HEALTH ASSESSMENT REPORT

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INTRODUCTION TO PHYSIOLOGY – BMHP5003 /LECTURER: MUMTAZ GOOLAM

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INTRODUCTION

The following report aims to identify the role of the health assessment questionnaire and present the cardiovascular system and diseases, such as hypertension. The objectives are to evaluate the risk factors which cause hypertension. A health assessment questionnaire was completed for Mis IB, who gave consent for her information to be shared. However, the real name remains withheld for data protection purposes, and the patient cannot be identified.

The Health assessment questionnaire was first “developed in 1978 by James Fries and colleagues at Stanford University” according to Stanford University School of Medicine (1996) and published in the 1980s according to Bruce and Fries (2005). The role of a health assessment questionnaire is to identify any health issues and give the opportunity to get to know the patient, lifestyle and family history, and unhealthy habits, such as smoking and alcohol.

The cardiovascular system will be explained in the assessment report section, including components, function and the disease hypertension. Hypertension is a blood pressure of 140/90 mmHg or higher; normal blood pressure is 120/80 mmHg. High blood pressure can damage the blood vessels leading to other cardiovascular diseases, such as stroke or heart attack, according to NHS (2019). The recommendation section will provide a care plan according to the results of the health assessment questionnaire, which can be found in the Appendix. Finally, the conclusion will summarise the main findings.

CASE STUDY

As stated previously, miss IB gave the consent for her information to be shared within this report; however, her real name remains withheld for data protection purposes and GDPR. The consent is vital; without consent from the patient or relative, information cannot be shared in any circumstances with other parties or for any purpose. Rethink Mental Health (2022) suggested that there are limited situations when a professional can share personal information without the patient's or relative consent. Relatives can act on behalf of the patient when they are not in good mental capacity; relatives include a carer, friend or a family member. Regarding sharing information without consent, also called “breaching confidentiality”, can happen to win the patient is a risk to other people or during a court. However, the patient or relative will have to be informed before that happen.

GDPR stands for General Data Protection Regulation according to GOV (2022) under the Data Protection Act 2018, which suggests that everyone who uses personal information is responsible for following strict rules. Such as the information should be used only for a specific purpose, data should be accurate, “up to date and not be kept longer than necessary”; also, the person has to be informed about how data is used. The health assessment questionnaire from the Appendix section shows that Mis IB suffers from high blood pressure, she does feel weakness on one side, and she did have a heart attack. Mis IB does not smoke or consume any alcohol, in fact, she never did, which is a plus, and she is also an active person. However, her diet needs improvement as she's eating too much meat and not enough fruit and vegetables. Also, her body mass index (BMI) it's way higher than 30, being a risk factor for many illnesses, including diabetes, heart disease, stroke, hypertension, high cholesterol, and mortality, according to Centres for Disease and Control Prevention (2022). Mis IB should follow a strict diet and try to lose weight to bring her high blood pressure in control and prevent any further illnesses and mortality in the worst case.

McDonnell et al. (2020) shared an article with the campaign where analysis of blood pressure from Ireland and the UK was conducted, called “May Measurements Month 2018” (MMM18). The campaign's role was to increase awareness among the citizens as many people suffer from high blood pressure and are not aware of it. The screening took place in various public places, such as GP surgeries, pharmacies, gyms and supermarkets, including 5000 volunteers. The result findings were that “34.3% were hypertensive and only 51.3% were aware of their condition”. Also, most obese and overweight had a higher blood pressure than other participants with a healthy BMI.

ASSESSMENT REPORT

According to Blood Pressure UK (2021), “one in three adults suffers from high blood pressure in the UK, and five million people are not diagnosed”. Hypertension rarely has any symptoms; it is called the “silent killer” a blood pressure reading is formed of two numbers; the systolic number, which is at the top, and the diastolic number, which is at the bottom. The systolic number represents the maximum blood pressure level when the heart is beating, while the diastolic number represents the lowest blood pressure level when the heart is entirely relaxed between beats. High blood pressure is a cardiovascular system disease.

