

CHEMICAL INVESTIGATIONS OF HONEY: A MULTIACTIVE COMPONENT OF HERBAL THERAPEUTIC AGENT

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ABSTRACT

Honey is the only ingredient, which is used as the sweating agent and plays an important part in the preparation of food product. Honey is an important ingredient, which is used in the ayurvedic system of medicine. Most of the preparation is taken along with or in combination with honey. Honey serves the necessary of almost all the element of the body. Research and development provide the information regarding the therapeutic use of honey and its use in diabetes mellitus, nervous disorders, muscular weakness infection in body, skin wounds and eye defect. The evaluation and the collection technique are also developed for the analysis of honey and are recently going on in searching the new constituents for it.

KEY WORDS: Honey, diabetes mellitus, sweating agent, therapeutic use

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INTRODUCTION

Since time immemorial man had developed the knowledge of medicine and the product of utility, honey since ancient time is in use in the household preparation. Before the discovery of sugar honey is the only ingredient, which is used as the sweetening agent and play an important part in the preparation of food product. Honey is an important ingredient, which is used in the ayurvedic system of medicine. Most of the preparation is taken along with or in combination with honey. Honey serves the necessary of almost all the element of the body. Research and development provide the information regarding the therapeutic use of honey and its use in diabetes mellitus, nervous disorders, and muscular weakness infection in body, skin wounds and eye defect. The evaluation and the collection technique are also developed for the analysis of honey and are recently going on in searching the new constituents for it. Since before the beginning of recorded history mankind has been enjoying the sweet sticky liquid known as honey praised as the ambrosia for the gods by more than one culture both honey and the pollen have been long hailed for their healing properties.

Hippocrates considered as the father of modern medicine said that "Let your food be your medicine" Bee pollen is the ultra fine powder that makes up the male element of the flower it is collected by honey bee, who by instinct pass by poor pollen and collected only that which is nutritious and healthy. It is than mix with the bee saliva and nectar from the flower providing use with pure all natural and highly patent life giving life extended food. Goliath and Herules of ancient time and Rammurthy the great Indian sandow were in the habit of taking daily honey in their diet hence their might strength and indefinitely capacity for work¹⁻⁴.

MORPHOLOGICAL CHARACTER

Synonym : Madhu, Honey, Mel, Purified honey

Biological sources : *Apis mellifera* and *Apis dorsata*

Order : Hymenoptera

Family : Apidae

Geographical sources: Honey is produced in Britain, Africa, Australia, New Zealand,

VARIETIES OF HONEY

Makshika: Honey collected by the common bee called Madhu Makshika.

Brahmara: Honey collected by large black bee called Brahmara.

Kshaudara: Honey collected by a sort of small bee of tawny colour called Kshaudara.

Pauttika: Honey collected by small black bee resembling a gnat called Pauttika.

Chhatra: Honey formed by tawny or yellow waps, which makes their hives in the shape of umbrellas.

Argha: Honey collected by a sort of yellow bee like Brahmara.

Audhalaka: Bitter and acrid substance found in the nests of white ants.

Dala (Unprepared honey): It found in flowers.

CHEMICAL INVESTIGATIONS OF HONEY

Honey is composed mainly of variety of sugars, traces of pollen water and some enzymes. The uncrystallized honey contains:-

Moisture	-	17.2%	Levulose	-	38.19%
Dextrose	-	31.28%	Sucrose	-	1.31%
Maltose	-	7.31%	Higher sugars	-	1.5%
Lactone	-	7.11%	Ash	-	0.469%
Nitrogen	-	0.041%	Diastase	-	20.8%
Free Acid	-	0.335%			

The other constituents of honey are nectar with traces of succinic acid and dextrin forming acid, colouring matters, enzyme (invertase, diastase, inulase) and traces of vitamins, proteins and pollen grains from various flower are also found in honey.

MECHANISM OF ACTION OF HONEY

Honey having multi action in the body, it is considered as demulcent and laxative. Honey more than a year old is astringent, demulcent, pectoral, emollient and laxative. The fatty acids present in the honey stimulate peristalsis and digestion. It is the most potent fuel to provide energy for muscles and consequently most value for all important most vital muscle and the heart muscle also.

