

Comparison of Nordic walking and Conventional Aerobic training on Ambulatory endurance, Quality of life and Psychological status in Post Covid-19 patients: A Research protocol

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Method Article

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Abstract

Background – Covid-19 has spread worldwide, including India. Cough, fever and difficulty in breathing are identified symptoms. After discharge, majority of Covid-19 survivors have reduced diffusion capability and poor perceived physical and mental health, resulting in need of rehabilitation which helps regaining normal lung function. Researches on Nordic walking in Post Covid-19 patients are limited. The study aims at comparing the effect of Nordic walking and Aerobic training program on ambulatory endurance, Quality of life and psychological function in Post Covid-19 patients.

Methods – 70 Post Covid-19 patients will be recruited for the study, which will be uniformly divided into two groups. Following the baseline assessment, Group A will receive aerobic training and Group B will receive Nordic walking program for 4 weeks. Ambulatory endurance, quality of life and psychological function will be assessed.

Discussion – The purpose of this study is to examine the effect of Nordic walking in Post Covid-19 patients.

Introduction

The Novel Corona Virus (Covid-19), previously known only as the Wuhan virus, has spread worldwide, including India. The symptomatology of the Covid-19 is very similar to that of other viral respiratory infections. Cases can range from mild to extreme, leading to serious medical problems or even mortality. Since the incubation time for the novel coronavirus has yet to be confirmed, symptoms are expected to occur in 2 to 14 days. The precise modes of transmission of this novel virus are unspecified at this time. Cough, sudden onset of fever, and difficulty in breathing are currently identified symptoms. Up to 20% of confirmed cases are listed as serious. Aside from it though, a variety of patients have been successfully treated and released from the hospital(1). The effects of Covid-19 are said to include both physical and mental health problems. After discharge, the majority of non-critical Covid-19 pneumonia survivors have reduced diffusion capability, as well as a poorer perceived physical and mental health(2). In addition to the physical effects, Covid-19 survivors are clinically depressed three months after leaving the hospital and suffer from PTSD, insomnia, and anxiety(3).

Since Covid-19 causes a reduction in lung capacity and volume, aerobic exercise helps recover the normal lung function. Exercise preparation is both healthy and helpful. Studies on the impact of moderate exercise training on immune functions have shown that even simple behaviours like daily brisk walking can be superior to sedentary lifestyles, resulting in less sick days. The impact of moderate exercise training on immune functions has been studied in various studies (4).

Nordic Walking program is applicable and healthy in the field of integrated health care. It's simple to learn, and it's affordable. The patients' quality of life seems to be improving (4). In patients with different

diseases, Nordic Walking improves resting heart rate, blood pressure, exercise capability, maximum oxygen intake, and quality of life (5).

In conventional aerobic training program, walking is the most preferred mode of exercise in patients with respiratory diseases. Normal walking after a period of time is readily adaptable and become monotonous. Nordic walking involves use of poles in traditional walking, this makes it more interesting, engaging and can be little more taxing to cardiovascular system. The Nordic walking has rhythm and pattern that loads the other system of the body to some extent. The Nordic walking involves rhythmic movement of upper and lower extremity along with the poles that demands integrated function of all the systems, thereby also have some effects on balance, co-ordination and proprioception. The Nordic walking requires correct walking technique, correct posture and correct use of poles. In spite of this it mimics the natural walking pattern which can be used as the modes of exercise in pulmonary rehabilitation. There are number of studies available on post-menopausal women, diabetes where Nordic walking program was used to enhance endurance. The present study uses the Nordic walking program as the mode of conditioning on mildly affected Post Covid-19 cases as a part of rehabilitation program. Limited studies on Nordic walking has shown its effectiveness on quality of life, ambulatory endurance, and lowering psychological complications like anxiety depression and stress.

The present study aims to compare the effect of Nordic walking program and Conventional aerobic training on ambulatory endurance, quality of life, and Psychological function like anxiety, depression and stress in Post Covid-19 patients.

Reagents

Equipment

Procedure

1. Recruit patients(N=70), Screen the patients for inclusion and exclusion criteria, Obtain informed consent
2. Perform baseline assessment
3. Allocation: Group A (35 patients), Group B (35 patients)
4. Group A : 4 weeks of aerobic training, 3 times a week
5. Group B : 4 weeks of Nordic walking, 3 times a week
6. Perform post-training assessment

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