Waugh, Grant and Ross (2018) suggest that the cardiovascular system is also called the circulatory system, which transports gases, nutrients, and hormones throughout the body and removes waste. The heart, blood, and blood vessels make up the cardiovascular system, as seen in Image 1. The heart, Image 2, is simply a pump that pumps blood through the vessels to the entire body. It has right and left sides, each with two chambers, the right and left atrium, right and left ventricle, respectively. The cardiovascular system functions is the transport of gases throughout the body; image 1, oxygenated (red) and deoxygenated (blue) blood, called the pulmonary and systematic circuit. Deoxygenated blood is sent from the right side of the heart to the lungs, where it is oxygenated before returning to the left side of the heart, called the pulmonary circuit. The left side of the heart is responsible for pumping oxygenated blood to body tissues, unloading oxygen, and absorbing carbon dioxide. In order to complete the cycle, the blood is returned to the right side of the heart. A systematic circuit is the name for this technique. Blood passes through the heart through four valves: deoxygenated blood flows from the right atrium to the right ventricle and pulmonary arteries, while oxygenated blood flows from the left atrium to the left ventricle and aorta.

The blood supplies body tissue with nutrients, transports hormones, and removes waste. The blood acquires nutrients through the digestive system, which absorbs digesting contents into the bloodstream through the small intestine walls. Nutrients are exchanged for waste in tissues, and waste is filtered from the blood by the kidneys and excreted in the urine. Plasma, red blood cells, white blood cells, and platelets are the blood components seen in Image 3. Red blood cells transport oxygen and carbon dioxide, white blood cells protect the organism as immune defence, and platelets are responsible for blood clotting. Plasma Is the liquid from the blood that carries blood cells to all parts of the body; blood cells are made daily in the bone marrow. There are three main blood vessels, Image 4, arteries, veins and

capillaries. Vessels that move blood away from the heart are arteries, and veins move blood back into the heart. The smallest blood vessels are capillaries that deliver nutrients to the cells and where the exchange of substances occurs.

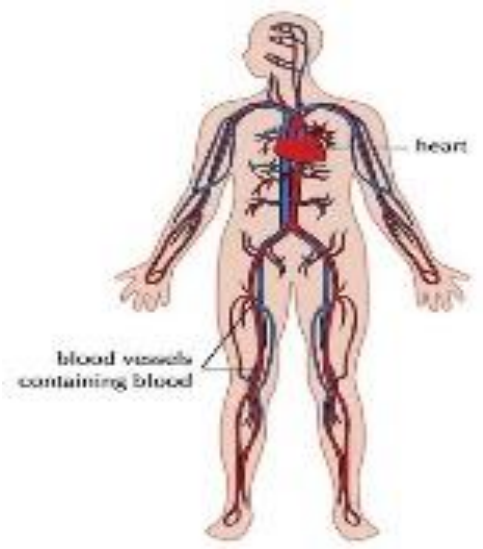

Image 1. The Wild Garden (2018) The Circulatory System.

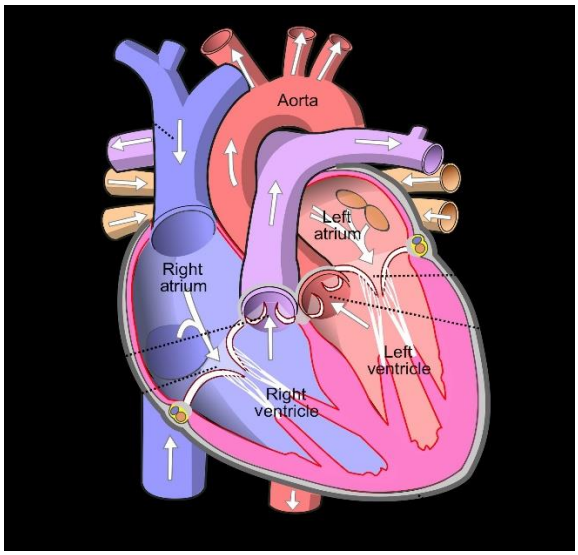

Image 2. Wikimedia Commons (2022) Human Heart

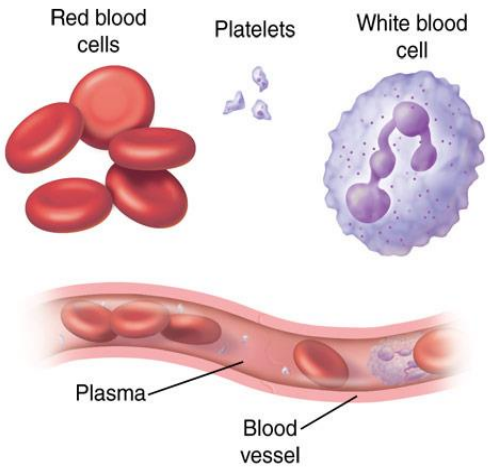

Image 3. ENT Health Library (2022) Understanding blood and blood components.

