

A Review On: Herb's Used in Herbal Cough syrup

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ABSTRACT -

Cough refers to a strong explosive exhalation that clears the tracheobronchial tract of fluids and foreign matter. Given the high frequency of coughs in both children and adults, the aim of this review article was to document the plants used to cure and relieve coughs. In traditional culture and ethnobotany. Problems arising from the use of conventional opioids cough suppressants such as codeine and codeine-like compounds to treat cough in a variety of respiratory diseases. Medicinal plants have the potential to provide compounds with potent antitussive efficacy and few side effects. The specification of the active ingredients responsible for the therapeutic effect and their measurement in medicinal products are recent advances in modern phytotherapy that allow treatment to be rationalized particularly dose and control of adverse effects. The purpose of this review is to discuss the current status of the plant, which is used as a food source, antitussive, and expectorant to suppress cough, as well as its active ingredients

Key words - Antitussives, expectorant, Mucolytics, Demulcent, stridor, Hoarsness, bronchiectasis.

I. INTRODUCTION:

Cough

A cough also known as tussive is a voluntary or involuntary act that clears the throat and breathing passage of foreign particulates, microbes, irritants, fluids, and mucus. It is one of the most common health problems coughing can also be due to a respiratory tract infection such as common cold, acute bronchitis, flu and smoking or health problems.

Cough History :

1 .Onset and Duration

Acute : < 3 weeks (self limiting less than 3 weeks)

Subacute :3-8 weeks

Chronic :> 8 weeks

Acute cough such as during and after common cold is usually due to upper respiratory viral infection.

Non -viral causes include environmental pollution, asthma and occupational exposure .From therapeutic point of view, chronic cough with normal chest x-ray .

a) Glucocorticoid responsive= due to eosinophilic disorder as in asthma .

b) Inhaled Glucocorticoid resistant =example postnasal drip ,(GERD),gastro -oesophageal reflux disease ,post -**respiratory** infection and drug induced .

Barking cough ,stridor and chest wall with drawal are characteristic of croup .common in children. Cough becomes worse at night .

2 .CharacterBovine with Hoarsness

Left recurrent laryngeal nerve palsy causing left vocal cord paralysis due to CA lung .

Barking With Hoarsness and StridorAcute Epiglottitis ,laryngitis, larynx . Wheezy -COPD ,Asthma .

3)Timing and associated features –

Nocturnal-Asthma ,CHF

Early Morning-Bronchiectasis ,chronic bronchitis

Recumbent-CHF ,postnasal drip

4) With or without sputum –

Dry Cough –(Without sputum)Causes of dry cough (Asthma ,viral infection of respiratory system.

Productive cough –(with sputum)Causes of productive cough

(Respiratory infections COPD.(Chronic Obstructive Pulmonary Disease)

Types Of The Cough –

Two types of cough –

1)**Wet Cough** 2)**Dry cough**

Dry cough	Wet cough
1)productive and effective cough	1)Non effective and infective cough
2)It expels secretion mucous or foreign material from respiratory tract	2) It expels secretion or mucous from lungs
3) The main purpose of wet cough is to remove the mucous from respiratory tract	3)Dry cough is chronic in nature and it is caused by dry irritation smoke or dust .



