

THE EFFECT OF AEROBIC EXERCISE AND THE WIPING MASSAGE IN REDUCING BLOOD PRESSURE FOR SOME PEOPLE WITH THE AGE OF (30-40 YEARS)

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Abstract

So the researcher believes that the diseased people exposes during the performance of aerobic exercise and massage into a state of satisfaction and according to that the processes of physiological preparation must be sought through the therapeutic programs to the development of oxygenated system and improve it through the use of these exercises together and from here we have found that there is a positive relationship between the practice of physical activity and the low incidence of high blood pressure disease. Through the previous, the importance of research lies in many aspects through the use of physical means in lowering the level of blood pressure as the aerobic exercise with low intensity considers one of the suitable and normal methods for the treatment of this disease as well as the use of wiping massage which is one of the therapeutic methods that have sedative effect on the nervous system which helps in regulating blood pressure. The research discusses the problem of the era through the practice of physical activity of the medium intensity as the evidences show that the practice of these activities regularly are working to reduce blood pressure in individuals who have high systolic and diastolic pressure The integration of the aerobic exercises that have light intensity with wiping massage achieved the best results in lowering blood pressure and the level of the variables under consideration, reaching the required level for these patients.

KEYWORDS: Physical. Aerobic. Exercise. Massage. Blood.

1. INTRODUCTION

The main objective that doctors are seeking about it recently is the advancement of individuals and communities to get them to the finest advanced health levels and this is done through good health and healthy body and as a result of technological development which led to the adoption of the individuals on the machine which led to the denial of the most important physiological requirements in their bodies which is movement. So many diseases that are resulting from lack of movement in humans appeared in the modern era and from these diseases is high blood pressure which is caused by high blood pressure in the arteries to a level higher than the normal level of blood pressure. In spite of scientific progress in the field of treatment so more researches and studies should be done to reach too many of the scientific facts in order to detect the best methods and techniques to treat people with lethal diseases by using exercises optimally in the treatment and rehabilitation of some of the people with high blood pressure. As according to these exercises and their intensity depends the level of treatment in the diseased people and the specialized process lead in the aerobic exercises to raise the level of physiological and functional aspects (through the development of the work of the two systems ; circulatory and respiratory) in addition to the use of wiping massage in easier manner to reduce the blood burden on the arteries that are filled with blood and through studies and researches in this field specially these related with the impact of these exercises on the different organs and systems of the body to know what that aerobic exercises and massage cause like functional and chemical changes on the different organs of the body which positively reflect on reducing the pressure in people in general and achieve the best results.

So the researcher believes that the diseased people exposes during the performance of aerobic exercise and massage into a state of satisfaction and according to that the processes of physiological preparation must be sought through the therapeutic programs to the development of oxygenated system and improve it through the use of these exercises together and from here we have found that there is a positive relationship between the practice of physical activity and the low incidence of high blood pressure disease. Through the previous, the importance of research lies in many aspects through the use of physical means in lowering the level of blood pressure as the aerobic exercise with low intensity considers one of the suitable and normal methods for the treatment of this disease as well as the use of wiping massage which is one of the therapeutic methods that have sedative effect on the nervous system which helps in regulating blood pressure. The research discusses the problem of the era through the practice of physical activity of the medium intensity as the evidences show that the practice of these activities regularly are working to reduce blood pressure in individuals who have high systolic and diastolic pressure From this point the researcher felt to study the effect of aerobic exercises with different intensities that commensurate with the status of the diseased individual and the use of wiping massage to reduce the blood pressure of the patients without any side effects that may increase the severity of the disease in the future

Research problem: High blood pressure is a disease of the era and belong to diseased which are called diseases of lack of movement that resulting from the use of human matters and technological methods to reduce the movement of human. Which led to an increasing number of people with these diseases in the modern era because of the circumstances that are exposed during the life of the individual and psychological conditions and tensions of life which adversely effect on the healthy and psychological condition of the patient, prompting individuals to search for ways to prevent and treat it which decreases this serious disease

Due to the paucity of studies that solve this issue, depending on the appropriate natural means, like oxygenated exercises with light intensity, and the adoption of most of the patients on the drugs that reduce the pressure to be easily taken despite their adverse effects on the various organs of the body which leads to other health problems that can be avoided.

