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A REVIEW ON ANTI-ALCOHOLIC HERBS

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### Abstract:

Alcoholism, also known as alcohol use disorder (AUD), is a broad term for any drinking of alcohol that results in problems. It was previously divided into two types: alcohol abuse and alcohol dependence. A craving for alcohol occurs in an alcoholic person which means that signals from brain are given for alcohol consumption to rebalance the body. Alcoholism causes loss of control, physical dependence, anxiety, confusion, depression, tolerance and it affects the liver adversely. Plants play an important role in reducing these cravings up to significant levels. This review deals with a brief overview to study the plants which help to overcome the effects of alcoholism.

**Keywords:** Alcoholism, Milkthistle, Kudzu, Iboga, Angelica.

### Introduction:

Alcoholism is an addiction characterized by a chronic dependency on alcohol. Unlike alcohol abusers, who drink too much but are not dependent on alcohol, alcoholics feel a compulsion to drink uncontrollably. Alcoholism is the reason behind family and work problems, and can also cause serious health problems such as liver diseases etc. In Asia and western parts of the world, medicinal plants are being used to treat alcohol abuse, addiction and hangovers for centuries. Herbs can be used as a primary therapy or in combination with conventional therapies. A doctor should be consulted before beginning herbal therapy.<sup>[1]</sup> Herbal treatment for alcoholism has its roots deep in the past. Plants have been utilized for many hundreds of years for the treatment of alcohol-related conditions in the ancient times. Some of the home remedies for an addiction to alcohol include many plants such as grapes, bitter melon, apples, celery, dates, almonds, evening-primrose, ginseng, milkthistle, dandelion, skullcap, licorice roots, fruit juices, and a balanced diet. These home remedies have proven to be useful in many cases all over the world. Although alcohol is one of the most

common causes of many fatal diseases, such as liver cirrhosis, it is still the favorite beverage of majority. While severe alcohol addiction needs specialized treatments, one can also follow simple home-based remedies as well. <sup>[2]</sup> Alcoholism or alcohol addiction is a chronic and progressive disease. The term alcoholism is generally referred to compulsive and uncontrolled consumption of alcohol. Medically alcoholism is considered as an addictive disease. People consuming too much alcohol for a long period of time have certain addiction problems like withdrawal effects, hangover effects and insomnia. In psychiatry various terms are used like alcohol abuse, alcohol dependence and alcohol use disorder which are slightly different from alcoholism.

### **Symptoms of Alcoholism or Alcohol addiction:**

Symptoms of alcoholism or alcohol addiction vary from person to person and also depends upon the factor that how much quantity of alcohol is being consumed. However, some commonly reported symptoms of alcoholism or alcohol addiction are mentioned below

- Tolerance to alcohol
- Drink alone or hiding drinking
- Physical dependence on alcohol
- No interest in social-activities and hobbies
- Aggression in behavior
- Lethargy
- Disturbance in normal sleep cycle
- Depression and anxiety
- Lack of social interaction
- Forgetting conversations or commitments also termed as blackout.<sup>[14]</sup>

There are various medicinal herbs which help in the treatment of alcoholism. They help in the detoxification of the body post effects of alcoholism. Alcohol produces addiction and creates various adverse effects in the body. There are various plants which are having anti alcoholic effects. Some of them are being reviewed as following

#### **1. Milk thistle:**

Silybummarianum, also known as milk thistle is an effective herb being used for its anti alcoholic properties. It has been used for thousands of years for the treatment of liver problems. This plant is indigenous to southern parts of Europe, but now it is grown across the globe. It contains a chemical constituent called silymarin. This flavonoid possesses antioxidant and anti-inflammatory properties, which are supposed to be highly beneficial to the liver. It is claimed that silymarin not only protects the liver from toxins but also helps in organ healing from damage that has already occurred. Ingredients in the plant can improve liver function. Further research will be needed to determine if milk thistle can prevent the progress of alcoholic liver disease. So far the herb has only proved effective for dealing with a moderate amount of liver damage. It seems to be of little benefit for those with advanced alcoholic liver disease.<sup>[3]</sup>Milk thistle has hepato-protective action and it also helps to improve the functioning of liver. It is used in the treatment of liver cirrhosis, various inflammations;toxin induced liver damage and gallbladder disorders.<sup>[4]</sup>