Lime in honey is wonderful in regulating the secretions of internal glandular organs being equally good for person of both the sexes, irrespective of age from infancy to old age .It has hypnotic action in bringing sound sleep if taken with water before going to bed in dosage of two table spoons in the a big cupful of water .It decreases flatulence and increases general metabolism. It stimulates the mucous surfaces when applied locally. A special protein secreted by honey the bees contained in honey when inoculated into rabbits causes the formation of antibodies in the serum.

THERAPEUTIC INVESTIGATIONS OF HONEY

- Honey is mostly used in the preparation of confection and electuaries and as an adjunct to decoction, pills and powder.
- Among all the foods containing carbohydrate, honey is the most wholesome, valuable and delicious.
- As a demulcent and warm barley water are given internally in constipation and indigestion in bronchial asthma, chronic cold, and sore throat.
- When combined with milk honey forms an ideal food for growing children's and adults.
- A mixture of honey and distilled water, vinegar, lime juice in equal parts melted together by gentle heat is an excellent adjunct to cough mixture
- In sever cases of malnutrition with heart weakness and in case of pneumonia honey has bound to have a marked effect in reviving the heart action and keeping the patient alive.
- In the west honey is coming in to more and more extensive use in curing marasmus, malnutrition and scurvy.
- In old age honey is especially useful in providing energy and heat to body, It dries up phlegm and clears the system of mucous which necessary in weakness that a man generally falls victim to in his old age.
- The use of honey internally and sunlight externally to the body directly has been ellogised as an ideal remedy to regulate the secretion of internal glands and calcium metabolism.
- Practioners of Hindu, Greek, Arabic schools of medicine gives honey to diabetics with many of their medicinal preparations , the ferment and a special protein as well as Vitamin in honey perhaps amount for beneficial action of honey in diabetics.
- A paste of Honey with flour is popular application to promote maturation of abscesses, ulcer, and buboes.
- Honey is used as an emollient, it is used as gargle to cure aphthae in a mouth and a vehicle to other agent it is used as an application to the throat infection.
- Honey with lime is used as an external application to the temples in headache.
- Honey by itself or mixed with ghee applied to burns, ulcer, soulds and wounds soother and has them rapidly.
- Rubbed over the teeth with charcoal powder makes them clean and white as snow
- Honey when rubbed over greasy dirty hands, it cleans them rapidly⁵⁻⁷.

SPECIAL INVESTIGATIONS IN THERAPY OF HONEY WITH POLLEN

- a) As Disinfectant:** Due the high content of potassium in honey it creates hygroscopic power .The germs thrive in moisture, this effect will deprived them of their nourishment and they die.
- b) As Magic healer:** Egyptian applied honey to open wounds and watched the healing take place. Orientals applied an ointment of honey and pollen to open sores for skin break out to promote healing. The ancient Hebrew physicians combined honey with pollen for dressing on ulcerated wounds, burns and boils.
- c) As folk healing:** South Indian used pollen and honey for dressing their open wounds
- d) As Respiratory Ailments:** In many regions of Europe people use a combination of honey and pollen to help healing respiratory ailments.
- e) As Respiratory relief:** Folklorist suggests that you dissolve one table spoonful of honey, one teaspoon of bee pollen and some lime juice in a cup of freshly boiled water. This mixture soothes respiratory distress, sore throat and other symptom of lungs discomfort.
- f) As Natural Sleeping tonic:** Early New England settler prepared this mixture-four table spoonful of honey two teaspoons of pollen three teaspoon of apple cider vinegar in a cup of freshly boiled water, sip slowly at bed time, give natural sleep.
- g) As Oriental youth elixirs:** combine two table spoons of pollen , one tea spoon of chopped ginseng herb and dried orange peel , Take with a spoon ,Oriental healer believe that this create a feeling of total reinvention and vitality.
- h) As Natural Regulatory Reaction:** we can use honey and pollen to solve problems of irregularity when taken with pollen either in liquid s on as a topping on thick black bread.

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