Figure no.1 Different Kinds of cough wet vs dry

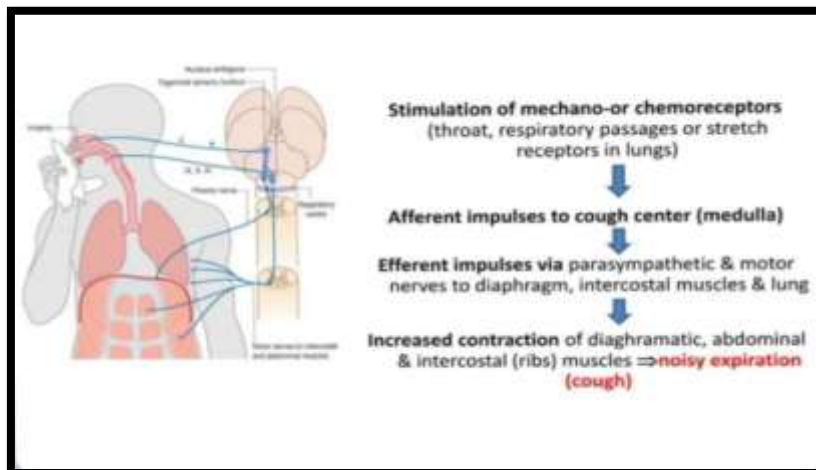


Figure no.2 Mechanism of action of cough

Advantages Of Herbal Syrup

- 1) No Side Effect
- 2) No Harmless
- 3) Easily Available
- 4) Easy to Adjust the dose for child's weight
- 5) No nursing is required, which main and the patient can take it with no help.
- 6) Herbs Grow in common place
- 7) Good patient compliance especially pediatric patients as syrup are sweet in test .
- 8) It is a preservative by retarding the growth of bacteria, fungi, and mould as osmotic pressure.
- 9) Low cost

Disadvantages Of Herbal Syrup

- 1) Sedimentation of solid occasionally gives foot from of product.
- 2) Dose precision can not be achieved unless suspension are packed in unit dosage forms .
- 3) Same microbial contamination taken place it preservation not added in accurate proportion
- 4) Also herbal medicine having another disadvantages is the risk of self dosing of herbs which is very rare.

Treatment Of Cough

Cough is protective reflex ,intended to remove irritants and accumulated secretion from the respiratory passages . The drugs used in the symptomatic treatment of cough .

1)**Antitussives** – These are drugs that act in the CNS to raise the threshold of cough centre or act peripherally in the respiratory tract to reduce tussal impulses ,or both these actions

Example -cinnamon ,vasaka leaf

2)**Pharyngeal Demulcent** -Demulcent are used to lubricant and protect the alimentary mucous membrane ,but the term is usually applied only to those agents that affect the buccal ,pharyngeal ,esophageal, and gastric mucosa .

Example – honey

3)**Expectorants** - They increase the volume of bronchial secretion and decrease viscosity of the sputum hence cough becomes less tiring and productive . **Example**-lemon Licorice4)

Mucolytics

These agents break the thick tenacious sputum and lower the viscosity of sputum ,so that sputum comes out easily with less effort .

Example - pineapple juice

HERBS PLANTS USED TO TREAT COUGH –

1) Ocimum sanctum Linn

Synonyms – Holy basil ,sacred basil

Biological Source – It consists of dried leaves of ocimum sanctum linn .

Family -labiatae

Chemical Constituents – Pleasant Volatile oil (0.1 to 0.9 %) Also

Consist 70% Eugenol and carvacrol(3%) eugenolmethyl-ether

(20%) Uses - Leaves and volatile oil use in various purpose. The oil is antibacterial and insectidal used . Fresh leaves are use in stomachin.



Figure no. 3 Tulsi

2) Pudina –Mentha spicatalinn



Figure no.4 Pudina

Synonyms – Peppermint ,fragrant ,mentha leaves .

Biological Source- pudina consist of dried leaves and obtained from flowering tops of mentha spicatalinn.

Family -Labiatae

Chemical Constituents-

The main constituents of menthol (40.7%) and menthone (23.4%) further components were (%+-) menthyl acetate , 1.8-cinecole ,limonene ,beta ,pinene and beta -caryophyllene.

Uses – 1) flavouring agent

2)Carminative ,digestive ,spasmolytic also use in one herbal syrup preparation .

3)Cinnamon –



Figure no.5 Cinnamon

Synonym – Cortex cinnamon oil Ceylon cinnamon ,Saigon cinnamon ,cinnamon oil aromaticum

Biological Source – Cinnamon umzeylanicum is widely cultivated in Ceylon Java sumatra

Family – lauraceae

Chemical Constituents – Cinnamon bark contains 0.5to 1.0% volatile oil ,1.2% tannins ,volatile oil contains cinnamaldehyde ,eugenol,benzaldehyde ,cumin aldehyde .It is also contains mucilage ,calcium oxalate ,starch and sweet substance as mannitol .

Uses – Stomachic ,carminative ,stimulant ,mild astringent and antiseptic .

4)Adhatoda Vasica L.Nees



Figure no. 6 Adhatoda vasica

Synonym – Adhatoda

Biological Source– Dried and leaves of Adhatoda Vasica .

