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Review Article On Anti-Inflammatory Activity Ofcassia Auritculata

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Abstract: *Cassia auriculata has long been used as a medication for a number of chronic illnesses. The current review's objective is to examine the literature for studies on pharmacological characteristics, safety and toxicity, and pharmacognostic,*
researches and phytochemical analysis of the shrub Cassia auriculata. Specifics regarding the plant's safety profile, such as phytochemical isolation, toxicity investigations, and pharmacological activity, were taken from published sources. The review concluded with plant-wide safety. The collected data can assist the researchers concentrate on the most important yet unexplored study topics.

Keywords: Cassia auriculata, phytopharmacological review, safety

I. INTRODUCTION

Introduction For the vast majority of people in the world, traditional medicine remains the main means of treating illnesses.

The number of people adopting complementary or alternative medicine in one form or another is rising quickly globally, especially among those who have access to western treatment, such as emerging nations like India. A wider range of applications for medicinal plants has been made possible by growing knowledge of human physiology and the metabolic processes involved in plants. Almost half of all medications on the market are composed of simple, natural ingredients. It's interesting to note that because many of the active chemicals in medicinal plants cannot yet be produced synthetically, there is likely to be a continued high demand for these products on the market. According to estimates from the World Health Organization (WHO), around 80% of people reside in poor nations. The use of traditional medicine in healthcare is significant. The usage of herbal medicine has grown during the past ten years.

As a result, there has been a rise in the use of herbal remedies and other forms of traditional medicine. The appropriate administration of these various medication kinds has consequently gained attention. The popularity of herbal remedies around the world in recent years has given India a great chance to search for medicinal lead compounds from the age-old Ayurvedic medical system that can be used to develop new drugs.[1] The world economy benefits from medicinal plants since they are used in about 85% of traditional medical medicines.

Plant-based extracts. In addition to being a major source of medications, plants are vital to global health. [2][3][4]

II. PLANT PROFILE

Auriculata Cassia: -

Fig 1: Auriculata Cassia

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Name Of Drug: Cassia Auriculata.
Common Name:Mature Tea Tree.
Family: Fabaceae (Cassia Tanner) [5][6][7][8][9]

CHEMICAL CONSTITUENTS:

Nonacosane and nonacosan-6-one, chrysophanol, emodin and rubiadin, β-sitosterol, polysaccharides, flavonoids, and anthracene are all present in pod husk. Compounds, as well as some dimeric procyanidins, saponins, and tannins. By using GC-MS analysis, Yesu Raj et al. (2011) discovered that the main chemical groups present in the methanol fractions from the seed extract of Cassia auriculata were phytol's, fatty acid esters, fatty acid amide, terpenoids, and diterpene alcohols. Anandan et al. (2011) examined the chemical makeup of Cassia auriculata leaves and found that they contained 1,2,3,4-Tetrahydroisoquinolin-6-ol-1-carboxylic acid (1.98%), α-Tocopherol-β-D mannoside (14.22%), Resorcinol (11.80%), n-hexadecanoic acid (3.21%), 13-Octadecenal, (Z)-(2.18%), and 4-omethyl-d-glucose (48.50%). From the leaves of Cassia, Senthilkumar and Reetha (2011) discovered the antibacterial chemical oleanolic acid. Auriculata and determined through examinations of the IR, HNMR, CNMR, and mass spectra.[10][11]

SIGNS AND SYMPTOMS:

There are two types of inflammation: acute and chronic. Acute inflammation is linked to the body's initial reaction to damaging stimuli, whereas chronic inflammation is linked to inflammation that lasts for a longer amount of time and continuously disrupts tissue recovery. Such inflammatory diseases are treated with non-steroidal anti-inflammatory medications (NSAIDs). This illness can be treated with a variety of conventional herbal medications that have little adverse effects.[12]

MARKETED PREPARATION:

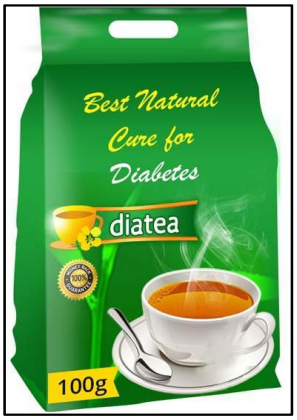

Fig 2: Image Of Marketed Product

III. MATERIAL AND METHODS

To investigate the anti-inflammatory action against the denaturation of proteins, methanolic extracts of the plants Cassia auriculata were utilized.[13][14]

APPLICATIONS IN MEDICINE:

It has been noted that the plant contains antipyretic properties, microbicidalefficacy and hepatoprotective, antidiabetic, antiperoxidative, and antihyperglycemic properties. Research has demonstrated the antiviral and antispasmodic properties of C. auriculata. The herb is used in traditional medicine to treat leprosy, diarrhea, worm infestation, female infertility

The flowers are used to cure diabetes, throat discomfort, nocturnal emissions, and urine discharges. Bark is used as an astringent for skin conditions.

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BENEFITS

Particularly in Ayurvedic medicine, the flower, buds, leaves, stem, root, and unripe fruit are employed for therapeutic purposes. There is no solid scientific evidence to support the use of Cassia auriculata for any of the conditions that people take it for, including diabetes, pink eye, rheumatism, constipation, and joint and muscular discomfort. Particularly in Ayurvedic medicine, the flower, buds, leaves, stem, root, and unripe fruit are used for therapeutic purposes.