**Fig1. Flower of Milk thistle.**

## **2. St.John's Wort:**

St. John's Wort (*Hypericum perforatum*) is a perennial herb native to Europe but is found throughout Asia and North America. The plant is best known for its antidepressant effects. This would make it useful in treating alcohol withdrawal symptoms, but St. John's Wort also deters the desire for alcohol, and therefore could be effective in treating alcohol dependency. A study published in the July-August 2005 issue of "Alcohol and Alcoholism" found that an extract of St. John's Wort given by injection reduced voluntary ethanol intake in test animals that had a preference for alcohol. The researchers also found that, over time, St. John's Wort reduced the cravings for alcohol. This reporting suggests that St. John's Wort may be helpful in treating alcoholism and preventing a relapse in recovering alcoholics, however results from human studies may differ from animal studies.<sup>[1]</sup>

### 3. Kudzu:

The kudzu root contains useful isoflavones such as: daidzein (an anti-inflammatory and antimicrobial agent) and diadzin (a cancer preventive). Kudzu root compounds can affect the same neurotransmitters (including serotonin, GABA, and glutamate) as alcohol consumption can. It has shown value in treating migraine and cluster headaches. It is also recommended for allergies. In the study done on herbal mixture containing kudzu, when given to drunk rats, it was found that when the rats ingested the kudzu herb mixture before drinking alcohol, their motor movements became more coordinated.<sup>[5]</sup>



**Fig 2.Kudzu Herb.**

### 4. Passion flower:

The Passiflora flower family is helpful in treating ailments such as anxiety, insomnia, and even stomach upsets. When it comes to stomach problems, another member of the Passiflora family, passifloraceae, is more effective than Passifloraincarnata. Study on rats showed passifloraceae to be helpful against ulcers caused by alcohol or aspirin. An ulcer is a rip in the stomach lining. Along with a decrease in ulcers, the plant was also found to have great antioxidant potential. Hopefully future studies will look at the affect this herb has on human subjects.<sup>[6]</sup>

### 5. Iboga:

Ibogaine is a naturally occurring psychoactive substance found in plants in the Apocynaceae family such as Tabernantheiboga, Voacangaaficana and Tabernaemontanaundulata.<sup>[7]</sup>It is a psychedelic with dissociative properties. It is used as an alternative medicine treatment for drug addiction in some countries. Its prohibition in other countries has slowed scientific research.<sup>[8]</sup>

Ibogaine is also used to facilitate psychological introspection and spiritual exploration. Derivatives of Ibogaine that lack the substance's psychedelic properties are under development.<sup>[9]</sup> A naturally occurring drug called Ibogaine may yield

new treatments for alcoholism. Ibogaine has been shown to reverse addiction to various drugs. According to the researchers, drug abuse/addiction activates reward regions in the brain. Despite the negative consequences of alcohol, addiction to alcohol manifests itself as uncontrolled drinking. In lab tests, alcohol-addicted mice drank less alcohol after being injected with Ibogaine. Ibogaine also helped the mice stay "on the wagon" after being weaned off alcohol.<sup>[10]</sup>



**Fig 3. Iboga fruits.**

#### **6. Liquorice:**

Liquorice root is a safe and effective remedy for safely quitting alcohol as this plant has strong anti-inflammatory and antioxidant effects, enhancing the body's natural barrier against pathogens and strengthening the immune system. It stimulates antibody which means it acts by improving the functioning of liver cells. It helps in fighting alcohol addiction and Liquorice root tea is a pleasant way to overcome the alcohol withdrawal symptoms.<sup>[11]</sup>

#### **7. Golden seal:**

Goldenseal is also known as Indian Turmeric and Orange Root. This herb can be a very effective remedy for stopping the desire for alcohol. This is because it destroys bacteria in the intestine which causes the alcohol cravings. More importantly, it has a bitter taste which is very useful in desensitizing the mouth and reducing the urge to drink alcohol. Golden seal also has anti-viral and anti-fungal properties.<sup>[11]</sup>



**Fig 4. Herbs of Golden seal.**

### 8. Angelica:

Angelica plant has detoxifying properties, which reduces the cravings for alcohol. It makes the taste of alcohol disgusting and creates a disliking for it. It also has anti-histamine properties which is used for driven and compulsive drinkers.<sup>[12]</sup>