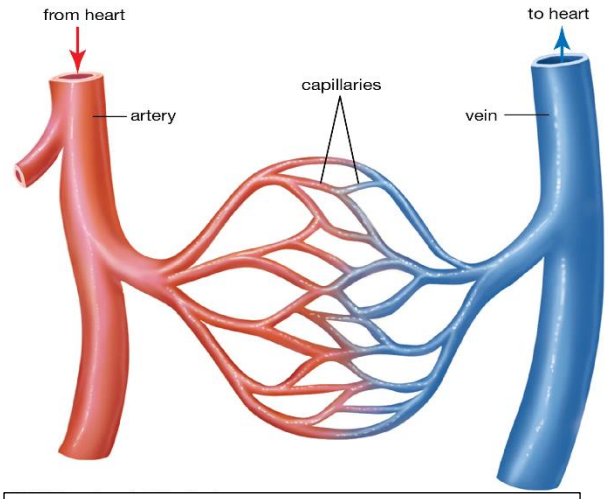

Image 4. The Editors of Encyclopaedia Britannica (2022) Blood vessel.

According to Sturgeon (2018), blood pressure, Image 6, is the force exerted on the walls of arterial blood vessels by circulating blood; this is also known as the arterial blood pressure in the systemic circulation. During systole, the pressure in the aorta rises as the heart pumps blood into it. A person's blood pressure fluctuates throughout the day depending upon their activities and emotional states. As shown in Image 5, persistent high blood pressure damages blood vessels slowly. In the long term, it's a risk factor for a variety of cardiovascular diseases and organ damage, including vision loss. Causes of hypertension could include ageing, obesity, high salt diet, lack of activity, smoking and alcohol consumption. Most common, the blood vessels are hard, and age or an unhealthy diet makes it harder for blood to flow; other causes could be underlying conditions such as diabetes, kidney disease or thyroid problems. Symptoms could include confusion, drowsiness, chest pain, breathlessness and weakness. Treatment of hypertension normally includes medication, there is a range of antihypertensive medication, but a healthy diet, exercise and stress reduction techniques are also vital to keep the blood pressure under control.

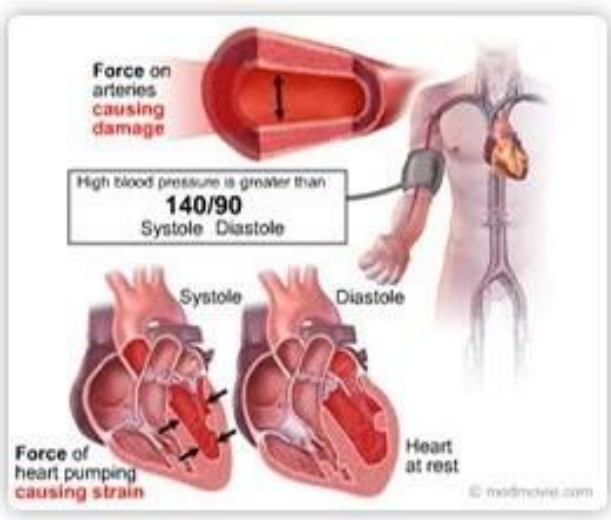

Image 5. Spices for Life (2011) High Blood Pressure (Hypertension).

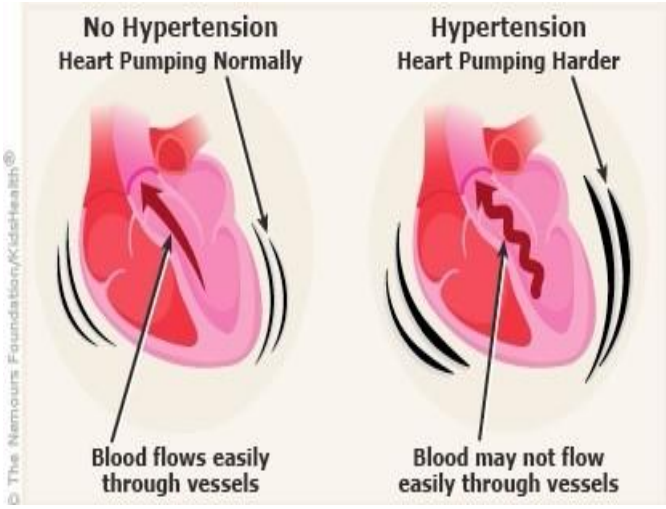

Image 6. Hirsch, L. (2022) Hypertension (High Blood Pressure).

