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Review Article

Sibr (*Aloe barbadensis*): A Short Description with Unani Approach

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Abstract

In many parts of world, there is still a tradition of using herbal drugs to combat various diseases & infections. *Sibr* is one of the essential components of Unani system of medicine and used by Unani physicians due to it's a lot of medicinal properties since ancient time. It is commonly called Aloe-vera and belongs to the Lilicaceal family. It is a cactus like herb and grows in hot and arid environment. Unani physicians have been using this drug as a laxative, purgative (phlegm/bile), brain tonic, stomach tonic, liver tonic, emmenogogue, anti-inflammatory, blood purifier, antibacterial, and carminative agent. Hence, this drug having a vital place in Unani system of medicine and text. It is also use to reducing Low density Lipoprotein, increasing High density Lipoprotein, minimizing frost-bite injury, reducing blood glucose level, fighting against Acquired Immuno Deficiency Syndrome (AIDS), allergies, and boosting immune system. This article was designed to lime light the *Aloe barbadensis* by describing its brief toxicology, contraindications, traditional, therapeutic and others uses.

Keywords: Antibacterial, *Aloe barbadensis,* Sibr, therapeutic, Unani system of medicine.

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INTRODUCTION:

Sibr (Aloe vera) is an extremely popular herbal drug amongst the various currently available herbal remedies and at the moment receiving a lot of scientific attention [1]. *Sibr* is an oldest medicinal plant ever known and most applied medicinal plant globally used for centuries for its health, beauty, cosmetic, vigor, wellness, and medicinal properties[2,3]. The name Aloe vera derives from the Arabic word *"Alloeh,"* meaning 'shining bitter substance,' whereas "vera" in Latin means *"true,"* about 2000 years back. The Unani scientists considered *Sibr* as the universal panacea and *Egyptians* called it "the plant of immortality." Nowadays, the plant of *Sibr* has been used for different purposes in Amraaz-e-jild Wa Tazeeniyaat (Dermatology and Cosmatology)[3].

HISTORY:

The history of our understanding of *A. barbadensis* parallels the history of scientific knowledge. *Sibr* has been used for its medicinal properties in many cultures such as Greece, Egypt, India, Japan, China, and Mexico from thousand years. It is used by Egyptian Queens Nefertiti as beauty regimes. Dioscorides, renowned Unani scholar of Roman era, describe about the *Sibr* in his Medical treatise *"De Materia Medica"*[3].

BOTANICAL DESCRIPTION:[4]

Taxonomy

Kingdom: Plantae

Order: Asparagales

Family: Asphodelaceae (Liliaceae)

Genus: *Aloe*

Species: *A. vera*

PLANT PROFILE:

Botanical Name: *Aloe barbadensis* Linn.[5,6]

Common Name: Aloe Vera[3]

Family: Liliaceae [5,6,7]

Vernacular Names:

Arabic: Sibr [7,8] **Persian:** Shabyar, Alwa [9] **Hindi:** Ailwa [5] Ghee-kanwar [10] **Greek:** Faiqra [9] **Sanskrit:** Kumarai, Aileekh [7,8] **English:** Indian aloes [7,8,10] **Romi:** Alya [9]

Part Used:

The dried and fresh juice of the leaves, leaf gel, the whole leaves, the gel from the water storing tissue and the roots.[7,8,11].

Temperament *(Mizaj):*

Hot and dry in second degree.[5,7,8]

Hot in second degree & dry in third degree.[9,12,13]

GEOGRAPHICAL DISTRIBUTION:

There are about 250 species of *A. barbadensis* grown throughout the world. Amongst them 2 species are grown commercially e.g. *A. barbadensis* Miller and *A. arborescens.* It is grown in warm, tropical regions and cannot stay alive in freezing temperature[1].

Aloe vera is a native to North Africa, the Mediterranean region of South Europe, Canary Island, Souther Arabia, and Madagascar. It is now cultivated throughout the West Indies, North and South Tropical America, Caribbean and tropical Asia[14,15, 16]. In India, it grows wild on the coast of Mumbai, Gujarat, and South India[17,18].

