

Acupuncture and Phytotherapy Applications in Non-Alcoholic Fatty Liver

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Received date: February 25, 2021; **Accepted date:** March 29, 2021; **Published date:** April 30, 2021

Citation: Hayriye Alp (2021) Acupuncture and Phytotherapy Applications in Non-Alcoholic Fatty Liver *J. Gastroenterology Pancreatology and Hepatobiliary Disorders*. 5(2) DOI: 10.31579/2641-5194/026

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Abstract

Phytotherapy, medicinal and aromatic plants, algae, fungi and lichens, or their extracts, such as gum, balsam and resin, extracts, essential oils, candles and fixed oils with herbal preparations prepared in various forms (tea, capsule, tablet, syrup, drop, lozenges, sachets, etc.) to be protected from diseases, to treat diseases or to support treatment.

Phytotherapy; It is based on scientific research and clinical studies. Historically, it has been the primary support of doctors in the treatment of diseases.

Objective:We offer here; In addition to the treatment of obesity with acupuncture and phytotherapeutically artichoke (*Cynara scolymus* L.) and thistle (*Silybum marianum* (L.) Gaertn.), dandelion (*Taraxacum officinale* FH Wigg.) using antidepressants for many years, the treatment of obesity with impaired obesity and elevated liver enzymes. It is a case where a positive decrease is achieved in liver enzymes by giving mix extract.

Methods: Yin-tan, Memory, Kid-3, Liv-3, St-36,24,25 in body acupuncture, Shen-men, stomach, larynx, jerome, kidney points were pinned in ear acupuncture.

When patients who apply to the outpatient clinic need phytotherapeutic support, liver enzymes are routinely checked.

Results:The patient lost both weight and liver enzymes.

Conclusions and Recommendations: The biggest disadvantage of these preparations is their uncontrolled and high-dose use. It is most appropriate to give this kind of support treatments by people who are trained and licensed in this regard, especially under the control of a doctor. For this purpose, the Department of Traditional Complementary Medicine provides the development of physicians and pharmacists who have received phytotherapy training.

Keywords: phytotherapy,liver enzyme, obesity

Introduction

There are 12.006 plant taxa (species, subspecies and variety) in our country(Turkey) and approximately 34% of them are endemic. Turkey; It includes the European-Siberian, Mediterranean and Iran-Turan phytoecogeographic regions and their transition zones. Our country has forest, mountain, steppe, wetland, coastal ecosystems and different forms of these ecosystems. For this reason, it has an important richness in plant diversity. While the total number of endemic plants in Europe is 2500, the number of endemic plants in our country is 3500. I can not rate in Turkey is quite high compared with other European countries. Turkey 34.4%; Spain 18.6%; Greece 14.9%; France is 2.9%. In other words, one of the three plants we see in our country is endemic to these lands. Endemic plants can constitute an important point of advantage especially in the realization of rural development and in the contribution of the country's biological resources to the economy. Herbal preparations (tea, capsule, tablet, syrup, drop,

lozenge , sachet, etc.) to be protected from diseases, to treat diseases or to support treatment[1].

Hepatoprotective plants

Plants used as hepatoprotective include *Cynara scolymus* (artichoke), *Curcuma longa* (Turmeric-Indian saffron), *Curcuma xanthorrhiza* (Turmeric-Java saffron), *Silybum marianum* (Camel thistle), *Achillea millefolium* (Yarrow). In addition, 'Betaine, which is not included in the phytotherapeutic group in sugar beet, has hepatoprotective properties. It is used in hepatopathies and hepatosteatosis due to its antihepatotoxic potential. A decrease in elevated transaminase levels is observed[1,2].

In our case, we discussed a case who developed obesity by receiving antidepressant treatment for years. The liver enzymes of the patient had increased as a result of the consumption of foods containing high amounts of fat due to the appetite increase as a side effect of the drugs and the drugs he had used for years. In the GETAT (Traditional and Complementary

Medicine Practices) center, the patient was provided with phytotherapeutic support as well as acupuncture, and a reduction in liver enzymes was achieved.

This study includes a phytotherapeutic support treatment plan in cases of continuous drug use and fatty liver.

