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ETHNOBOTANICAL STUDY OF AMALTAS (*CASSIA FISTULA* LINN.): A DRUG OF IMPORTANCE IN UNANI SYSTEM OF MEDICINE

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ABSTRACT

Amaltas (*Cassia fistula* Linn.) is a moderate size deciduous tree with a 12-15 ft high and 3-4 ft in girth. It is indigenous to India and naturalized in tropical Africa, South America and West Indies. It is described as laxative, useful for relieving thoracic obstructions, and heat of blood, is a safe aperient for children and women even when pregnant, but slows in its action. In this paper various important aspects of Amaltas have been explored.

Introduction

Amaltas (*Cassia fistula* Linn.) is a moderate size deciduous tree with a 12-15 ft high and 3-4 ft in girth. It is indigenous to India, and naturalized in tropical Africa, South America and West Indies[(1).] The pods are directed to be slightly warmed, and the pulp extracted and rubbed up with a little almond oil for use. It is described as laxative, useful for relieving thoracic obstructions, and heat of blood, is a safe aperient for children and women even when pregnant, but slows in its action [(2)].

Vernaculars

Khyar Shember (Arabic); Indian laburnum, pudding pipe tree, purging Cassia (English); Girimalah, Kirvali (Hindi); Khyar chamber (Persian); Suvarnaka, Rajataru (Sanskrit); Garmala (Gujrati) and Khiyar shamber (Unani).[1,2,3,4,5,6,7,8,9,10,11,12,13]

Geographical Distribution

It is common throughout India and Burma[3]. The tree is a native of India and Ceylon and rises frequently to the height of 50 ft [4]. It is indigenous to India and naturalised in tropical Africa, South America and West Indies [1] A large tree thought to be indigenous to India but now widely cultivated in the tropics. The drug is chiefly obtained from West India and Indonesia. [14] It is found in India, Brazil and hot areas of Africa. [15]

Ethnobotanical Literature

A moderate sized deciduous tree with a bole 12-15 ft. high and 3-4 ft. in girth, indigenous to India. It is sometimes cultivated for its beautiful yellow flowers which appear during April-June. The fruit are pendulous cylindrical 25-50 cm long and 1.5- 3.00 cm in diameter and contains 25-100 seeds. Although one celled in the beginning, the fruits later develop numerous transverse septa between the seeds. In fresh pods, the seeds are completely surrounded by a black pulp which on drying adheres to the septa [1]. It has shining dark green large leaflets. Leaves are peripinnate, 30-60 cm long.

Flowers appear in hanging branches, bright yellow in colour. Fruits are cylindric long stick like, black or shining dark brown. Fruits pods are 30-40 cm long [5]. The ovary of the flower is one celled with numerous Ovules. The ripe legume is cylindrical, dark chocolate brown 1.5-2.00 ft long with a short strong woody stalk, and a blunt end suddenly contracted into a point [2].

In Unani Literature it is described as a tree of 6.9 meter high with straight trunk straight, smooth bark of pale grey colour when young which becomes rough and dark brown when old. It has

spreading branches with slender leaves which are 23-40 cm long having leaflets in 4-8 pairs of ovate or ovate oblong shape and bright green colour, glabrous at apex. Petioles are 6-10 mm long, pubescent or glabrous. Flowers are in racemes inflorescence 30-50 cm long, pedicels 3.8 - 5.7 cm long, cylinder. Pods are 30-60 cm long, 2-2.5 cm diameter, pendulous, cylindrical, nearly straight, smooth, shining brown black indehiscent with numerous (40-100) horizontal seeds emerged in a dark coloured sweetish pulp, and completely separated by transverse dissepiments.Seeds broadly ovate 8 mm long slightly less in breadth, and 5 mm thick [16].

Parts Used

Pulp, root bark, flowers, pods, leaves and roots [3]**.**

Pharmacological Actions

Purgative (*Mushil*); Laxative (*Mulaiyan*); Anti-inflammatory (*Muhallil-e-Waram*); Anti-fungal *Daaf-e-Fatar*); Anti-bacterial (*Daaf-e-Jaraseem*); Emetic (*Muqi*); Emmenogogue (*Mudir-e-Haiz*); Abortifacient (*Man-e-Hamal*); Analgesic (*Daf-e- Alm*); Anti-pyretic (*Daaf-e-Humma*); Demulcent (*Mulattif*); Carminative (*Kasir-e-Riyah*) ; Appetizer (*Mushtahi*); Astringent (*Habis*); Antitussive (*Musakkin-e-Sual*); Cicatrizant (*Mudammil*); Digestive (*Hazim*)

Medicinal Uses

Skin affection (*Amraz-e-Jild*); Rheumatism: (*Hudar*); Disease of the heart (*Amraz-e-Qalb*); Tonsillitis (*Warm-e-Lozatain*); Constipation (*Qabz*) ; Cough (*Sual*); Asthma (*Damah*); Gout (*Niqras*); Jaundice (*Yarqan*); Ring worm (*Quba*); Syphlitic ulcer (*Zakhm-e-Aatshak*); Black water fever; Eye affection (*Amraz-e-Ain*); Joint Pain (*Wajaul Mafasil*)

Phytochemical Studies

By steam distilling the finely powdered fruit, a dark yellow volatile oil with honey odour is obtained. Water which distills over with the oil contains normal butyric acid. Pulp consists of sugar, gum, astringent matters, gluten, colouring matter and water [3]. The most important anthraquinone derivative of the pulp appears to be rhein and combined sennidin like compound. The leaves contain free and combined rhein, sennidins and sennosides A&B [14].

The bark of the tree is rich in tannin. Pulp contains sugar, tartaric acid, melic acid, oxalic acid and cathartic acid [5]. The root bark contains besides tannin, phlobaphenes and oxy-anthraquinone substances which probably consists of a mixture of emodin and chrysophanic acid. It consists of mucilage, pectin, hydroxyl–methyl anthraquinones and a larger proportion of sugar [1]. Rhein, glucose, sucrose, fructose isolated from fruit pulp [17].

Organic: Carbohydrates, glycosides, phenolics, proteins, resins, steroids and tannins

Inorganic:Aluminium,calcium,iron,magnesium,sodium,potassium[18]

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