



Effect of yoga on Chronic Kidney Disease Patient: A Case Report

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ABSTRACT

Yoga is an ancient technique which is claimed to enhance physical and mental well-being. Yoga does play an important role in controlling hypertension, diabetes and chronic illness. Chronic kidney disease is a health condition that causes a progressive loss of kidney function. The aim of this study is to see the effect of yoga on psychological well-being of chronic kidney disease patients. For this study we took a chronic kidney disease patient. Patient was advised to do yoga-based lifestyle modification. She was trained in Physical postures (asanas), Breathing techniques (Pranayama) and Yogic relaxation techniques. After 12 weeks the results showed that there was significant improvement in all domains of psychological well-being. There was significant improvement in her mental health, social relationship and interpersonal relationship.

Keyword: - Chronic Kidney Disease, Psychological well-being, Yoga

INTRODUCTION:

Today, due to busy schedule we have sedentary and unhealthy lifestyles. Due to these life styles people are suffering from diabetes, hypertension, obesity, fatty liver, cholesterol problem etc. when we have these problems over a long time results in irreversible renal failure or chronic kidney disease. Chronic kidney Disease is a type of long term kidney disease in which either there is a gradual loss of kidney function which occurs over a period of months to years, or an abnormal kidney structure with normal function. When kidney function falls below a certain point it is called kidney failure [1]. Reduced kidney function impairs the function of brain results in various mental health issues. Chronic kidney disease (CKD) has increasingly been recognized as an emerging health problem in India. According to WHO research, nearly one million lives are lost globally every year due to kidney and urinary tract-related complications. The major contributory factors leading to the development of

CKD are diabetes and hypertension. The main treatment of CKD is hemo-dialysis. Regular dialysis patients often suffer from negative side effects such as an increased risk of cardio-vascular disease, restlessness, difficulty sleeping, anxiety, depression, and a decline in overall quality of life [2].

Yoga and meditation originated in India almost 2000 years ago with the goal of fostering human and spiritual development and they are known to offer multiple health benefits [3]. Yoga stretches and strengthens muscles and increases blood supply to whole body. Yoga is composed of mixed Asana, breathing exercise, and relaxation meditation techniques. Yoga and meditation have been recognized for their potential benefits in improving physical and mental health across various populations. Researches have shown that yoga play an important role in controlling hypertension and diabetes, lowers the chance of cardiac problem, managing stress, anxiety, depression, asleep problem etc.. As diabetes and hypertension are major causes of CKD and yoga has a definitive role in controlling them, so it would be beneficial in CKD also. With this background, we undertook this study to find out whether the yoga could be safe tool in the management of CKD.

The aim of this study is to see the effect of yoga on psychological well- being of chronic kidney disease patients.

CASE:

A 47 years old housewife women lived in Patna, Bihar was perfectly healthy. Her symptoms of kidney disease started slowly. Before diagnosis kidney problem she was suffering from back pain, had low blood pressure and uric acid problem from the last 11 years. One day she went to the doctor for routine checkup. After routine check-up doctor referred her to a nephrologist. In nephrology department her treatment (medicine) started for kidney problem for the last 4 years. After 4 years of taking medicine suddenly her condition got worse, she had to get admitted in hospital and there first time her dialysis started. After 1 year dialysis the patient started complaining problem in maintaining balance, many types of worries, sad mood due to the effects of dialysis treatment. She did not want to meet people. Most of the time she would lie on bed.

Analysis before and after intervention:

Before the intervention, a pre-test was administered to assess psychological well -being of the patient. Total score she got was 132. After the intervention, a post- test was done to assess psychological well-being of the patient and total score increased. Total score became 199. Table -1 shows that there is improvement in all areas after yoga intervention.

Domain of Psychological well-being	Pre-test score	Post test Score
Satisfaction	29	36
Efficiency	25	34
Interpersonal relation	26	44
Mental Health	28	40
Sociability	24	45
Total score	132	199

Table -1**Yoga Intervention:**

Patient was advised yoga-based lifestyle modification. She was trained in yoga techniques and asanas (specific body postures) useful for kidneys and motivated to participate in integrated yoga program with the help of certified yoga trainer for about 30 minutes, for 5 days a week, and duration of 12 weeks.

The yoga intervention consisted of:

1. Physical postures done with awareness (asanas), sessions of 30 minutes consisting of following:

- Surya Namaskar – 3 minutes
- Uttanasana- Standing forward bend -3 minutes
- Sarvangasana- 3 minutes
- Pādahastāsana- hand-to-foot pose – 3 minutes
- Paschimottanasana- Seated forward bend -3 minutes
- Ardha Matsyendrasana-Sitting half spinal twist -3 minutes
- Vajrasana- 2 minutes
- Anuloma Viloma -3 minutes
- Sitali - humming bee breath cooling pranayama- 3 minutes
- Yogic relaxation techniques with imagery or mindfulness-based stress reduction for 4 min at the end of asanas and pranayamas.

She was told to practice yoga regularly for at least 5 days a week for 30 min a day.

DISCUSSION:

This case report highlights the effect of yoga on chronic kidney disease patient. The present study shows that after 3 months yoga intervention there was a significant improvement in her psychological well-being. There was also improvement in her blood pressure and uric acid level.

Before intervention total score of psychological well-being was 132 which increased upto 199 after yoga intervention. There was improvement in all domains of psychological well-being namely satisfaction, efficiency, interpersonal relations, mental health and sociability.

Chronic kidney disease is a type of long term kidney disease, in which either there is a gradual loss of kidney function or an abnormal kidney structure (with normal function). Initially, patients are usually symptoms free, but later symptoms may include leg swelling, feeling tired, vomiting, loss of appetite, and confusion [4]. The main causes of CKD are diabetes, hypertension, glomerulonephritis, and polycystic kidney disease [5].

When people are diagnosed as CKD individuals are likely to report increased psychological distress and as the severity of the disease increases so does the severity of mental health symptoms, particularly anxiety and depression [6].

Hemodialysis is the most frequent treatment method for CKD. But this treatment needs many restriction and modifications, which have a detrimental effects on the quality of patient's life and affects individual's physical and psychological well-being [7]. Survival rates of CKD are generally longer with dialysis than without dialysis. About one in ten people have chronic kidney disease

Quality of life of CKD also becomes poor. They see their condition as chronic and this poor illness perception affects their emotional well-being as well. Many studies found that poorer illness perceptions in CKD are associated with increased disease activity, psychological distress, reduced medication adherence, and poorer quality of life [8]. Treatment of CKD patients require not only drugs but also family care, lifestyle education, psychological support.

CONCLUSION:

Chronic kidney disease (CKD) is a major health problem in India. After yoga intervention there was improvement in all domains of psychological well-being namely satisfaction, efficiency, interpersonal relations, mental health and sociability. Yoga is helpful in improving psychological well-being of Chronic Kidney Disease patients.

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