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Pharmacognostic Review On Datura

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ABSTRACT :-

Datura is a rapidly spreading plant belonging to the Solanaceae family that has both therapeutic and toxic properties. *Datura* species. Different portions of *Datura* are utilized both topically and orally to treat a range of human illnesses in Ayurveda. It has been claimed that many functional groups are distributed throughout the plant. The plant has a range of properties, including analgesic, anti-inflammatory, antiviral, and anti-diarrheal effects, which could be attributed to the active chemical compounds present.

D.stramonium has been used, particularly in Ayurvedic medicine, to treat a wide range of human conditions, such as sciatica, bruises and swellings, fever, asthma and bronchitis, ulcers, wounds, inflammation, rheumatism, and gout.

KEYWORDS:- drug toxicity, *Datura stramonium*, pharmacological activities, traditional medicine, and phytotherapy.

INTRODUCTION:-

Herbal Plants:- Plant have been utilized for thousands of years in the medical and wellness fields. Over the years, there has been a significant increase in the usage of herbal supplements and medicinal items; today, less than 80% of people worldwide rely on them for some form of basic healthcare. The vast majority of people on the planet still get their medical needs from herbal remedies in poor nations. Herbal medications are frequently utilized to provide first-line and basic healthcare, both to residents of impoverished places where they offer the only accessible treatment and to residents of distant areas where they are the only available health care. The use of herbal medicines and interest in them has grown significantly in recent years, even in places with access to contemporary medical care.

VARIOUS SPECIES OF DATURA:-

1. *Datura metal*

2. *Datura alba*

3. *Datura stramonium*

4. *Datura fastuosa*

5. *Datura candida (Pers) Saff.*

6. *Datura ceratocaula Ortega*

7. *Datura discolour Bernh.*

8. *Datura dolichocarpa (Lagerh) Saff*

9. *Datura ferox L.*

10. *Datura inoxia Mill.*

CLASSICAL NAMES:- There are several Sanskrit names for this plant. Kanaka, Unmatta, Matula, Shivapriya, Dhurta, Devata, Kitava, Toori, Mahamohi, Kanakahvaya, and so on are a few examples.

DHATURA METAL:-

Datura metal, also known as purple datura, is a type of *Datura* that is widely used in ayurveda and religion. It is used to treat a variety of ailments, including asthma, colds, and coughs.

DHATURA ALBA:-

Datura alba, often known as White datura, grows wild in the Himalayas from Kashmir to Sikkim. It typically produces white blooms.



FIG 1. DHATURA BALLERINA

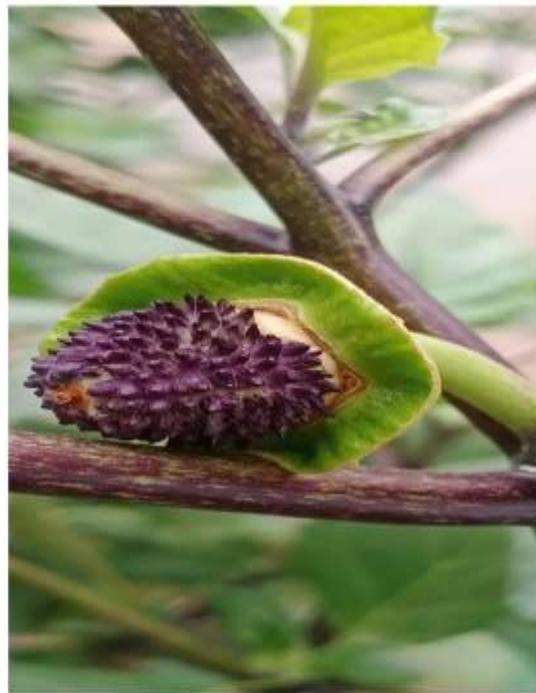


FIG 2. DATURA STRAMONIUM

BLACK DHATURA:-

Black datura, or *Datura stramonium*, is: This variety of Datura has strong hypnotic and sedative properties and is the source of the hypnotic drug stramonium.

