

APPLICATION OF SOME INDIAN HERBS IN THE FIELD OF HEALTHCARE SYSTEM

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ABSTRACT

There is a growing use of natural compounds and supplements in herbal medicines to treat various diseases as they are safe and having fewer side effects. Herbal medicines contain unpurified plants parts either in power form or aqueous extracts of the plant body. Plant extracts are mixture of various compounds like alkaloids, glycosides, flavonoid, saponin etc. In this study, we have reviewed the effect of Indian herbal medicines and possible causes of their benefits. Some of the very common plants are Vincristine, Licorices, Aloe vera, Saraca Indica, Centella asiatica, Gymnema sylvestre.

KEYWORDS: Phyto-chemicals, Natural compounds, Polyphenols, Epigenetic changes.

INTRODUCTION

India has been known to be rich repository of medicinal plants. Many plants which are grow in Indian environment having medicinal values. Many of them have discovered and many are to be evaluated. Herbs are the parts of plants which are used as flavour, fragrance, dietary supplements (nutra-ceuticals) and also in therapeutic purposes. Now a day due to advancement of formulation technology these are dispensed as powder, capsules, tablets (Hazzmola), dip-sachets. India being a vast area having different climatic conditions various kinds of herbs are growing with enriched active chemical constituents.

With these a little amount of these herbs in any form like powder or extract gives very potent formulation for the treatment of many diseases like Cancer, diabetics, hypertension and obesity etc.

These products are as important as allopathic medicines may have serious consequences like undesirable and unavoidable side effects and their long term uses may develop some other physiological challenges for the patients. Drug resistant are very common in case of antibiotics.

Names of very common medicinal plants are: Aloe vera, Turmeric, Tulsi, Pepper, Elachi and Ginger, which are being used in numerous homemade remedies very early ages of our society in India. Now a days whole world are using these products in different brand names for the treatment of many diseases and considered to be the best aid among fighting ailments related to throat and skin problems.

The investigation revealed that, the traditional healers used 85 species of plants distributed in 76 genera belonging to 41 families to treat various diseases. The documented medicinal plants were mostly used to cure skin diseases, poison bites, stomachache and nervous disorders. In this study the most commonly used a few plants and leaves were most frequently used for the treatment of diseases are described in this review article.

Now a day various other plants which contain phyto-chemical constituents are used as potential bio-molecules that play a major role in modern medicines in the treatment of many critical diseases like human immunodeficiency virus (HIV), Tuberculosis (TB) etc. Here we are highlighting a few commonly used Indian plants with their dosage forms used.

- a) Vincristine and Vinblastine, alkaloids obtained from Vincarosia are used in the treatment of cancer. It is used in the form of oil based injection. Vincristine is a vinca alkaloid found in the Madagascar periwinkle or catharantus roseus, widely used in the treatment of breast cancer, non-small cell lung cancer, pancreatic cancer, kidney cancer, blood cancer.
- b) Licorices and Quill containing Saponine is useful for treatment of tumor in the form of tablets or capsules. In modern times, licorice is widely used in food, medicines and supplements, tobacco, chemical applications, environmental applications, animal husbandry and other industries.

- c) Aloe vera is a medicinal plant with antioxidant and antibacterial properties. Aloe vera benefits can include reducing dental plaque, accelerating wound healing, preventing wrinkles, and managing blood sugar. Aloe vera, or *Aloe barbadensis*, is a thick, short-stemmed plant that stores water in its leaves. It is used as i) anti-ageing, ii) acne, iii) reduces Plaque, iv) moisturizing, v) boosts digestion, vi) soothes Razor Burn, vii) lowers blood sugar. It is in the form of gel and liquid forms are available.
- d) Warfarin is an anti-clotting drug widely present in different food sources like spinach, kale and broccoli which have deleterious effect by inhibiting clot formation. It is a good anticoagulant. It is used to prevent blood clots from forming or growing larger in your blood and blood vessels. It is prescribed for people with certain types of irregular heartbeat, people with prosthetic (Replacement or mechanical) heart valves, and people who have suffered a heart attack.
- e) *Saraca Indica* is commonly known as Ashoka, belongs to family *Caesalpinaceae*. It is used as blood purifier and beneficial in all skin sickness. The bark is also useful in dyspepsia, fever, and burning sensation. It is also used to treat menorrhagia, leucorrhoea, internal bleeding, hemorrhoids, and hemorrhagic dysentery. It is available in powder form.
- f) *Withania omnifera*, known commonly as ashwagandha or winter guava, is an evergreen shrub in the *Solanaceae* or nightshade family that grows in India, the Middle East, and parts of Africa. Several other species in the genus *Withania* are morphologically similar. It can be used medicinally, to treat various CNS disorders, specifically Alzheimer's disease, Parkinson's disease, cerebral ischemia, epilepsy, tardive dyskinesia, stress and even for managing drug addiction.
- g) *Centella asiatica*, commonly known as Indian pennywort and Asiatic pennywort, is an herbaceous, perennial plant in the flowering plant family *Apiaceae*. It has been used to treat many conditions for thousands of years in India to heal wounds, improve mental clarity, and treat skin conditions such as leprosy and psoriasis.
- h) *Gymnema sylvestre* is an indigenous herb, belonging to the family *Asclepiadaceae*. It is popularly known as “gurmar”. It is a therapeutic plant utilized in Ayurvedic medicine for

the remedy of type 2 diabetes mellitus. Leaf powder is mixed with cow's milk and taken orally to treat diabetes. The root powder is also taken orally.

