



**Research Article**

**ROLE OF ASSORTED INDUSTRIAL ASTHMAGENS: HYPOTHESES ON CONTEMPORARY APPROACH TO TARGET DISEASE KNOWLEDGE AND MEDICATION ADHERENCE AND TREAT OCCUPATION INDUCED ASTHMA**

**Muthukumar. A\* and SundaraGanapathy .R**

Faculty of Pharmacy, Karpagam University, Karpagam Academy of Higher Education, Coimbatore-21, Tamil Nadu, India

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**ABSTRACT**

Patient education and drug adherence are most important factors that determine therapeutic outcomes; especially in patients are affliction from work induced chronic illness. Whatever the therapeutic efficacy of drug regimen, it cannot act unless otherwise the patients take it properly. Poor knowledge and medication adherence will assume importance as it seriously undermines the benefits of current treatment and imposes a significant pecuniary burden on individual patients and health care system. Patient should have knowledge in their etiology, usage of drug regarding occupation induced bronchial asthma. Estimation of patient knowledge and attitude is a crucial for the health improvements and wellbeing as well as preventing them from complications. In India, patients are scarceness of data concerning knowledge and drug devotion within the textile asthmagens induced occupational asthma. The current approach to expressed prevention and management of drug therapy against bronchial asthma but which had severe side effects and lesser therapeutic efficacy. Adverse drug reactions are produced by irrational treatment and rebelliousness. Based on current situation, these hypotheses exemplify to augment the efficacy of disease knowledge and drug obedience in a new way to treat employment induces asthma.

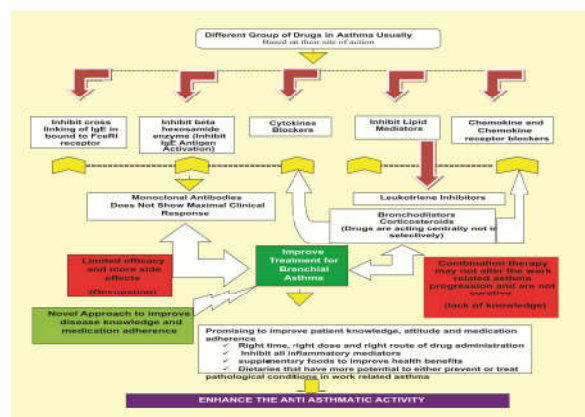
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**INTRODUCTION**

Bronchial asthma is a major public health problem affecting large number of individuals of all ages. Globally, 100 to 150 million peoples are suffering from work related asthma and estimates indicate that, India has 20 to 28 million asthmatics and pervasiveness in between 10% to 15% patients affecting from occupational induced asthma [1-5]. Poor knowledge and drug adherence would be extent to which a patient’s behavior coincides with health related advice and ability of the asthmatic patients to attend clinic appointments as per scheduled, take medicines as prescribed, and life style modification are recommendation for prevention and treatment asthma [6-10].

In recent document, the world health organization recognized lack of knowledge and poor adherence as a major problem in prevention and management of chronic disease including asthma and concluded that improving compliance would have more beneficial impact on health outcome that improving specific treatment for asthma. It is an acceptable fact for current medication that despite tremendous advances in diagnosis accuracy, if patients fail to recommended

medication that expenses and efforts involved are virtually wasted [11-15]. In recent years various approaches have been made to utilize the industrial asthmagens in pre clinical and clinical studies [16-40]. Nonetheless, in this clinical study we put forward to investigate the clinical survey on disease knowledge and drug adherence of asthmatic patients in Tirupur city and their therapeutic care.



**Figure 1** Role of Knowledge and Drug Adherence in Asthma

\*Corresponding author: **Muthukumar. A**  
 Faculty of Pharmacy, Karpagam University, Karpagam Academy of Higher Education, Coimbatore-21, Tamil

**RESULTS AND DISCUSSION**

In Indians; poor knowledge is a major for health problem affecting a large number of individuals of all ages.

bubonic plague disease resulting in increased morbidity and mortality. Assimilation of disease knowledge and drug devotion is given privilege to make use of it, as it reduce