DHATURA BALLERINA:-

Datura metel 'Ballerina Purple' unfolds its exotic, upright flowers filled with many furled, silvery white petals backed in deep purple. As the sun sets, these blossoms send an intoxicating scent floating into the night air. All parts of this plant are poisonous.

Datura 'Purple Ballerina', also known as "angel's trumpet" is a marvelously fragrant flowering herb with upward-facing blooms that resemble a dancer's costume. These compact plants are perfect for containers or as a scene-stealer in the garden. Flowers open in the evening and close again in the morning. Beginning in early summer and continuing until the fall weather sets in, the plant is covered with magnificent blooms, so fragrant that a single plant perfumes the garden! Large, very attractive fruits follow the blooms and should be cut for splendid accents to fresh and dried arrangements.

A beautiful aromatic addition to any night garden, this nocturnal beauty is a must have for its showy blooms!

DISCRIPTION:- Commonly found growing in waste areas and by the sides of roads in India, particularly in the Sub-Himalayan regions of North West Himalaya, Kashmir, Bihar, Orissa, West Bengal, Madhya Pradesh, open forests in Rajasthan, the Deccan, mountains in Karnataka, and Tamil Nadu

PROPERTIES FOUND IN AYURVEDA:- Rasa, guna, virya, vipaka, prabhava, etc.

CAUTION:-

All parts of these flowering annuals are poisonous, including seeds. Exercise extreme caution around children and pets.

USES:-

The plant has several uses, including being emetic, narcotic, anodyne, antispasmodic, and caustic. In cases of duodenal ulcer, renal colic, asthma, cough, fever, inflammations, edema, neuralgia, insanity, myalgia, hyperacidity, calculi, and dysmenorrhea, it is beneficial. Dogs that are rabid are bitten with roots. Leaf is beneficial for piles and inflammations.

TRADITIONAL USES OF DHATURA:-

1. *Datura* seeds are cleaned before being used in a variety of remedies, such as those found in ayurvedic and Unani medicine.
2. Drugs containing data are used to treat respiratory conditions, particularly asthma and productive cough.
3. Owing to its many therapeutic qualities, *datura* is also used to treat a variety of different conditions that include pain, acidity, heart failure, irregular heartbeat, gall bladder stone pain, post-meal abdominal pain, dysmenorrhea, kidney stone pain, and enuresis.

REFERENCES:

1. Available from: <http://www.apps.who.int/medicinedocs/en/d/Jh2945e/2.html>. [Last accessed on 2016 Feb 23].
2. Anonymous. Schedule E-1 of Drugs and Cosmetics Act-1940 and Rules-1945, List of Poisonous Substances under Ayurveda System of Medicine, Government of India, New Delhi.
3. Shagal MH, Modibbo UU, Liman AB. Pharmacological justification for the ethnomedical use of Datura stramonium stem-bark extract in treatment of diseases caused by some pathogenic bacteria. *Int Res Pharm Pharm*, 2(16) (2012) 9.
4. Sharma PC, Yelne MB, Dennis TJ. Database on Medicinal Plants used in Ayurveda. New Delhi: CCRAS, Ministry of AYUSH (2001) 200.
5. Afsha Parveen, K. Vijula, K. V. Avinash, M. Ravishankar, D. V. Leeladhar, Medicinal values of Datura: A synoptic review, *International Journal of Green Pharmacy*, 10 (2) Apr-Jun (2016): 77.
6. Oseni OA, Olarinoye CO, Amoo IA. Studies on chemical compositions and functional properties of thorn apple (*Daturastramonium* L) Solanaceae. *Afr J Food Sci.*, (2011) 5:40-4.
7. *Daturastramonium* <https://www.ayurtimes.com/Ayurveda/rasayana/ayurvedictreatment>.
8. Abo Kutaifa MA, Abbas DA, Kadhim FM. Acute toxicity of aqueous and petroleum ether extracts of *Daturainnoxia* leaves in mice, *Al-Anbar J Vet Sci* (2012) 5:68-74.
9. Abdelouahab B, Nadia M, Nabila K. Toxicity studies of alkaloids of seeds of *Datura stramonium* and synthesis alkaloids in male rats. *J Med Plant Res.*, 5(34) (2011) 21-31.
10. Mahdeb N, Bouzidi A, Kara N, Benouadah Z, Soufane S. Acute and subacute toxicity studies of alkaloids of seeds and synthetic alkaloids of *Daturastramonium* in female rats. *Pharmacology* (2012) 3:598-604.
11. Chang SS, Wu ML, Deng JF. Poisoning by *Datura* leaves used as edible wild vegetables. *Vet Hum Toxicol* (1999) 41:242-5.
12. Sharma S. *Rasa Tarangini*. 11th ed. Ch. 24/163. Varanasi: Motilal Banarasidass; 1979.
13. Charpin D, Orehek J, Velardocchio JM. Bronchodilator effects of antiasthmatic cigarette smoke (*Datura stramonium*). *Thorax*. 34(2) (1979) 259-261.