TRADITIONAL USES:

It is popular amongst various traditional medicines like Chinese, Ayurvedic, Unani etc. In Ayurvedic medicine, it is used internally as a uterine stimulant, laxative, vermicide, and hemorrhoid remedy. Topically, it is used to treat various skin disorders like eczema, psoriasis in different proportion with licorice root. In Arabian medicine, the fresh gel of Aloe is rubbed on the forehead to lighten the headache and also rubbed on the whole body to cool it in case of pyrexia. It is also use to heal the wound, to cure the conjunctivitis and as a disinfectant[19].

ACTIONS *(AFA'AL):* [5,6,7,8,10,12,18,20,21,22,23]

Laxative/Cathartic, Purgative (Phlegm/Bile), Tonic to stomach and liver, Vermicide Emmenogogue, Anti-ulcerogenic, Anti-inflammatory, Anesthetic, Anti-bacterial, Anti-prostaglandin effect, Anti-spasmodic, Carminative, Diuretic, Blood Purifier, Antileprotic.

THERAPEUTIC USES:

Gastro-intestinal tract: Aloe relieves obstruction of liver and stomach, act as a tonic for liver & stomach and is beneficial in jaundice.[10,24,25]. The drug is widely used for constipation, anal fissure, and haemorrhoids.[205,206,223] It is used in worm infestation due to its vermicide action[7,22]. The stem is used in dysentery[10].

Central Nervous System: It purifies the brain, eyes by excretion of corrupt humors from them. It is beneficial in melancholia and in case of headache it mixed with rose oil & applied on forehead[24,25].

Respiratory system: It is used in children suffering from bronchial asthma[10,22,25].

Skin: Radiation burns, thermal burns, frost bite, wound healing in pressure sore, seborrhoeic dermatitis, and psoriasis[9,10,20,25,26,27].

Fertility and Menstruation:

In a study aloe compound was found to improve fertility in 85%, the menstrual function also improved in 44.60%. It has been concluded that aloe compound is very useful in case of functional sterility[28]. It is also used in various menstrual disorders such as amenorrhea, oligomenorrhoea[7,8,22].

Analgesic Activity:

Carboxypeptidase was found to have a significant analgesic effect and inhibited the acceleration of vascular permeability with acetic acid inflammation. It has been suggested that carboxypeptidase may be a main anti-inflammatory agent of aloe, though other compounds could contribute to the effect[29].

Musculoskeletal system:

Aloe is also beneficial in Wajaul Mafasil (Joints Pain). It mixed with roghan gulab and used as a Tila in Wajaul Mafasil [6,9,10,22,23,24].

DOSE:

6 gm, [23] 4½ g- 9g, [9] 1 ratti-4 ratti, [7,8] 3½ masha- 4½ masha, [13]

1.75 masha-3½ masha, 7 masha, 10½ masha [22]

SUBSTITUTE *(BADAL)*:

Turbud (Ipomoea turpethum R.) [7,8]

Usara Rewand [7]

Huzuz double its weight, says Ibn-e-Masawaih [5]

Rasoot double its weight, and Afsanteen, Zafraan [22]

CHEMISTRY:

The aloe yields two important products:

Aloe resin: It is the solid residue obtained by evaporating the latex obtained from the pericyclic cells beneath the skin. The bitter yellow latex contains the anthroquinone barbaloin (a glucoside of aloe-emodin) and iso- barbaloin in addition to a series of o- glucosides of barbaloin called aloinosides chrysophanic acid, and upto 63% resin. Filtering out resins from the exudates and concentrating the remaining anthroglycoside material into crystalline form produces aloin. The concentration of anthroglycosides varies with the types of aloe ranging from 4.5 to 25% of aloin. Aloin is a mixture of water soluble glycosides obtained from aloe [30].

Dried leaf juice:

Anthranoids: Anthrones mainly the c-glycosides, aloins A and B (Barbaloin, isobarbaloin, and stereoisomers of 10-glucosyl-aloe-emodin anthrone), other glycosides include 8-0-methyl-7-hydroxy aloins A and B, aloinosides A and B (aloin-11-0-rhamnosoids). Small quantities of 1, 8-dihydroxyxanthra-quinoid glycones, including aloe-emodin and chrysophanol are present[11].

