THERAPEUTIC EFFECT OF DHATURA IN RESPIRATORY INFECTIOUS DISEASES: A REVIEW

1*Dr. Bhargavi S. Lakkakula and 2Dr. R. D. Lambat

1PG Scholar in Agadtantra, Govt. Ayurved College, Nagpur.
2Associate Professor, Agadtantra Department, Govt. Ayurved College, Nagpur.

ABSTRACT

In Ayurveda, immunity can be correlated as vyadhikshmatva, bala or ojas which is the product of overall balance of body functions, tissues, digestion and elimination. Whenever these things get hampered, immunity deteriorates and infectious disease occur. Infectious disease like TB, AIDS, HIV, Skin diseases and many more occur due to lowered immunity. Respiratory symptoms include infection of upper respiratory tract and lower respiratory tract which includes cough, sore throat, runny nose, nasal congestion, bronchitis, pneumonia etc. RTI can affect the sinuses, throat, airways causing infection. Dhatura is among the well known folklore medicinal herbs. It has both poisonous and medicinal properties and has been proved to have great pharmacological property like bronchodilator, anti inflammatory, anti fungal, anti bacterial, kaphaghna and shwasaghna which is of great utility to humankind. So this article aims at creating public awareness related to use of Dhatura in treatment of respiratory infectious disaeses.

KEYWORDS: Dhatura, Respiratory infections.

INTRODUCTION

India has 18% of the world’s population but 32% of the global burden of respiratory diseases. Chronic respiratory diseases were responsible for 10.9% of the total deaths.[1] Respiratory tract infection is defined as any infectious disease of upper and lower respiratory tract. URTI includes common cold, laryngitis, pharyngitis/tonsillitis, acute rhinitis. LRTI include acute bronchitis, pneumonia and tracheitis. Respiratory infections can be correlated as shwasavyadhi in Ayurveda. It is mainly difficulty in breathing. Doshas mainly responsible for shwasakashtata are due to vataj and kaphaj hetu. This hetu vitiates kapha dosha leading to
obstruction in the pathway of vata dosha leading to shwasakashtata causing shwasa vyadhi. So to tackle the vitiation of kapha and vata dosha I have selected dhatura to treat respiratory infection due to it’s anti-asthamatic, antibacterial, anti- spasmodic, antioxidant, anti-microbial, anti-microbial, anti-inflammatory properties. Any food/drug consumed in proper dosage acts as a rasayana and same drug consumed in inappropriate amount leads to poisoning. So the drug can also act as boon or a curse depending on dosage.[2] Though being a poisonous drug it has miraculous properties which can be used for treatment and due to its easy availability it can be used easily.

MATERIAL AND METHODS
References regarding respiratory infectious disease, shwasa, dhatura are collected from ayurvedic texts and available information and analysed and presented in this article.

Properties of Dhatura[3]

गुण- लघु, व्यवायी, विकासी, रक्ष

विपक- कटु

प्रभाव- मादक

रस- तिंक, कटु

बीमार- उण

दोषकर्म- कफवाहाशामक

Taxonomic classification[4]

Kingdom : Plantae
Division : Magnoliophyta
Subdivision : Angiospermae
Class : Magnoliopsida
Subclass : Asterids
Order : Solanales
Family : Solanaceae
Genus : Datura
Species : Datura metel (Datura fastuosa)
Some folkloric uses of dhatura are as follows[5]

- **Leaves** – Used a lot in resolutive and mitigant poultices. Smoke like stromium in cases of dyspnea produced by asthma. Seeds and roots have same uses.
- **Asthma**- Cut the dried leaves and stems into small slices and mix with an equal quantity of tobacco and roll into a cigarette and smoke 2-3 times a day.
- **Severe cold accompanied by sneezing** – Powdered seeds (0.1g) in pills or loose form.
- **In China used for asthma**, the dried leaves are rolled and smoked like a cigar. Dried flowers used fas anesthetic and prescribed for the treatment of asthma, cough and convulsions.
- Dried leaves, flowers and roots are used as anti- spasmodic, anti tussive, bronchodilator and anti asthmatic.[6]

Pharmacological uses of Dhatura

- **Anti asthmatic**- When smoke is inhaled, it is possible the sticky, resinous substance may help by coating the mucosa and thus lessening the bronchial asthma.[7]
- **Anti bacterial**- A new antibacterial agent was isolated from Dhatura metel leaves with activity against aureus, P. aeruginosa, P. mirabilis, S typhi, B. subtilis and K pneumoniae. Results support its use in the treatment of cough, asthma etc. Leaf extracts have the highest inhibitory potential against K.pneumoniae and E.coli.[8]
- **Anti – spasmodic effect**: Leaf extract and scopolamine shows anti spasmodic effect.[9]
- **Antioxidant**: Antioxidant activities are higher than the bark. Results suggest the plant as a natural source of antioxidants and phytochemical quality for bacterial effectiveness.[10]
- **Antimicrobial**: Study evaluated aerial parts of Dhatura metel for antimicrobial activity against resistant pathogens, aquatic, human and plant origin. Results showed antimicrobial property and potential for use in the treatment of infectious diseases caused by resistant pathogenic organisms.[11]
- **Anti inflammatory**: Study suggests considerable activity of Dhatura metel as an anti-inflammatory.[12]
- **Dry and fresh leaves**- its antimicrobial and antioxidant activity : In a comparative study of phytochemical screening, antioxidant and antimicrobial capacities of different crude extracts from dry and fresh leaves revealed that both have a positive result for alkaloid, flavonoid, saponin and tannin compounds and all organic crude extracts from both fresh and dry leaves could be used as potential sources of new antioxidant and antimicrobial
agents.[13]

- It relieves bronchial spasm and absorbs mucus whereby it eliminates shwasa and kasa due to removal of obstruction to the movement of prana.[14]

DISCUSSION
Dhatura is a medicinal plant easily available and is used on wide range for many health complications especially on respiratory infections mentioned in Bhaishajyaratnawali where its fruit, branch and leaves can be used as dhuma for treatment of shwasa vyadhi.[15] Also traditionally it is being used in many diseases in various parts of world. Pharmacological activity explained in article shows its worth.

CONCLUSION
As per today’s situation, I can conclude that people are more prone to respiratory infections due to low immunity, poor lifestyle, pollution, poor diet etc. For which Ayurvedic drug like Dhatura metel can play a major role in this due to its anti-asthamatic, anti-oxidant, antimicrobial, anti-inflammatory activity and is obviously easily available. Being a poisonous plant it has wonderful properties and has the capacity to cure various illness. So many more works on Dhatura are yet to be established for the betterment of human race.

REFERENCES
7. Adekomi DA, Tijani AA and Ghazal OK: Some effects of the aqueous leaf extract of Datura metel on the frontal cortex of adult Wistar rats (Rattus norvegicus). Eur J Anat,


13. Dr Balne Vijay Kumar, Review article on Dhatura, Internal Journal of Recent Advance in Multidisciplinary Research, feb 2015; 02(02): 0240- 0243.