RECOMMENDATIONS

As stated previously, hypertension is a severe condition that can cause numerous health problems if not treated. Mis IB currently suffers from high blood pressure, resulting from the health assessment questionnaire found in the Appendix section. Mayo Clinic (2021) suggested that a hypertension crisis is a blood pressure measurement of 180 /120 or higher, and it “requires urgent medical care”. The care plan and recommendations from Mayo Clinic (2021) are to keep monitoring the blood pressure at home; lifestyle changes are also vital, such as eating a healthy diet, physical activity at least 30 minutes a day, weight loss, and limiting alcohol consumption and smoking. If the doctor prescribes a medication, the patient should take the medication regularly. If there are any side effects, the patient should not stop taking medicine until they see the doctor to try different alternatives. Some medications that help treat high blood pressure and slow the heart rate are diuretics, angiotensin, calcium channel blockers, alpha-beta blockers, beta-blockers, or vasodilators that help direct the arteries' walls by preventing tightening and narrowing of the arteries.

National Institute for Health and Care Excellence (2019) also suggest that lifestyle advice is vital among people with hypertension. Also, diet and exercise lower blood pressure, alcohol consumption, coffee, and smoking. Treatment should be discussed and agreed upon with the patient; education regarding the condition, risks and side effects of the treatment is a must. In addition to lifestyle changes, medication should be offered to all people with stage two hypertension at any age and those under the 80s who have stage one hypertension and one of the followings; target organ damage, renal disease, diabetes or cardiovascular disease. Blood pressure should be regularly monitored in the clinic to check the lifestyle changes and medication response. Hypertension should be monitored once while seated and once standing in people with type 2 diabetes aged 80 and over. Training should be provided on how to self-monitor the blood pressure at home for the person who wishes to do so.

Mis IB is currently under medication for high blood pressure, and she's obese. The care plan for Mis IB is to consume more fruits and vegetables, try to lose weight, keep active, take her medication regularly and try stress reduction techniques. Education will also be provided for Mis IB on the risks of hypertension, the symptoms of a heart attack, such as numbness, chest pain, shortness of breath, and dizziness, and that she should call the emergency services if she does feel any of those symptoms.

CONCLUSION

To summarise the main concepts, a health assessment questionnaire has been completed for Mis IB. The results were that she suffers from hypertension stage 2. The health assessment questionnaire is used to identify any health issues and gives the opportunity to find out more about the patient lifestyle and family history. Mis IB gave consent for her information to be shared, but her name remains withheld for data protection purposes under the Data Protection Act 2018. According to McDonnell et al. (2020), obesity and overweight it's a risk factors causing hypertension, and only one in two people are aware of their condition. Blood Pressure UK (2021) suggested that one in three adults suffer from high blood pressure in the UK.

Furthermore, hypertension is a cardiovascular system disease; the cardiovascular system is formed of the heart, blood, and blood vessels. The cardiovascular system's function is to transport gases, nutrients, and hormones throughout the body and remove waste. Plasma, red blood cells, white blood cells and platelets are the components of blood. The heart is an organ that pumps blood through the vessels to the entire body. There are three main blood vessels arteries, veins and capillaries that move blood away from the heart throughout the body and back into the heart.

Blood pressure refers to the force exerted by the circulated blood on the walls of the blood vessels; normal blood pressure is lower than 120/80, and high blood pressure is 140/90 or higher. The recommendation section suggests that lifestyle changes are vital and regular medication among people with hypertension. Also, Mis IB should try to lose weight to prevent a heart attack, lower blood pressure, and continue taking her medication regularly.

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APPENDIX

Bellow is the Health Assessment Questionnaire completed for Mis IB.

Health Assessment Questionaire copy.pdf