14. Pretorius E, Marx J. *Datura stramonium* in asthma treatment and possible effects on prenatal development. *Environ Toxicol Pharmacol.* 21(3) (2006) 331-337.
15. Peredery O, Persinger MA. Herbal treatment following postseizure induction in rat by lithium pilocarpine: *Scutellaria lateriflora* (Skullcap), *Gelsemium sempervirens* (Gelsemium) and *Datura stramonium* (Jimson weed) may prevent development of spontaneous seizures. *Phytother Res.* 18(9) (2004) 700-705.
16. Bania TC, Chu J, Bailes D, O'Neill M. Jimson weed extract as a protective agent in severe organophosphate toxicity. *Acad Emerg Med.* 11(4) (2004) 335-338.
17. Eftekhari F, Yousefzadi M, Tafakori V. Antimicrobial activity of *Datura innoxia* and *Datura stramonium*. *Fitoterapia.* 76(1) (2005) 118-120.
18. Shagal MH, Modibbo UU, Liman AB. Pharmacological justification for the ethnomedical use of *Datura stramonium* stem-bark extract in treatment of diseases caused by some pathogenic bacteria. *Int Res Pharm Pharmacol.* 2(1) (2012) 16-19.
19. Sharma A, Patel VK, Chaturvedi AN. Vibriocidal activity of certain medicinal plants used in Indian folklore medicine by tribals of Mahakoshal region of central India. *Indian J Pharmacol.* 41(3) (2009) 129-133.
20. Mdee LK, Masoko P, Eloff JN. The activity of extracts of seven common invasive plant species on fungal phytopathogens. *S Afr J Bot.* 75(2) (2009) 375-379.
21. Sonika G, Manubala R, Deepak J. Comparative studies on anti-inflammatory activity of *Coriandrum sativum*, *Datura stramonium* and *Azadirachta indica*. *Asian J Exp Biol Sci.* 1(1) (2010) 151-154
22. Kurnal NA, Çobanoğlu S, Yalcin C. Acaricidal, repellent and oviposition deterrent activities of *Datura stramonium* L. Against adult *Tetranychus urticae* (Koch). *J Pest Sci.* 83 (2) (2010) 173-180.
23. Balachandran P, Rajgopal G. Cancer-an Ayurvedic perspective. *Pharmacol Res.*; 51(1) (2005) 19-30.
24. Swathi S, Murugananthan G, Ghosh SK, Pradeep AS. Larvicidal and repellent activities of ethanolic extract of *Datura stramonium* leaves against mosquitoes. *Inter J Pharmacogn Phytochem Res.* 4 (1) (2012) 25-27.