

ROLE OF DIET IN MITRAL VALVE REPLACEMENT: CASE REPRESENTATION

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ABSTRACT:

Valve replacement is a surgical procedure. By this procedure, the dying risks are significantly less (1-3%). If the person continues with the problem, it may lead to death. Depending on the patient, either a biological or mechanical valve can be changed. After replacement, the patient must take an Acitrome tablet. Acitrome is a blood-thinning medication till the patient uses an Acitrome tablet. For the rest of his or her life, he or she must eat only one green leafy vegetable per week.

Keywords: Diet, valve, cardio, disease, heart, replacement, Nutrition, dietician, protein, carbohydrates, blood pressure, biological, blood, thinning, clotting, mechanical, surgical.

INTRODUCTION:

Surgically, a patient's defective mitral valve can be replaced with either a mechanical or bio-prosthetic valve, depending on the patient's preference. Replacement of the mitral valve occurs when the valve becomes either too tight or too loose, allowing blood to leak into the left atrium and so back into the lung (mitral valve stenosis). It is possible to develop mitral valve disease due to infection, calcification, hereditary collagen disease, or other factors. In order to do a mitral valve replacement, the patient must be placed on cardiopulmonary bypass. The two major categories of artificial mitral valves are mechanical and bio-prosthetic tissue (biological) valves. The patient's age, medical condition, preference for medical

medicine, and lifestyle all play a role in deciding which valve type to choose. When replacing a mechanical valve, patients are typically given the anticoagulant (Warfarin), which has been linked to birth problems in infants. After the procedure, women who plan to become pregnant should be given a biological tissue valve to avoid this problem. Occasionally, aspirin can be used instead.

They have initiated cardiopulmonary treatment. General anesthesia and cardiac monitoring are implemented. The surgeon uses a sternotomy to gain access to the heart and major arteries. As cannulae are placed into the major cardiac vessel, femoral vessels, or a combination, anticoagulation is administered. As the cross-clamp is applied to the aorta's ascending aorta, the heart stops pumping blood. The surgeon makes an incision in the chest to recognise the mitral valve. He/she can open the atrial septum to expose the mitral valve, or he/she can open a big left atrium, allowing the mitral valve to be seen directly. The surgeon next removes the sick valve from the annulus of the valve (outer ring). Allows surgeons to pick the correct valve size for the patient's anatomy. The valve annulus is sutured and secured into position after the sutures have been applied. The atrial septum is healed with suture or natural healing, and the heart is stitched together. Bleeding and infection are possible complications of mitral valve replacement surgery. A patient's risk factors include age, general health, underlying medical disorders, and how well his or her heart works.

Case Representation:

A 48 years old female who is a housewife was admitted to the hospital with moderate chest pain, a known case of CRHD (Chronic Rheumatic heart disease) treatment, Hysterectomy 10 years back. On examination time, patient conscious, A febrile, pulse rate 70/min, Hypertension-PSM grade III & IV, 2decho-severe mitral stenosis, and moderate Pulmonary Hypertension (PAH). She was admitted for Mitral valve Replacement (MVR) it is a surgical procedure based on Cardiac surgeon advice. The patient's anthropometric measurements were height-160cms, weight-60kgs, Body mass index (BMI)- 23, and Ideal body weight-56kgs. The dietician recorded the patient 24-hour dietary recall. It shows that she consumes 1,258 kilocalories, 228gms of carbohydrates, 40gms of protein, and 27.46gms of fat per day. Based on ideal body weight, stress factor, activity factor dietician low fat regular diet which contains 1700 k.cal, 276gms of carbohydrates, 67gms of protein, and 28gms of fat per day, this diet given by hospital for three days under dietician guidance. On the fourth day, she is advised for NBM (Nil by Mouth) before surgery; after surgery, the dietician provides a liquid diet hourly for a few hours. The next day dietician provided a soft diet and a Protein supplement (promaxe) because the promaxe supplement provides additional good quality protein; after surgery, the fast wound healing patient requires extra protein. According to the surgical procedure (Replaced mechanical valve) done by the cardiac surgeon, the patient should not take more fat and Vitamin K because, after valve replacement, the patient has to take only 90mcg of vitamin K. Dietician provided a regular low-fat diet it contains 1800k.cal, 276gms of carbohydrates, 70gms of protein, and 28gms of fat on the fourth day and weekly once green leafy vegetables in one meal. Because by taking green leafy vegetables,

the patient will not get any bleeding problems and clotting problems with Acitrome medication, a blood-thinning medication, it has to be used after mechanical valve replacement.

Dietary Suggestions:

Heart valve replacement patients should have a diet comparable to individuals who suffer from those illnesses. Cutting back on fat and cholesterol intake and sodium and other products that contribute to high blood pressure should be the main focus. Typically, this involves avoiding processed foods, dairy, red meat, and saturated fats while discovering how to adopt a more solid nutritional approach to heart health through adequate Nutrition.

Cholesterol:

Atherosclerosis, the buildup of fatty deposits in the arteries, can be prevented by cutting down saturated fat and cholesterol, which play a major role in developing the condition. Cardiovascular disease can worsen an already compromised condition by placing undue stress on the heart's weak muscles. Avoid high in hydrogenated fats, such as margarine, shortening, bacon, gravy, and cream sauces. Instead, choose whole grains high in fiber, such as those found in whole grain cereals. Cholesterol levels should not exceed 300mg each day.

Protein:

A heart valve replacement patient's recovery-friendly diet should include lean meat, poultry, fish, and low-fat dairy items. These should be avoided unless they are of the reduced-fat version because fat is concentrated in dairy products such as cheese and yogurt. Cold cuts, hot dogs, sausages, egg yolks, organ meats like liver, and processed meats should all be avoided if you want to lose weight. Frying is always preferable to baking, broiling, grilling, or pan-frying. Salmon, trout, and herring are

rich sources of omega-3 fatty acids, which contribute to heart health when ingested twice or three times a week.

Vegetables:

If you are at risk of blood clotting, the Brigham and Women's Hospital in Boston suggests avoiding foods high in vitamin K. That list includes broccoli, kale, and spinach, as well as collard greens and lettuce.

Beverages:

To reap the benefits of red wine's added antioxidants, you must limit your alcohol intake to a manageable level.

Acitrome Diet:

When using this blood-thinning medicine, you don't need to follow a specific Acitrome diet. However, several foods and beverages can help you get through the day. It appears that Acitrome does not prevent blood clots from forming. While using Warfarin, you must pay attention to what you consume.

Conclusion:

The hospital prescribed and monitored a two-week diet for the patient. Acitrome and a regular diet are safe and effective for the patient, and she has been advised to continue taking them for the remainder of her life.

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