From this point the researcher felt to study the effect of aerobic exercises with different intensities that commensurate with the status of the diseased individual and the use of wiping massage to reduce the blood pressure of the patients without any side effects that may increase the severity of the disease in the future.

Research aim: knowing the effect of aerobic exercises with light intensity and wiping massage in reducing blood pressure for men with high normal pressure for the ages 30-40 years.

Research hypotheses: The light-intensity aerobic exercises and wiping massage have significant effect between the results of the tribal and posteriori tests in lowering the level of blood pressure for men with high normal blood pressure.

2. MATERIAL AND METHODS

The researcher used the experimental method to solve the problem of the research because the experimental approach fits with the nature of the problem to be discussed and how to solve as it has been selected one of the designs of the experimental method which is represented by designing the experimental group between two experimental variables at same time.

The research sample: The sample was selected depending on the discretionary participation after clarify the goals of the research and its reasons and how important it is and if it is accepted for patients with high blood pressure who are classified as those with mild hypertension and totaling 10 patients with light hypertension (with ages 30-40 years) who showed their willingness to participate in the research experiment.

(4) individuals from the research sample have been eliminated due to they are affected with diabetes and heart disease and so the researcher excluded them from the sample and thus the final number reached to (6) patients.

Research procedures: After selection the functional measurements of the research by some experts, the researcher took the necessary measurements, which included the following:

Functional Measurements: - include the following:

- Blood Pressure measurement : (1-64: 1997-67) Measurement
- Heart rate measurement (1-64: 1997-67)
- Respiratory rate measurement : (61: 1997: 1)
- Determination the intensity of physical effort :

The intensity was determined by heart rate intensity as the intensity during the prepared training program ranging between (50-70%) of the reserve pulse rate knowing that (50%) of the reserve pulse equivalent to walking for the patient herself.

How to calculate the intensity of exercise during a single session (360: 1997: 2)

1. The maximum pulse rate calculation $-220 = \text{age of the athlete}$

2 - The number of heartbeats in the required intensity = $(\text{the maximum average of the heart beats} * \text{the required intensity}) / 100$

Tribal test: The researcher conducted a tribal experimental measurements 18-19 / 2/2014 in the fitness hall / Anbar Sporting Club / Al-Anbar on the research sample and before starting to exercise any physical effort in order to know the extent of the changes that taking place on them during the performance of designed programs for them.

The physical massage program : The researcher prepared physical program includes a set of aerobic exercises and with low to medium intensity as it relied on the American College of Sporting Medicine by using the intensity of (45-70%) of medium intensity for patients with high blood pressure (1993: 3) as the researcher used the prepared physical fitness program by the researcher with the introduction of wiping massage and for the patients of high blood pressure. the researcher focused on the introduction of wiping massage after the effort directly for the duration of the test for a period of 8 weeks. The intensity of this program has reached to (45-70%) which means light intensity. This program aims to reduce the level of blood pressure in patients as well as raising the level of fitness of the patients themselves.

The training module has been divided into 3 sub-parts:

- **Introductory part:** Includes warming the body for a period of (5-10) minutes, which is a warm-up for all parts of the body.
- **The main part:** Includes implementation of the program vocabulary that prepared by the researcher by using the selected set of exercises and then the use of wiping massage and exercises which are:
 1. Standing: normal walking and putting arms aside with rotation the palm up and down once again).
 2. Standing: walking by opening step. Standing: normal scrambling by opening the step with putting the arms to the front for the first time and aside for the second time.
 3. Standing: light scrambling with the lifting of the arms high first and then down)
 4. Standing: (walk on the heel)
 5. Standing: scrambling with raising the knees to the front first and then hitting the ankles with the hip.
- * **The final part:** Includes the performance of calm and relaxation exercises and their purpose is to return the pulse and pressure to a normal situation as much as possible.

