Official Title of Study: -

Effect of aerobic exercises on immune system in patients with multiple sclerosis

Document Date: - 08/30/2020.

Human Subjects protection review board approval date: - 4/10/2015

Effect of aerobic exercises on immune system in patients with multiple sclerosis

PURPOSE:

This study will aimed to determine the effect of aerobic exercises on the immune system anti inflammatory (IL-10) and pro inflammatory (IL-17) cytokines and its consequences on the functional status in the Multiple Sclerosis patients.

BACKGROUND:

Multiple sclerosis (MS) is a condition that can affect the brain and spinal cord, causing a wide range of potential symptoms, including problems with vision, arm or leg movement, sensation or balance.

It's a lifelong condition that can sometimes cause serious disability, although it can occasionally be mild. In many cases, it's possible to treat symptoms. Average life expectancy is slightly reduced for people with MS. It's most commonly diagnosed in people in their 20s and 30s, although it can develop at any age. It's about 2 to 3 times more common in women than men.

Multiple sclerosis (MS) can cause a wide range of symptoms and affect any part of the body. Each person with the condition is affected differently.

The symptoms are unpredictable. Some people's symptoms develop and worsen steadily over time, while for others they come and go. Periods when symptoms get worse are known as relapses. Periods when symptoms improve or disappear are known as remissions.

Multiple sclerosis is considered to be an immune-mediated disease in which the body's immune system attacks the central nervous system (CNS). Most MS experts believe it to be an autoimmune disease, although no specific antigens (proteins that stimulate the immune system) have been identified in MS.

HYPOTHESES:

H0 there is no significance difference of aerobic exercises on the immune system anti inflammatory (IL-10) and pro inflammatory (IL-17) cytokines

H1 there is a significance difference of aerobic exercises on the immune system anti inflammatory (IL-10) and pro inflammatory (IL-17) cytokines

RESEARCH QUESTION:

Is there is significance difference of aerobic exercises on the immune system anti inflammatory (IL-10) and pro inflammatory (IL-17) cytokines?

Aim of the study:

To determine the effect of aerobic exercises on the immune system anti inflammatory (IL-10) and pro inflammatory (IL-17) cytokines and its consequences on the functional status in the Multiple Sclerosis patients.

Inclusion criteria:

included with age ranged from 25 to 45 years. All the patients were remitting relapsing MS according to revised McDonald criteria

All patients were able to ambulate with EDSS for each patient ranged between 1.0 and 4.5

Exclusion criteria:

Patients with other neurological deficits.

psychiatric disease, history of previous inflammatory diseases

cardiovascular or pulmonary diseases.

Methods for assessment:

Blood sample testing for serum anti inflammatory cytokine IL-10 and pro inflammatory cytokine IL-17. This analysis performed pre and post 3 months of intervention.

Methods for treatment:

The study group (GA) : received modifying drug (interferon beta-1a) "Rebif" in addition to aerobic exercise.

The control group (GB) was treated by the disease modifying drug (interferon beta-1a) "Rebif".

RECRUITMENT

Please state clearly how the participants will be identified, approached and recruited.

Note: Attach a copy of any poster(s), advertisement(s) or letter(s) to be used for recruitment.

The patients will be recruited from Outpatient Clinic of faculty of medicine, South Vally University

CONSENT

Describe the process that the investigator(s) will be using to obtain valid consent. If consent is not to be obtained explain why. If the participants are minors or for other reasons are not competent to consent, describe the proposed alternate source of consent, including any permission / information letter to be provided to the person(s) providing the consent.

I am freely and voluntarily consent to participate in a research program under the direction of M.Sc.
A thorough description of the procedure has been explained and I understand that I may withdraw my consent and discontinue participation in this research at any time without prejudice to me.
Date Participant