- i) Kiwi contains abundant amounts of Vitamin C, which stimulates the body's immune response. In fact, the kiwifruit contains roughly 230% of the daily recommended intake of Vitamin C. This bold fruit provides a burst of immune-boosting nutrients in every bite. Kiwis are also rich in antioxidants. It controls the level of blood sugar, helps to glow skin, and many more like Vitamin C sources.
- j) Curcumin is a bright yellow chemical produced by plants of the *Curcuma longa* species. It is the principal curcuminoid of turmeric (*Curcuma longa*), a member of the ginger family, Zingiberaceae. It is sold as a herbal supplement, cosmetics ingredient, food flavoring, and food coloring. It has powerful anti-inflammatory effects and is a very strong antioxidant. Curcumin is poorly absorbed into bloodstream. In order to experience the full effects of curcumin or to improve its bioavailability, curcumin in powdered form is mixed with carboxy methyl cellulose and dispensed as capsule.
- k) *Coccinia grandis*(kundri) is a powerful anti oxidant containing dietary fibres & different vitamins. It is reported to have hepatoprotective activities preventing liver cancer. It is used as daily household vegetable preparation. It is most often used for diabetes. It is also used for gonorrhea, constipation, wounds, and other conditions, but there is no good scientific evidence to support these uses. The fruit and leaves are also used as a vegetable in India and other Asian countries.
- l) *Glycyrrhiza glabra*- Liquorice or licorice is the common name of *Glycyrrhiza glabra*, a flowering plant of the bean family Fabaceae, from the root of which a sweet, aromatic flavouring is extracted. The chemical composition of *G. glabra* is glycyrrhizin, glycyrrhetic acid, isoliquiritin, isoflavones etc and their derivatives have been reported for several pharmacological activities like, expectorant, antidiabetic, antiulcer, anticancer, anti-inflammatory, antidiabetic, etc. These phytochemicals hold strong promise for designing new herbal drugs, and derivatives of these compounds are being generated to evaluate their pharmacological purposes for future drug use. Natural products have been a prime source for the treatment of many forms of ailments, many of which are consumed daily with the diet. They provide significant protection against various diseases and disorders. It is used in powder form.

- m) *Terminalia prunioides* (purple-pod terminalia; family: Combretaceae) is a medium-sized tree or shrub native to several regions of southern and eastern Africa. It is used traditionally in the management of several human ailments including pain, coughs, diarrhea, and gastrointestinal discomfort. Antimicrobial activities have been reported with the use of leaf extracts against clinically important microorganisms such as *Candida albicans*, *Staphylococcus aureus*, and *Enterococcus faecalis*.
- n) Amalakayas Rasayana is composed principally of the fruits of *Emblica officinalis* Gaertn. or *Phyllanthus emblica* Linn. (colloquially known as the Indian gooseberry in English, and amla or Amlaki in most Indian language), and is an important Rasayana drug. Amalaki improves functioning of the liver, heart, brain, and lungs., the fruit has been studied as a treatment for heartburn, high cholesterol, and diabetes.
- o) The almond is a species of small tree from the genus *Prunus*, cultivated worldwide for its seed, a culinary nut. Along with the peach, it is claAlmonds contain lots of healthy fats, fiber, protein, magnesium, and vitamin E. The health benefits of almonds include lower blood sugar levels, reduced blood pressure, and lower cholesterol levels. They can also reduce hunger and promote weight loss.
- p) Ginger is a flowering plant whose rhizome, ginger root or ginger, is widely used as a spice and a folk medicine. It is a herbaceous perennial which grows annual pseudostems about one meter tall, bearing narrow leaf blades. Ginger also contains antioxidants and anti-inflammatory properties. The combination of these properties has many benefits. These ginger health benefits and side effects improve coughs, lower fevers, fight off infections, relieve headaches, and ease other symptoms associated with common colds and the flu.
- q) Garlic is widely recognized for its ability to fight bacteria, viruses, fungi, and even parasites. One study found that allicin, an active component of freshly crushed garlic, had antiviral properties and was also effective against a broad range of bacteria, including multidrug-resistant strains of *E. coli*. garlic has been used to treat bronchitis, hypertension (high blood pressure), TB (tuberculosis), liver disorders, dysentery, flatulence, colic, intestinal worms, rheumatism, diabetes, and fevers.

CONCLUSION

Today people are more concerned about their health and shifting towards using natural herbal products. Another important factor is that the plants are locally available and preserved very easily in domestic environment. Cost point of view they are cheaper than allopathic form of dosage forms. Moreover these resources should be utilized for holistic treatment all over the world leaving the geographical partition. It thus becomes necessary to acquire and preserve this traditional system of medicine by proper cultivation, formulation and proper applications. Medicinal use of plants to treat disease and enhance general health and wellbeing. Some herbs have potent (powerful) ingredients and should be taken with the same level of caution as pharmaceutical medications. Almost, 70% modern medicines in India are derived from natural products. The basic uses of plants in medicine will continue in the future, as a source of therapeutic agents, and as raw material base for the extraction of semi-synthetic chemical compounds such as cosmetics, perfumes and food industries.

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