After performing the prepared exercises and then the wiping massage on the patient and after a direct effort and as follows:

The patient takes a prone position on the abdomen and arms bent from the elbows with putting palms of her hands under the forehead with total relaxation of all muscles of the body, massages start by using wiping massage as being a massage from the bottom of the head toward the axilla passing through the muscles (clavicle muscle , mastoid, deltoid, the muscles of the upper back behind the shoulder) and the massage should be in wiping manner without using the force and prefers to use cream during massage to facilitate the movement of the hands on the patient's body as used a low intensity in order to increase the muscular relaxation. Massage sessions lasted from (5) minutes in the first week and to 10 minutes until the seventh week and as illustrated as follows: (5 minutes .7 minutes .8 minutes .9 minutes, 10 minutes, 10 minutes, 10 minutes, 10 minutes.

Posteriori test :The researcher conducted the posteriori measurements on the research sample per week (8) in total rest at 23-24 / 4/2014 and the used methods was the same methods used in the tests

3. RESULTS

Table 1: arithmetic means and standard deviations for the two tests (tribal and posteriori) for the research group in variables under research and the ratio of development

Rank	Variables	Unit of measurement	Sample number	Tribal test		Posteriori test		Ratio of development
				M	SD	M	SD	
1	The systolic pressure	mmHg	6	146.7	1.114	132.8	3.484	7.45%
2	The diastolic pressure	mmHg	6	91.03	0.361	86.22	0.484	4.43%
3	pulse	Beat/minute	6	77.6	0.386	73.68	0.386	2.25%
4	Respiratory rate	Once/minute	6	16.55	0.234	13.71	0.416	16.08%

From Table 1, we find that the values of arithmetic means and standard deviations in the test (tribal - posteriori) of the systolic pressure were different among the experimental group which confirms the occurrence of change which means changed from what it was in the tribal test as the arithmetic mean reached to (144.8) and standard deviation (5.765) in the tribal test while the arithmetic mean reached to (134) and standard deviation (2.054) in the posteriori test as it is an indication of the effect in lowering systolic blood pressure level as the percentage of development reached to (7.45%) while the diastolic pressure test , the results were different among the experimental group which confirms the occurrence of change which means changed from what it was in the tribal test as the arithmetic mean was (90.2) and with standard deviation (4.359) in the tribal test while the arithmetic mean reached to (86.20) and standard deviation (2.578) in the posteriori test , as it is index of the effect in reducing diastolic pressure level as the percentage of development reached to (4.43%).

To the systolic pressure test were different among the experimental group which confirms the occurrence of change that means changed from what it was in the tribal test, as the arithmetic mean was (78.6) and standard deviation (2.768) in the tribal test while the arithmetic mean reached to (76.60) and standard deviation (2.067) in the posteriori test as it is an indication of influence in reducing the level of the pulse as the percentage of development reached to (2.52%)

To test of systolic pressure were different among the experimental group which confirms the occurrence of change that means changed from what it was in the tribal test as the arithmetic mean was (16.8) and standard deviation (1.197) in the tribal test while the arithmetic mean reached to (14.1) and standard deviation (0.985) in the posteriori test as it is an indication of the influence in reducing the level of the respiratory rate as the percentage of development reached to (16.08%)

Table 2: shows difference of arithmetic means and standard error, value of (T) and significance of the differences in the experimental group in research variables between tribal and posteriori tests

Rank	Variables	Unit of measurement	Number of the sample	M D	Sta. error D	(T) value		Significance
						calculated	Error ratio	
1	Systolic pressure	mmHg	6	13.95	3.679	9.287	0.002	significant
2	Diastolic pressure	mmHg	6	4.766	0.249	19.075	0.007	significant
3	pulse	Beat/minute	6	3.98	0.849	11.486	0.008	significant
4	Respiratory rates	Time/minute	6	2.83	0.454	15.266	0.002	significant

Degrees of freedom n-1 = 5 with level of significance (0.05)

To find out the differences between the arithmetic means for the two tests (tribal and posteriori) for this group in the systolic pressure test , the researcher adopted the (t) test of the samples that are independent for verification of differences significance and the value of calculated (t) have amounted to (9.287) and the error rate amounted to(0.002) which is smaller than the value of the level of significance (0.05) which indicates the presence of a significant difference and in favor of the posteriori test and this is what we observe in the table above.