Case

A 34-year-old male patient was admitted to the GETAT center with complaints of obesity, forgetfulness, stress and fatigue. The patient, who was fed 3 meals a day, mostly consumed carbohydrate. He had arrhythmia, diabetes, peptic ulcer, fatty liver, shortness of breath and sinusitis in his history. He had been using 100mg of Lustral® for a long time. SGOT: 55 u / l, SGPT: 93 u / l, D-vit: 11.82 ug / l, Hb: 15 g / dl, insulin: 13.4 µl / u / mL, blood pressure 110/70 mmHg His weight was 120 kg, height 1.78 m, BMI 37.9 fat ratio 39.6% fluid ratio was 55.4 BMR 2239 cal.

After 6 sessions, the patient's liver enzymes were SGOT 47 U / L, SGPT 82 U / L, D-vit 20.54 ng / dl. Liver enzymes decreased with the phytotherapeutics used.

Discussion

Milk thistle, whose Latin name is *Silybum marianum*, is a plant that has been used for more than 2000 years worldwide for its protective and purifying properties against prostate, liver, gall bladder and liver diseases. The active ingredient in milk thistle is "silymarin." When the blood values of people who took high amounts of "silymarin" were examined, it was found that flavonoids named "silibin A" and "silibin B" were also high in these individuals[1,2,3].

Especially in its fruit, there are flavonoid gnans, the ratio of which is 1.5-3%. It should not be less than 1.5% according to the German Pharmacopoeia (DAB) and 2% according to the American Pharmacopoeia (USP). Silymarin has an antihepatotoxic effect [1].It is used because it directly affects liver parenchymal cells. Silymarin prevents toxic substances from entering the liver cell. Silymarin stimulates the regeneration in the liver cell, provides the formation and reproduction of ribosomal RNA and thus regulates the formation of hepatocytes with increased protein biosynthesis. It also stabilizes the liver cell membranes, thereby preventing many toxic substances, including alcohol, from entering the cell. It acts as an antidote against the mycotoxins of the *Amanita* species, which are the hat mushroom. It is a good free radical scavenger both preventively and curatively. It also suppresses post-pirandial meteorism and nausea, as it also increases venaporta circulation.

Silibinin is protective against lipid peroxidation in liver cells due to its antiperoxidative properties and free radical scavenging effect. It is also protective against glutathione consumption. One of the most important properties of silymarin is that it provides fibrotic transformation of liver cells. Many studies with the Legalon preparation have proven this in Germany. The use of milk thistle preparations in Germany was evaluated in 50 clinical studies involving more than 2400 patients. As a result, it has been shown that Milk Thistle is the best documented therapeutic agent for various types of liver poisoning.

Severe vascular occlusion, alveolar damage and inflammatory cell infiltration were observed in the histopathology results of the group treated with H₂O₂; It has been shown that silymarin treatment blocks these histopathological changes and reduces the toxic effects of H₂O₂ on liver cells. Ready preparations of Devedikeni drug are available. Standardized preparations are equivalent to 40-70: 1 (w / w), 70-80% silymarin in dry extracts calculated over silibin, equivalent to 200-400 mg per day. It should be taken in divided doses. Many studies have recommended a dose equivalent to 420 mg of silymarin per day and dividing this dose into three (3x140mg) [1].

The study of Mansour et al. Showed that the increase in albumin levels is due to the role of silymarin in the protection of hepatocytes by scavenging free radicals and antioxidants. The present results are in line with the findings published by others who reported that treatment with silymarin provides protection against oxidants that cause changes in the liver, as in this study [2].

Silibin shows its benefit by enhancing the effect of "phase 2 enzymes" that detoxify the liver and inactivate chemicals For example, one of the phase 2 enzymes of the liver is "glutathione". Glutathione is a "super antioxidant" synthesized naturally by the liver. It binds to toxins in the body and prevents these toxins from entering the cell through the cell membrane and facilitates their elimination from the body by inactivating the toxins. It has a preventive effect on tissue damage[4].