### 9. Ginkgo:

Ginkgo extract is used as a hepatoprotective. Supplements with Ginkgo biloba extract improves the liver injury, blunted the rises of MDA contents and TNF-alpha expression, and restored the GSH content in the liver. Ginkgo biloba extract protects against alcohol-induced liver injury by facilitating reduction of lipid peroxidation, prevention of GSH depletion and inhibition of TNF-alpha expression in the liver. Ginkgo biloba is a natural nootropic agent which is mainly used as memory and concentration enhancer, and anti vertigoagent. Ginkgobiloba is widely used for number of brain disorders like dementia, amnesia and withdrawal symptoms of certain drugs. Ginkgobiloba can be used as an adjuvant in the treatment of alcoholism or alcohol addiction treatment because ginkgo biloba contains flavonoids that increases the blood supply to cerebral regions of the body and improves co-ordination between neurons which results in increase mental performance. Ginkgobiloba is being used as over the counter (OTC) drug in both syrup and tablet form.<sup>[14]</sup>

### 10. Skullcap:

Skullcap is known to improve the blood flow to the brain and makes it useful treatment for ADHD. Increasing oxygen (via blood flow) to the brain may help prevent strokes as well. This herb is very useful for treating withdrawal from drugs and alcohol. It is also helpful for those trying to quit smoking, as it can help to relax. Skullcap is a widely used herb for calming down people who are nervous. It is used as a natural tranquilizer. It is a great remedy for stress and anxiety. It has the ability to relax the nervous system.<sup>[16]</sup>



**Fig 5. Herbs of Skullcap.**

### **11. Evening Primrose oil:**

GLA from Evening Primrose oil prompts the brain to produce a specific type of prostaglandin called prostaglandin E, which works to prevent withdrawal symptoms such as depression and seizures by indirectly protecting the liver and nervous system. It fights the alcohol withdrawal symptoms.<sup>[17]</sup>

### **12. Cayenne Pepper:**

Addition of Cayenne pepper to foods helps to reduce the cravings for alcohol and help to increase appetite. Since one of the primary concerns related to alcohol withdrawal is the reduced appetite and nausea, the Pepper can provide some relief that makes it possible to eat a balanced diet while the body is detoxifying. The benefit of cayenne pepper is not limited to just increasing appetite. It also helps reduce feelings of nausea and helps prevent vomiting.<sup>[18]</sup>

### **13. Ginseng:**

Ginseng naturally in the system breaks and flushes away the toxins from the alcohol that linger in the body through long term alcohol use. In the stomach and digestive tract it also lowers down the rate at which alcohol is absorbed. It reduces the symptoms of withdrawal but is also a way to manage cravings. It is a good starting point for a home remedy to ease the effects of quitting drinking alcohol as it is easily available also. It is also a supplement easily taken without changing diet.<sup>[19]</sup>Ginseng possess good revitalizing and energizing qualities. It speeds up the body metabolism, and so it also helps the body break down alcohol more quickly thus aiding detoxification from alcohol. Ginseng root (the part of the plant that is most effective) is obtained with difficulty, but Chinese Ginseng root slices with honey is the most effective Ginseng product available in the market.<sup>[20]</sup>

### **14. Apple:**

Addicts should take it at regular intervals. This helps to decrease alcohol craving and to remove the toxins from the body.

### **15. Grapes:**

Grapes have the pure form of alcohol. Meal of grapes at every 4-5 hours decreases the cravings for alcohol.<sup>[21]</sup>Alcohol plays a significant role in trauma by increasing both the likelihood and severity of injury. Heavy drinkers or alcohol abusers are more likely than others to be involved in a trauma event.<sup>[22]</sup>

**16. Green tea:** It is rich in tannins, mainly Catechins as epicatechins, epigallocatechinsetc which helps in the detoxification of body due to consumption of alcohol. The proliferation of stellate cells of liver is closely associated with progression of liver fibrosis in chronic liver diseases. It also possess strong anti-oxidant action.<sup>[23,24]</sup>

**17. Amla:** Inflammation and oxidative stress due to alcohol contribute to liver injury. *E. officinalis* which is rich in vitamin C, gallic acid, flavonoids, and tannins, protects against hepatotoxicity-induced liver injury. *E. officinalis* supplementation offsets N-nitrosodiethylamine (NDEA) -induced liver injury via its antioxidant, anti-inflammation.<sup>[25]</sup>

### **Conclusion:**

From the above literature review done through various sources, it was found that alcoholism is the major health affecting issue. It hampers the balance of body and creates dependency for it. Plants have been found to be very useful in treatment of alcoholism to major extent. They help in various ways such as help to lower down the cravings for alcohol, develop a disliking for it. They help to heal the damaged liver as well as gastric ulcers. They play an important role in detoxifying the body. They help to overcome the symptoms of alcohol withdrawal.

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