Family – Acanthaceae

Chemical constituents – vasaka leaves contain Quinazolin alkaloids vasicine,vasicinone and adhatodine.

Uses – Broncho-dilators ,antispasmodic

5)Liquorice -



Figure no. 7 Liquorice

Biological Source – It consist of root and stolons of Glycyrrhizin ,globra

Family – Leguminosae

Chemical Constituents- Liquorice contain saponin glycoside ,glycyrrhizin. It also contains flavonoids liquiritin and isoliquirtin .

Uses- The ammonium and sodium salts of glyayrrhizinic acid are widely used in cosmetics. It has skin improving properties hence used in skin care cosmetics

6) Haridra -



Figure no.8 Haridra

Synonym – Haldi ,turmeric ,curcuma longa

Biological Source -Harida consist of the dried rhizomes of curcuma longa Linn .

Family – Zingiberaceae

Chemical constituents- Haridra contains not less than 1.5 %w/w of curcumin,calculated on the dried basis

Use – Turmeric have antiseptic and antioxidant properties ,it is used skin care cosmetic .

7) Brahmi-



Figure no. 9 Brahmi

Synonym – Bacopa

Biological Source- It consists of the fresh leaves and the stems of the plant known as Bacopa moniera Linn .(Herpestis moniera)

Family– Scrophulariaceae

Chemical Constituents- Brahmi is found to contain the alkaloids brahmine ,Additionally ,it also contains betulic acid ,stigmasterol ,monnierin and hersaponin.

Uses – It is used as nervine tonic ,in the treatment of asthma ,epilepsy and insanity .it is aperient and also diuretic .it has significant effect on retention of new information and promotes clarity of thought .

8) Fennel –

Synonym- Fennel fruits

Biological Source- Fennel consists of dried ripe fruits of the plant known as foeniculum vugare Miller.

Family – Umbelliferae

Chemical constituents- Fennel consists of 3to 7%of volatile oil ,about 20% each of proteins and fixed oil

Uses – it is used as a carminative ,aromatic and stimulant .it is also an expectorant pharmaceutically ,it is used as flavouring agent



Figure no.10 Fennel

9) Ashwagandha –



Figure no. 11 Ashwagandha

Synonym – Withania root ,winter cherry

Biological Source – It consists of dried roots and steam bases of Withania somnifera (Linn)

Family – Solanaceae

Chemical constituents- the main constituents of ashwagandha are alkaloids and steroidal lactones .among the various alkaloids withanine is the main constituent .

Uses – Ashwagandha has sedative and hypnotic effect .it has hypotensive , respiratory stimulant action .along with bradycardia .it is immunomodulatory agent .

10) Ginger –



Figure no. 12 Ginger

Biological source –It is the dried rhizomes of Zingiberaceae officinale **Family**–Zingiberaceae

Chemical constituents- it contains volatile oils ,minerals

resins . Ginger oil contain zingiberine , bisabolone ,farnesene ,sesquiphellandrene and curcumene

.resins contain phenolic ketones such as gingerols , shogaols ,zingerone and other compounds.

Uses

Stomachin ,aromatic, carminative,stimulant ,flavouring agent ,in Ginger beverages ,adsorbent of toxins from GIT ,to control parasitic infections

10)Honey

Synonyms madhu ,madh,mel, purified honey.

Biological source Honey is viscid and sweet secretion stored in the honey comb by various species of bees ,such as APIs dorsata ,APIs florea ,APIs indica and other species of APIs

Family Apideae

Chemical constituents

The average composition of honey is an follows Moisture 14-24% , Dextrose 23-36 ,levulose (fructose) 30-47% ,Sucrose 0.4-6% ,dextrin and Gums 0-7% and Ash 0.1-0.8% besides .It is found to certain small amount of essential oil, beeswax,pollen grain,formic acid,acetic acid,succinic acid,maltose,dextrin,colouring pigment,vitamins and an admixture of enzymes

Uses – It is used in treating burns and wounds It is used in natural Cough syrup.

It is help to improve digestion .

