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# GOBE ARTICHOKE AS SUPPLEMENTARY FLOOD TO RESTRAIN DEPRESSION? A CASE STUDY

Pharmacology

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## ABSTRACT

A depression patient in a hospital in Taiwan was tested from 02, Jan, 2019 to 02, May 2019. On 02, March, he began to take an artichoke capsule with 600mg every day. His flood and water with same and constant contents and the antidepressant i.e. Mirtazapine (15mg) were controlled with the same conditions befor and after taking artichoke capsule. Heart rate variability (HRV) was used to detect his Resting Heart Rate (RHR) every day in the test time. HRV was used to detect his RHR with the averaged RHR of 113/min from 02 Jan, 2019 to 02 March 2019. His RHR was simultaneously detected every day by HRV with the RHR of 79/min from 03, March 2019 to 02, May 2019 after taking artichoke capsule. Another patient has shown the RHR with 104/min under the same treatment without taking artichoke for comparison. Results shown the depression of this patient obtained a little good improvement. Therefore, artichoke can be suggested as importation and supplement and then was combined into antidepressants to treat and restrain depression.

## KEYWORDS

Artichoke, Hypercholesterolemia, Antidepressants, Mirtazapine, Heart rate variability (HRV), Resting Heart Rate (RHR)

## 1. INTRODUCTION

The globe artichoke known by the names French artichoke, which is a variety of a species of thistle cultivated as a food (Rottenberg and Zohary, 1996). The artichoke is mentioned as a garden plant in the 8th century BC. The Greeks ate the leaves and flower heads, which cultivation had already improved from the wild form. Further improvement in the cultivated form appears to have taken place in the medieval period in Muslim Spain. Later artichoke cultivation spread in Italy and southern France in the late 15th and early 16th centuries. Today, cultivation of the globe artichoke is concentrated in the countries bordering the Mediterranean basin. Today, cultivation of the globe artichoke is concentrated in the countries bordering the Mediterranean basin. Artichokes can also be made into Artichoke tea.

In medical research, it is found it to have a modest effect on reducing cholesterol levels, but the results were not compelling enough to recommend its use as a treatment for hypercholesterolemia (Wider et al., 2009). Duncan (1999) suggested the use of nutritional supplements for the treatment of depression, chromium for improvement of abnormal glucose and insulin regulation. The hypercholesterolemia, were more popular nutritional supplements for depression patient. Tyrovolas et al (2009) reported the hypercholesterolemia was an important factor causing cardiovascular disease (CVD). They evaluated the relationships between lifestyle and depression associated with hypercholesterolemia for elderly people without known CVD. Engel et al (2016) studied an association between hypercholesterolemia and mood disorders regarding depressive in animal models of hypercholesterolemia

## 2. A Treatment Case

A depression patient (Man, 43 year old) in a hospital in Taiwan was tested for 4 months, which was the test time. The time period was from 02, Jan, 2019 to 02, May 2019. However, on 02, March, he began to take an artichoke capsule with 600mg (Figure 1) every day. In the test time, we controlled his flood and water with constant and same contents and antidepressant i.e. Mirtazapine (15mg) (Figure 2) to make sure the same conditions befor and after taking artichoke capsule. Heart rate variability (HRV) was used to detect his Resting Heart Rate (RHR) every day in the test time. HRV is the physiological phenomenon of variation in the time interval between heartbeats. It is measured by the variation in the beat-to-beat interval (Brüser et al., 2011). Table 1 shows the information for this treatment case. Another patient with same age and degree of depression was tested with the same treatment but without taking artichoke for comparison.

## 3. RESULTS AND DISCUSSION

From 02 Jan, 2019 to 02 March 2019, HRV was used to detect his RHR every day with the averaged RHR of 113/min. After taking artichoke capsule, from 03, March 2019 to 02, May 2019, his RHR was simultaneously detected every day by HRV with the averaged RHR of 79/min, which was lower than the averaged RHR of 113/min before taking artichoke capsule. Another patient had averaged RHR of 104/min. The results of this testing by HRV is shown in Table.2.

This might promote and control the metabolism of the hypercholesterolemia by taking artichoke because hypercholesterolemia was important nutritional supplements for depression patient as stated previous. Through taking artichoke, hypercholesterolemia was controlled to keep suitable nutritional supplements in the body and also reduce CVD. The relationships between depression associated and hypercholesterolemia had better balance. Therefore, from the statements, his depression had a little good improvement. Artichoke might affect the content of hypercholesterolemia for this depression patient. In this paper, it is only a testing, it might have more complicated actions associated with hypercholesterolemia, and such actions must be confirmed by test many depression patients. However, we proposed that artichoke can be imported to equilibrium the content of hypercholesterolemia and thereby be supplementary into antidepressants to treat and restrain depression that was significant results in this study. However, this research would meet some arguments. The lifestyle, physique and history of disease for two patients should be considered before treatment. It means that these factors must be controlled before treatment. Therefore, future research is necessary.

**Table Captions**

**Table.1 The information for this treatment case**

| | |
|---|---|
| Test time | from 02, Jan, 2019 to 02, May 2019 |
| Artichoke capsule | 600mg |
| Antidepressant | Mirtazapine (15mg) |
| Evaluation Instrument | Heart rate variability (HRV) |

**Table.2 The results of this testing by HRV**

| | |
|---|---|
| Before taking artichoke capsule | averaged RHR of 113/min |
| After taking artichoke capsule | averaged RHR of 79/min |
| Without taking artichoke capsule | averaged RHR of 104/min |

**Figure Caption**

**Figure 1 Artichoke capsules**

**Figure 2 Mirtazapine (15mg)**

## 4. CONCLUSION

A depression patient was tested from 02, Jan, 2019 to 02, May 2019. In the test time, flood and water with same and constant contents and the antidepressant i.e. Mirtazapine (15mg) were controlled. An artichoke capsule with 600mg was taken by this patient every day. HRV was used to detect his RHR every day. Before taking artichoke capsule, his RHR was averaged RHR of 113/min. After taking artichoke capsule, his RHR was averaged RHR of 79/min. Another patient was treated without taking artichoke and he had the RHR of 104/min. From the information, a little good improvement was obtained. Artichoke could be suggested to import and as supplement combining into antidepressants to treat and restrain depression.

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