

Effect of Yogic Practices on Liver Function Parameters

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Abstract

The effect of Yogic Practices on Liver function parameters is study that is carried out in the Dept. of Human Consciousness and Yogic Sciences, Mangalore University. A total of 20 subjects (who were working as the Reserve Police) between the age groups 40 and 58 years, selected based on selective sampling method for the study. The subject were then divided into group I (experimental) and group II (control). Yoga therapy was given only to the group I subjects for 1 hr, and the group II subjects were allowed to carry out their routine works. The experimental group subjects were progressively introduced to the series of Asana, Pranayama, healthy diet and adequate sleeping habit. Various yogic practices were given to group I subjects for 1 month, 6 days a week. The control group was not given any of these. Liver function parameters were recorded in terms of Serum Glutamic Oxaloacetic Transaminase (SGOT and Serum Glutamic Pyruvic Transaminase (SGPT)). The initial and final readings were taken for two groups by testing SGOT and SGPT before and after the study. After Yoga therapy, the experimental group showed a significant result in SGOT and SGPT test. This was calibrated by using paired t- test to compare the effects within and other groups. There was no significant change in Control group. This depicts that the regular practice of the selected yogic practices improve the function of liver in the experimental group subjects.

Keywords: Serum Glutamic Oxaloacetic Transaminase, Serum Glutamic Pyruvic Transaminase, paired t-test, yoga therapy, selective sampling.

Introduction

Health is one of the greatest resources for vitality, creativity and wealth. Health is not a static state-it is dynamic ever changing. We can never claim that we are always healthy but only that we are healthy at a particular moment. Health is like a live wire. Now we feel it, the sensation is energizing, the absence it is a state when the body and mind are dull and slow. Disease exists when health does not. Good health results from right diet, adequate exercise and a mind, which is stress free. The dramatic changes in our life style, sedentary way of working, wrong dietary habits, lack of exercise, smoking and alcoholism leading to many psychological and psychosomatic

problems. Improper functioning of liver causing 'n' number of diseases and this is the leading causes of death in the world. For example the diabetic mellitus, which is due to improper functioning of liver? Humankind knows it from time immemorial. It is also described as a disease of abnormal carbohydrate metabolism due to a disturbance in the relationship between glucose in the blood and insulin. It is characterized by high blood sugar levels and excretion of sugar in urine, and is associated with a fair number of complications-vascular, renal, neurological and many others.

Yogic practices with their unique characteristics have an important impact on the physical and mental stability. Yoga

offers a largely unexplored, widely available resource for the management of liver related ailments like Diabetes Mellitus. It is an asset for Preventive care and focused on preserving health. In the modern world, the afflictions like Diabetes mellitus, hypertension, constipation, low backache etc are more common. These diseases are increasing day by day because of the working pattern and Life style changes of the people.

Objectives of the study:

To find out the effect of yoga therapy on liver function of police officers of the age group 40 – 58 years.

Materials and Methods:

The present study was conducted to assess the effect of yogic practices on liver Functions. The subjects aged between, 40-58 years. There were 20 volunteers. Subjects were allocated to Experimental (group I), Control group (group II) and they were comparatively new to yogic practices. The Control group continued with normal lifestyle. The Experimental Group was offered six yoga classes per week in the department. The Experimental group was subjected to an experimental treatment in which a set of yogic practices were performed on six days per week between 7.00 am to 8.00am. This practical session utilized a standard sequence of selected Asanas, Pranayama techniques, taking appropriate precautions for patients with Hypertension or back pain. A Paired “t” test was employed in the study to analyze the significance of the result statistically.

Parameters

1. SGOT (Serum Glutamic Oxaloacetic Transaminase)

This enzyme is normally found in the liver, heart muscle, muscle and red blood cells. SGOT levels are measured to see how the liver, kidney, heart, pancreas, muscle and red blood cells are functioning. Its normal range is <40 U/L. Causes for a

high SGOT level can include – Infection, viral hepatitis and Gallbladder disease, the presence of toxins from drugs or alcohol and cancer. It may also indicate muscle damage from a fall or injury or muscle disease.

2. SGPT (Serum Glutamic Pyruvic Transaminase)

This is essentially an enzyme that found in the liver and plays a role in the metabolism process of food to energy conversion. This enzyme found in the cells of the heart, muscle and pancreas in small amount, but it is much greater concentration in the liver. Normal range of SGPT is < 40 U/L. It is increase in the case of certain diseases such as –Cirrhosis, Hepatitis, Use of certain drugs and Use of alcohol, Liver damage and Gallbladder disease.

3. Weight

Weight was measured using the weight measuring scale and used as body parameter for the study.

Yogic practices:

The following Yogic practices were given to Experimental group over a period of 45days. Svastikasana, Vajrasana, Supta vajrasana, Tadasana I & II, Trikonasana, Parsvakonasa, Pascimottanasana, Purvothanasana, Janushirshasana, Pavanamuktasana, Bhujangasana, Dhanurasana, Viparitarani. Ujjayi, Anuloma Viloma and Bhastrika Pranayama.

Results

All the subjects under study were tested before and after 45days of yoga training which consisted of 60 minutes of practice in a day. The result shows an overall improvement in the test: SGOT, SGPT and weight in Experimental group. Tables II& III shows significant values of the test conducted. In the control group, there are no significant values in the test conducted. Therefore, in general we can analyze the result as follows: As far as SGOT test is concerned, 10 out of 10 subjects of

Experimental group showed a significant result. The test conducted for SGPT showed a significant result. Weight & BMI also decreased in overweight subjects.

Discussions:

The present study reveals that the concerned variables have been rationalized in terms of the hypotheses that the Experimental group will outperform the control group due to 45days of yogic interventions. The results could best depicted that, there is significant reduction at a level of significance $p < 0.05$ in SGOT with $p = 0.02091$. In the case of weight also there is significant reduction at level of significance $p < 0.05$ with $p = 0.005223$. Compared to experimental group, the control group has not shown any significant changes after the study. It reveals that the Experimental group has been benefited more in terms of various variables are concerned. The rationale for the yogic treatment could be offered in the following manner. The Yoga therapy can

use as an aid to improve liver function. Yogic practices attain steadiness of body and mind, a feeling of lightness, suppleness and psychophysical poise (Rama ET'el1976). The Asanas tones up the muscles, helps in removing the disease and purifies the internal and external organs. It stimulates and tones up the pancreas, strengthening the abdominal muscles and improving the digestive system.

Conclusion

Yogic treatment will work more efficiently than other medicinal treatments in the improvement liver function. Regular yoga practice work as a therapeutic tool in the improvement liver function. The practice of yoga offers improvement of overall health and a relaxed outlook of life by making the mind peaceful and happy. Selected Yogic Practices administered in a more controlled set up under strict vigilance and for more duration can yield better results.

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