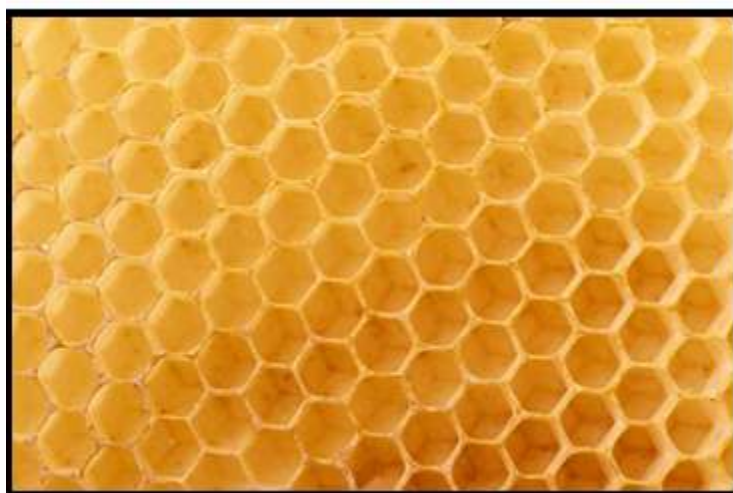








Figure no.13 Honey

List of Herbal marketed formulation used to treat Cough

Sr. No.	Herbal formulation name	Key ingredients	Dosage	Images of formulation

1)	Zhandutulsi, ginger, mint syrup	Tulsi, shunti,maricha,pippali, tvak, pudina, sukshmaila, yasti, jatiphala, Peppermint	3-4 times a day	
2)	Himalayan tulsi syrup	Tulsi	Adults can consume 10mL of Tulsi Syrup twice a day; this is about two teaspoons full Children should take half as much twice a day	

3)	D'Cold natural syrup	<p>Haridra (Curcuma longa)500.0 mg, Kulanjana (Alpinia galanga)500.0 mg, Shati (Hedychium spicatum) 400.0 mg, Vasa (Adhatoda vasica)300.0 mg, Yasti (Glycyrrhiza glabra) 200.0 mg, Tulsi (Ocium sanctum)200.0 mg, Pippali (Piper Longum)50.0 mg, Sunithi (Zingiber officinale)30.0 mg, Navsadar (Ammonium chloride)30.0 mg, Pudinah Ka Phool (Mentha Viridis)2.0 mg, Madhu (Honey)1.0 mg, Flavoured syrup base Q.S to</p>	<p>You should only take 4 doses of D Cold syrup in 24 hours.and there should be gap of at least 4 hours between 2 doses.</p>	
4)	Cough tablet	<p>Tulsi – 170mg Ardusi 170mg sunth 40 mg Piper 40mg Jethimadh140mg Halдар 170mg Excipients-Q.S</p>	<p>1tablet before one hoursof meal twice a day</p>	

5)	Dabur Honitus	Banaphsa 50.0 mg, Kantkari 50.0 mg, Talispatra 50.0 mg, Sunthi 25.0 mg, Pippali 25.0 mg, Vasaka 25.0 mg, Shati 25.0 mg, Pudina Satva 3.0 mg, Shudha Madhu (Honey) 1.75 g	Children: 1 teaspoon 3-4 times a day, Adults: 2 teaspoons 3-4 times a day.	
6)	Adulsa	Sweet Tulsi, Krishna Tulsi, Rama Tulsi, Safed van Tulsi, Kali van Tulsi (Adulsa), Jeshthamadh (Yestimadhu), Kantakari, Sunth, Pudina ,pimpali	Adult- (10ml) two teaspoonfuls, three times a day, after meals.; Children: (5ml) one teaspoonful, three times a day	

II. CONCLUSION -

Traditional medicine and complementary and alternative medicine have become increasingly popular in both developed and developing

countries over the past two decades. Due to the current global interest in

Traditional medicine, many medicines used by different ethnic groups around the world are rapidly being developed and studied. The information is

held in the form of a common name for the botanical name, a

Family name, a used part, an active component and a reference. Scientists from many fields are investigating new plants with antitussive and expectorant effects.

Finally, the current study concludes with a holistic view of herbal medicines for the treatment of cough, arguing that both raw and poly-herbal formulations are effective alternatives to modern cough medicines that have diverse effects negative effects. This study also suggests that future clinical trials could be conducted with these polyherbal formulations as well as individual raw drugs to provide clinical evidence of use.

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