In an experimental study, Legalon®, a preparation of artichoke and thistle, was used in liver toxicity in chickens; The results showed that H₂O₂ treatment increased serum aspartaminotransferase, alaninaminotransferase and bilirubin level (direct and total) and decreased serum albumin level compared to control group. Treatment with Legalon® 70 mg significantly reversed the change caused by H₂O₂ and was found to have positive effects on liver function parameters [5].

It has been stated that the use of milk thistle in skin, prostate and breast cancers provides protection against the damage of chemical therapeutics to the liver. Silibin was shown to be effective on lung cancer in a cell culture study conducted in 2011. Boch et al. Showed that 420-1050 mg / day silibine and its derivatives inhibit metastasis in lung cancer that has caused brain metastasis and is resistant to chemotherapy and radiotherapy[6].

Yadav et al. Reported that silicon can regenerate hepatic cells, thus protecting against membrane fragility and reducing the leakage of marker enzymes and bilirubin into the circulation[7].Dandelion (*Taraxacum officinale*), a member of the Asteraceae family, is a perennial herb that grows in the Northern Hemisphere. In China, dandelion is not only a delicious dish, but also a traditional herb used for its cholinergic, diuretic, antirheumatic, anti-diabetic and anti-inflammatory properties. Some studies have shown that extracts from different parts of dandelion have multiple pharmacological effects. For example, the aqueous extract from dandelion roots reduces alcohol-induced oxidative stress; dandelion leaf extract alleviates non-alcoholic fatty liver linked to a high-fat diet[8,9].

Although this substance does not have a direct antiviral effect, it is effective by increasing protein synthesis that provides liver regeneration, controlling inflammation, increasing glucuronidation and protecting against glutathione deficiency[9,10,11].Its use with phospholipid structure phosphatidyl choline provides better absorption. In combined use, 100-200 mg of milk thistle should be given in 2 doses per day. In hepatoprotective combined preparations, silymarin should be at least 70 mg / day for adequate liver protection. It can be combined with other drugs used in liver and biliary diseases[12,13].We think that the diet (obesity diet containing 1400 cal), phytotherapy application (artichoke, thistle and dandelion extract) and acupuncture were effective in improving the patient's biochemical values. Probably, the young age of the patient also affects the recovery positively. As a result, natural supplements are mostly used in many liver [13].

This feature is due to the phenolic structure of silymarin, which leads to increased protein synthesis, which plays a role in the development of liver function. Treatment with Legalon® 70 mg significantly reduced the activities of serum ALT, AST and serum bilirubin. This indicates that silymarin prevents liver damage by preserving the integrity of the plasma membrane, thus preventing the release of enzymes through the membrane[14].

Conclusion

In recent years, dizzying developments have been experienced in the field of pharmacognosy, food science and technology. Many natural substances that are beneficial to our body, the use of extracts in certain dosages as an aid in the treatment of certain diseases has revealed a wide range of products under the name of nutritional supplements in this field. With the regulation published on 27 October 2014, the Department of Traditional and Complementary Medicine was established and added these plants to a plant list. The production of the plants is carried out by the controls between the two ministries, whether the stages of harvesting are suitable or not. Food supplements, especially medicinal and aromatic plants, must be passed through commissions of scientists from the pharmacognosy and pharmaceutical botanical sciences of the universities, in which there is a systematic botanist. The biggest disadvantage of these preparations is their uncontrolled and high dosage usage. It is most appropriate to give such supportive treatments by trained and licensed persons, especially under the supervision of a doctor. For this purpose, the Department of Traditional Complementary Medicine ensures the development of physicians and pharmacists who receive Phytotherapy training.

Community age is increasing all over the world. As the population of the society increased, they started to be healthy, to be protected from diseases, to take preventive treatments, and to introduce medicinal and traditional herbs into their lives. Developed countries have begun to integrate traditional treatments into existing health systems, creating a large market. Increasing living standards of people creates the biggest market in this area. These products are put on the market under the name of "food supplement" by obtaining food support license from the Ministry of Food, Agriculture and Livestock. Since these types of products do not have drug status, their licensing and placing on the market may differ. Common problems with these products include contamination, additives, toxicity, and uniform manufacturing problems resulting from incorrect dosing and labeling.

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DOI: [10.31579/2641-5194/026](https://doi.org/10.31579/2641-5194/026)

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