Chromones: Major constituents are aloesin and aloeresin E. Lesser quantities of isoaloresin D, 8-c-glucosyl-7-o-methyl-aloesol and related glycosides which may be esterified at the glucose moiety by either cinnamic, p-coumeric or ferulic acids are also present. Non-glycosylated chromones include 7-hydroxy-2, 5-dimethyl chromone, furoaloesone, 2-acetonyl-7-hydroxy-8-5-methyl chromone and 2-acetonyl-8-7-hydroxy-5-methyl chromone[11].

Phenyl pyrones- glycosides include aloenin and aloenin B[11].

Other constituents- Cinnamic acid and 1-methyl tetralin, salicylates, cholesterol, .tryglycerides, magnesium lactate, carboxypeptide [11,31].

TOXICOLOGY:

Harmful (*Muzir)*: It is harmful to intestine due to its erosive property[7,8,23].

Corrective (*Musleh*): [7,8,23]

Kateera (*Sterculia urenus*)

Gul-e-surkh (*Rosa Damascus* mill)

Side effects:

- Gastrointestinal: Spasm, Irreversible intestinal mucosa damage, hemorrhagic diarrhea due to internal use of dried juice, and pigmentation of intestinal mucosa (pseudomelanosis coli). These side effects usually resolved after withdrawal [11,21,32,33,34].
- Genitourinary: Red-colored urine, nephrotoxicity due to use of dried juice internally [11,34].
- Skin: Contact sensitivity, severe burning sensation, itching, rash, pruritis after the application of Aloe Vera to skin [33].
- Aloe can reportedly cause muscle weakness, cardiac arrhythmias, peripheral edema, and weight loss [33].
- Reproductive: Uterine contraction causes spontaneous abortion, premature labor (internal use of dried juice). Aloe has been associated with congenital malformations, thus its use is contraindicated in pregnant and nursing women [35].

Contraindications:

- Dried aloe juice should not be used internally in case of pregnancy and lactation because anthraquinone is secreted in breast milk [21,32,31,34].
- It is Contraindicated in patients with kidney disease, cardiac disease, bowel obstruction, IBS and appendicitis [32,31].
- It should not be used topically on deep wounds.[211]
- It should not be used topically by persons who are hypersensitive to this plant or plants in the LIliaceae family such as garlic, onions etc [32].

Interactions:

Herb/Drug

- Aloe product taken internally may increase the effects of antidysrhythmics (e.g. quinidine), cardiac glycosides, loop diuretics, potassium wasting drugs, thiazide diuretics [32,34].

Herb

- The action of jimsonweed is increased in case of chronic use of aloe.
- Licorice may cause hypokalemia when used with aloe or taken internally [32].

MURAKKABAT [7,8,23]

Habb-e-tinkar

Habb-e-shibyar

Habb-e-mudir

Habb-e-sibr

Habb-e-ayarij

CONCLUSION:

In last few decades, there is increased interest in understanding the mechanism of action and development of herbal drugs for wellness of human being. Treatment based on allopathic drugs is effective in the prevention and management of diseases, but it is very expensive and has a lot of adverse effects. Hence, the implication natural herbal drugs in prevention and management of diseases, day by day are increasing all over the world, especially in the developing countries, due to their affordability and less toxicity. The *A. barbadensis* Linn (*Sibr)* has been used by renowned Unani Physicians since ancient time to treat various bacterial infection, gastro-intestinal disorders, skin conditions, fighting against allergies, to heal cancer, and boosting the immune system. Along with this, *Sibr* has many other uses which are supported by various researches done by researchers across the world.Traditionally, *A. barbadensis* Linn is used to treat a huge variety of health problems. Consequently, there is a burning call for investigate the biological activity of its phytoconstituents for development of a new more effective, economical, reliable herbal drug with better efficacy and higher safety margin.

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CONFLICT OF INTEREST:

There is no any conflict of interest to declare.

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