic medicines like *Sitopaladichurna*, *Nardiyalaxmivilasras*, *Chandramritras*, *Swaskutharras*, *Haridrakhandra*, *Kanchnarguggulu* etc. were prescribed. She was advised for CBC, ESR, RBS and X-ray chest PA view. Blood report shown normal values but X-ray report showed Pneumonitis in bilateral mid and lower lung zone. Same treatment was given for 15 days and observed her complaints but prescribed medicines were not responded significantly.

Absolute Eosinophil Count was advised to the patient and report was 1.32 thou/mm³ (Normal 0.02-0.50 thou/mm³). As per report above medicines were stopped and new prescription consisting of *MallaSindoor* 125 mg and *ShringBhasma* 250 mg were given to take orally thrice a day with honey for 10 days to the patient. Patient purchased the medicines from local chemist shop as per prescription. After 10 days patient reported with significant relief in breathlessness, chest pain, cough and indigestion. The medicines were further continued for 7 days. Patient reported 95% relief in her complaints due to treatment by *MallaSindoor* and *ShringBhasma*. After follow up repeat Absolute Eosinophil Count was done and report was found to be in normal range (0.50 thou/mm³).

Discussion:-

The present study showed the relationship between peripheral blood eosinophilia and bronchial hyper reactivity in allergic rhinitis and also revealed a strong association between allergic rhinitis and lower airway dysfunction. Allergic rhinitis is a frequent inflammatory chronic disease induced by an IgE-mediated reaction after allergen exposure in the nasal mucosa. It is now clear from a large number of cross-sectional studies that allergic rhinitis is strongly associated with Asthma and BHR¹⁵. The mean value of blood AEC was below the standard normal value with 307.6 in patients having only nasal symptoms and 460 in patients having nasal with respiratory symptoms. Hence, blood AEC tends to be more in the respiratory system⁵. Similar finding was observed by Jagdeeshwaret al.¹⁶ but with a little highvalue of AEC which was 416.26 in patients having only nasal symptoms and 683.76 in patients having nasal and respiratory systems.

Malla-Sindoor is a mineral formulation of Ayurveda and contains *Malla* means Arsenic Trioxide (As₂O₃), *Parad* means Mercury (Hg) and *Gandhak* means Sulphur (S). Arsenic is a strong poison and in Ayurvedic medicines it is used only after proper detoxification. *Malla-Sindoor* is a *KanthasthaKupipakvaRasayana* (a preparation in which product is obtained at the neck of glass bottle). For the preparation of *Kupipakwarasayan*, preparation of *Kajjali*, time duration, and heating pattern are the most important factors to obtain maximum quantity of yield and to increase the efficacy of the product without any untoward effect¹².

The quality of *MallaSindoor* is *Ushna*, *Tikshna*, *Kapha-Amasanshodhana*. It is stimulant to lungs, heart and nerves. This stimulant action may facilitate more supply of oxygenated blood to lungs. *Malla* and *Raskarpur*, ingredients of *Malla-Sindoor* have purgative properties. Thus it also relieves the *Malabaddhata* (Constipation) which is line of treatment of asthma. As it is Arseno-Mercurial preparation, it has antibacterial and antiviral property also. Hence it may useful in infection originated diseases¹⁷.

MallaSindoor is useful in *Vata* and *Kapha* diseases. It gives good result in treatment of *Vata* diseases, *Pakshaghata* (Hemiplegia), *Amavata* (Rheumatism), Gout and *Kapha* diseases, Pneumonia, Respiratory illness. *MallaSindoor* is also indicated in Hysteria, Weakness in old age, Chronic Asthma, Indigestion, Weakness of male sex organ, Influenza, *Vishamjwar*, *Prameha*¹⁸.

ShringaBhasma is an Ayurvedic medicine prescribed mainly for asthma. *ShringaBhasma* is aodourless dull white powder with chalk like taste. Qualitative inorganic analysis showed the presence of Carbonates, Sulphates, Chlorides, Potassium, Calcium and Magnesium. The organic contents like tannins and proteins were also identified¹⁹.

ShringaBhasma is used in respiratory disorders accompanied with a productive cough, wheezing, chest congestion, chest tightness, chest pain and fever. *ShringaBhasma* helps clearing the lungs and airways. It is used when there is a need to regulate mucous secretion. *ShringaBhasma* has bacteriostatic action, which most likely to appear in tuberculosis. It inhibits the growth of *Mycobacterium tuberculosis*. Though, *ShringaBhasma* plays a supportive role in Tuberculosis and the main medicine is *Swarna Bhasma*.^{20,21}

Ushna, *Tikshna*, *Kapha-Amasanshodhana*, purgative, stimulant, antibacterial and antiviral properties of *MallaSindoor* and *kaphaghna*, soothing, bacteriostatic properties of *ShringBhasma* might have reduced elevated Absolute Eosinophil Count in patient and provided relief from the sign & symptoms of allergic rhinitis.

Conclusion:-

MallaSindoor 125 mg and *ShringBhasma*, 250 mg administered together orally with honey thrice a day provided relief in sign and symptoms of patient of allergic rhinitis with increased absolute eosinophil count. The treatment

was found very effective and safe. The findings of this case report may be helpful for treatment of allergic rhinitis with increased absolute eosinophil count and the effect of the drugs may be further confirmed in clinical study employing more number of patients of allergic rhinitis with increased absolute eosinophil count.

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