**Table 1** Role of Industrial Asthmagens Induced Bronchial Asthma

S.No	Industrial asthmagens	Mechanism	Respiratory challenges	Commercial uses	Reference
1	Carmine	IgE (antigen reaction) Immunological mechanism	Allergic alveolitis Anaphylactic reactions Asthma	Cosmetic pharmaceutical dyeing	[16]
2	Castor beans	Immunological mechanism	Rhinitis Conjunctivitis Wheezing Asthma	Plastics Hydraulic fluids Textile finishing materials	[17]
3	Chloramine-T	Immunological mechanism	Asthma Anaphylactic reactions Bronchial and Nasal challenge	Anti viral Bactericidal	[18]
4	Chloroplatinate salts	Immunological mechanism	Rhinitis Conjunctivitis Wheezing Asthma	Refining of Platinum metal, ammonium, sodium and potassium	[19]
5	Cow urine and epithelium	IgG and IgE antibodies to bovine urine and epithelium	Asthma Reduction in peak expiratory flow Bronchial and Nasal challenge	Agriculture	[20]
6	Crustacean protein	Bronchial challenge and lung function tests Immediate skin reactivity Increased serum levels of specific IgE	Wheeze Cough Breathlessness	Prawn Crab	[21]
7	Diazonium salts	Immunological mechanism and irritant reaction	Asthmatic response (wheeze, chest tightness)	Dyes Polymer production Photocopier	[22]
8	Ehtylenediamine	Immunological mechanism and irritant reaction	Asthmatic response (wheeze, chest tightness)	Urea Resins Fatty bisamides	[23]
9	Glutaraldehyde	Irritant reactions	Asthmatic Reponses	Disinfectant Cold sterility Medical and surgical instruments	[24]
10	Hardwood dusts	Decrease in forced expiratory volume	Rhinitis Conjunctivitis Wheezing Asthma	Interior for house	[25]
11	Isocyanates	Symptoms of bronchial asthma	Bronchitis COPD Urticaria Allergic alveolitis Asthma	Auto mobile painting Plastics coating Adhesives	[26]
12	Papain	Immunological mechanism Symptoms of bronchial asthma	Asthma Bronchitis Urticaria Allergic alveolitis	Wool, silk Production Cosmetic	[27]
13	Phthalic anhydride	Increased serum levels of specific IgE or IgE	Phthalic anhydride Exposure induced asthma	Plasticizers Resins Dyes	[28]
14	Piperazine	Respiratory sensitizer Immunological basis for the asthma	Developed rhinitis Progressing to asthma attack	Anti –helminthic agent	[29]
15	Reactive dyes contain three moieties Anthraquinone	Specific immunoglobulin (IgE) in particular showing a good correlation with bronchial challenge	Exposed to reactive dyes developed work related rhinitis Then asthma	Textile and dyeing industries	[30]
16	Colophony	Respiratory sensitizer Immunological basis for the asthma	Rhinitis Conjunctivitis Wheezing Asthma	Electronics factory	[31]
17	Softwood dusts	Increased serum levels of specific IgE or IgE	Developed rhinitis Progressing to asthma attack	Interior for house	[32]
18	Spiramycin	Symptoms of bronchial asthma	Occupational rhino conjunctivitis	Macrolide antibiotic	[33]
19	Coffee bean dust	Exposed to an allergen and respiratory sensitizer	Sneezing Nasal itching wheezing Asthma	Coffee processing industry	[34]
20	Egg yolk	Immunoglobulin cause food induced allergies	Asthma Rhino Conjunctivitis	Baker products	[35]
21	Fish proteins	Hyper sensitivity showed allergic reactions (wheezing and Urticaria)	Wheezing or chest tightness after ingesting fish	Food products	[36]
22	Henna	Henna dye –associated asthma by immunological response	Wheeze and breathlessness	Cosmetic preparation	[37]
23	Opiates	Plausible mechanism for asthma induction	Comprised cough Dyspnoea Rhinitis	Pharmaceutical uses	[38]
24	Alpha amylase enzymes	Occupational broncho asthma which is mediated by an immunological mechanism involving	Asthma rhino conjunctivitis	Bacterial alpha amylase animal feeds and detergents Bread baking	[39]
25	Cephalosporin's	Immediate falls in FEV	Rhinitis Asthma type Symptoms during the night time in home	Semi synthetic antibiotics	[40]

Being a chronic condition of disease, management of bronchial asthma requires proper medical care. The term drug adherence means, “sticking to a plan” for perceived benefit. Strategies that may lead to elimination or control of asthma triggers are important in the management of asthma and should be incorporated into patient education. Narrative approach to target industrial asthmagens, prevention and treatment bronchial asthma with appropriate awareness and medication devotion system to enhance the anti asthmatic activity on patients suffered from asthma has been discussed in this critique. Occupational asthma is the world wide spread

44]. Lack of knowledge and medication adherence with prescribed regimen may result in to misconceptions on disease management, especially in patients suffering from work related asthma. Drug adherence is determining therapeutic efficacy for chronic illness. Poor knowledge and adherence leads to reduced treatment benefits and can obscure the physician’s assessment of therapeutic effectiveness. Almost all the patients should not have appropriate disease knowledge, attitude and perception for occupation induced bronchial asthma. Improving the patient knowledge and awareness on work related asthma reporting among the textile

worker should be made compulsory apart from their curriculum [45-48]. The current approach of the prevention and management of asthma includes the addition of drugs in a stepwise fashion on the severity of symptoms and stronger asthmatic agents are more prone to have severe side effects [49-53]. The limited therapeutic efficacy and adverse effects with conventional treatment has leads to the introduction of asthma knowledge and drug adherence.

## CONCLUSION

In this article, we proposed a new approach to target disease knowledge and drug adherence with enhanced anti asthmatic activity from industrial asthmagens. The proposed medication knowledge is play vital role to reduce the adverse drug reaction and avoiding the multiple drug regimens. The target on asthma sensitizer and patient education is expected to better result for treatment of occupation induced bronchial asthma.

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