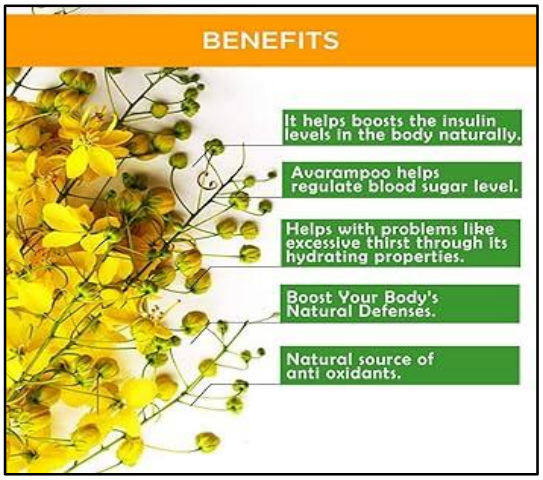

Fig 3: Benefits

There is no solid scientific evidence to support the use of Cassia auriculata for any of the conditions that people use it for, including diabetes, pink eye, rheumatism, constipation, and joint and muscle pain.

PHYTOCHEMICAL TEST:

This procedure also goes by the term of phytochemical screening. These extracts are derived from plant materials, such as the roots, bark, leaves and stems, that are abundant in secondary metabolites. Then, the plant extracts are analyzed for secondary metabolites such flavonoids, terpenes, and alkaloids.

PREPARATION EXTRACT:

A kilogram of shade-dried material was extracted in a Soxhlet using 50% acetone. The passage
was removed by evaporation until a solid residue remained. It was discovered that the yield percentage was 0.5. [15][16]

ANTI-INFLAMMATORY ACTIVITY:

The anti-inflammatory activity: Rat paw edema caused by carrageenan was used to test the anti-inflammatory properties of many leaf extracts. Inflammation caused by carrageenan, is a well-known model of the development of edema and hyperalgesia that has been widely utilized to assess the anti-edemal effects of medications. Rats that receive carrageenan sub-planterally typically experience biphasic edema, with the first phase occurring between 0 and 2 hours and being linked to serotonin and histamine production. The production of molecules similar to prostaglandins is the cause of the second phase of swelling, which lasts for two to six hours. Comparing methanolic extract of C. auriculata leaves to aqueous, hydroalcoholic, and ethyl acetate extracts revealed that the former exhibited stronger anti-inflammatory properties. Given that the anti-inflammatory impact became more pronounced in the later stages of inflammation.[17]

MEDICINAL USES:

There have been reports that the plant has hepatoprotective, antipyretic, microbicidal, antihyperglycemic, antiperoxidative, and antidiabetic properties. It has been demonstrated that C. auriculata contains antiviral and

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antispasmodic properties. The plant is used in traditional medicine to treat leprosy, diarrhea, worm infestation, female infertility, and pittasickness. The herb has been frequently used to treat conjunctivitis (Pari and Lata, 2002) and rheumatism (Kirtikar and Basu, 2006). It has been observed that the plant's numerous parts help to reduce the symptoms associated with diabetes (Surana et al., 2008).[18][19][20][21][22][23]

The Flowers: are used to treat diabetes, throat discomfort, nocturnal emissions, and urine discharges.[24]

The Bark: is used to treat skin issues; it acts as an astringent and can be used to stop bleeding or discharge. They additionally fix the broken nutritional processes. [25]

The Leaf: extract exhibits an emollient effect and a protective action against alcohol-induced oxidative stress to the cells, as demonstrated by elevated levels of enzymatic and nonenzymatic antioxidants, lowered tissue lipid peroxidation, and experimentally induced alcohol-related liver damage.[26]

The Seeds: Tanner's cassia seeds are used to treat purulent ophthalmia, or inflammation of the conjunctiva or eyes. They ought to be pulverized finely and directed towards the afflicted eyes. The following conditions can benefit from the use of seeds: diabetes, chyluria, ophthalmic, dysentery, diarrhea, swelling, abdominal disorders, leprosy, skin illnesses, worm infestations, chronic purulent conjunctivitis, aphrodisiac, anthelmintic, stomachic, alexiteric.[27]

The Roots: are used to treat asthma and skin conditions. The roots have skin-beneficial properties and are astringent, cooling, alterative, depurative, and alexiteric, illnesses, Urethrorrhagia, tumors, asthma, and leprosy.[11]

Leaves, Flowers, And Fruits: The leaves and petals of this plant have a somewhat astringent flavor, making it an anthelmintic. Additionally, it monitors the flow of excess urine and aids in the kidneys' and intestines' absorption of the necessary quantity of fluids.[27]

IV. CONCLUSION

This review makes it quite clear that Cassia auriculata has a variety of phytoconstituents, indicating its potential use for a range of medicinalobjectives. The plant, or any of its constituent parts, has antihyperlipidemic, antidiabetic, hepatoprotective, antifungal, antibacterial, anti-inflammatory, and antioxidant properties. To determine which ingredients are in charge of the biological effects, more investigation is required. Additionally, it was noted that no clinical trials have been conducted to far. Thus, it was determined from the most recent literature assessment that the herb has a significant therapeutic value. The plant's high effectiveness and safety for medicinal usage have been demonstrated by traditional and ethnomedical literature. A powerful and secure medication can be looked into from the natural drug development process by employing the reverse pharmacological techniques.

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