To find out the differences between the arithmetic means for the two tests (tribal and posteriori) for this group in the diastolic pressure , test researcher adopted the (t) test of the independent samples for verification of significance differences and the value of calculated (t) have amounted to (19.075) and the error rate (0.007) which is smaller than the value of the level of significance (0.05) which indicates the presence of a significant difference and in favor of the posteriori test and this is what we observe in the table above.

To find out the differences between the arithmetic means of the two tests (tribal and posteriori) for this group in the pulse test , the researcher adopted the calculated (t) test of the Independent samples for verification of significance differences and the value of calculated (t) reached to (11.486) and the error rate of (0.008) which is smaller than the value of the level of significance (0.05) which indicates the presence of a significant difference and in favor of the posteriori test and this is what we observe in the table above.

To find out the differences between the arithmetic means for the two tests (tribal and posteriori) of this group in the test of respiratory rates , the researcher adopted the (t) test of independent samples to verify the significance of differences and the value of calculated (t) reached to (15.266) and the error rate (0.002) which is smaller than the value of the level of (0.05) which indicates the presence of a significant difference and in favor of the posteriori test and this is what we observe in the table above.

4. DISCUSSION

Through the results in the table (2) shows that there are significant differences and in favor of a posteriori tests and the researcher attributes the reason for this development to aerobic exercises used as well as the wiping style which is considered one of the most effective ways to reduce high normal blood pressure and this has been demonstrated in studies in the field of treatment of high blood pressure that the aerobic exercise with moderate intensity and regularity cause a decrease in pressure without any change in the body weight. The state of relaxation that accompany the physical activity causes decrease in heart beats during rest for individuals with hypertension after attendance in sporting programs and this is similar to what is happened during eating (abuse) of medical drugs for hypertension which is working to reduce the excitement sympathetic nervous system of them (785 1990: 5)

Also, the practice of the medium intensity aerobic exercise with graduation in their time not less than one (15-30) minute and for (3) times a week helps in reducing systolic and diastolic blood pressure and within a few weeks of practicing these exercises and for categories (high normal blood pressure and light hypertension) 843 : 2000: 10)

Moreover, the diastolic pressure reflects the amount of resistance that encountered in the blood stream or the amount of contraction state of the artery so the decline means a positive case in patients with this disease. It also has a great importance from the medical point of view because it represents a real pressure inside the heart as it is more stable than the systolic pressure (390: 1990: 5).

While for the pulse variable , we note from the same table that all the results were significant and researcher attributes the causes of those differences to the effect of wiping massages as the nervous signals increase their efficiency and urge through massage and lead to increase the contraction intensity of the heart muscle which in turn leads to increase the heart's ability to pump larger blood volumes which is a clear signal that the decline in heart rates of the sample shows the good adjustment to extract more oxygen allowing to decrease the rate of blood flow to the muscles that are exposed to this massage and cause relaxation and thus the heartbeat drops (130: 1998: 7)

As for the respiratory rate variable, we note that all the results also were significant, the researcher attributes the reason to the used curriculum (massages with light exercises) which contributed to the adaptation of the circulatory and respiratory system and the development of the efficiency of this system which reflects the functional status of the individuals of the sample. Moreover, the improvement of heart work as a result of these approaches also helps in reducing the heart rate which in turn has worked to reduce the

respiratory rates. (467: 1989: 6) as well as the adequacy of the need for oxygen by the sample members has demonstrated the extent of adaptation of the work of the lungs as a result of this adaptation.

Also, the improvement of the two systems (circulatory and respiratory) means increasing the ability of the working muscles to take advantage of most of the amount of oxygen that carried by the blood which causes increase in the efficiency of the work of the muscles and improve the condition of the patient himself (65: 1993: 11)

In this section the results confirm the effectiveness of the impact of the training oxygenated curriculum that followed in variables (under discussion), especially if there are also massage as the results confirm that the effectiveness of this method in a positive effect on systolic and diastolic pressure and other variables that have a close relationship with the level of blood pressure like pulse and the respiratory rates and thus the research hypotheses have been achieved with regard to the effect of oxygenic training programs in reducing the level of blood pressure and changes in research and in the favor of the posteriori test for the research sample .

5. CONCLUSION

The integration of the aerobic exercises that have light intensity with wiping massage achieved the best results in lowering blood pressure and the level of the variables under consideration, reaching the required level for these patients.

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