

Mitral Valve Replacement

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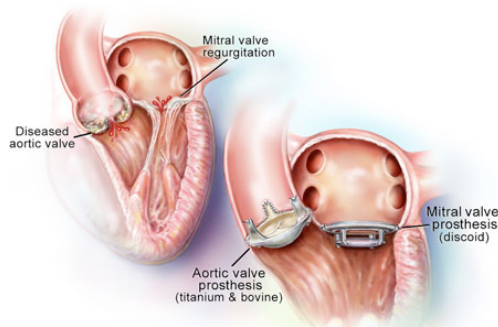
Abstract—The heart replacement valve surgery is a procedure that has been around since 1960. The purpose of this heart valve replacement is to improve blood flow through the heart due to the mitral valve not closing tight enough. By replacing the valve, patients are able to live a more normal lifestyle and function the way they are used to.

I. INTRODUCTION

THE mitral valve heart replacement is a procedure that helps to improve the quality of life of people who suffer mitral valve regurgitation. Mitral valve regurgitation is a condition in which the mitral valve becomes “floppy” and does not close tightly. Mitral valve problems are rarely caused by a birth defect, otherwise known as a congenital condition. More often, simple “wear and tear” may cause part of the valve mechanism to fail. This is called “degenerative disease”. The regurgitation that occurs could happen in another valve as well; therefore the heart valve prosthesis is crucial to replace the defective heart valve that causes problems for patients.

II. METHODS

As shown in the picture below, mitral valve regurgitation is when the blood does not completely pass from the left atrium to the left ventricle due to a floppy valve. The mitral valve prosthesis (shown at the right) eliminates this problem.



There are actually two alternatives to the prosthetic valve that can be used to replace the faulty one. There is a biological valve that comes from pig aortic valves and a mechanical valve that can be used to take the place of the mitral valve. However, there are advantages and disadvantages to both.



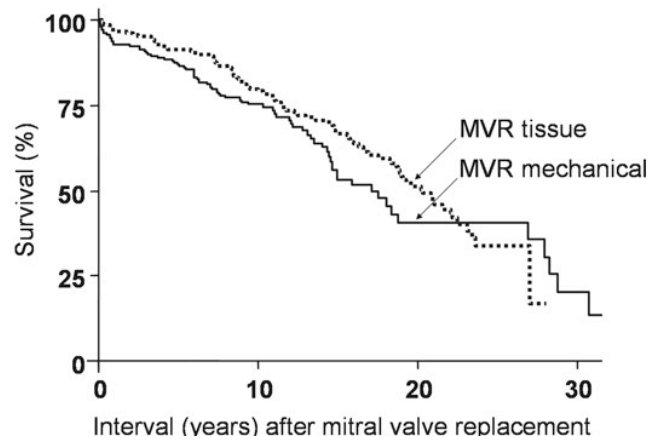
III. RESULTS

The figure below displays the survival of adults less than age 60 at first MVR, according to their initial type of prosthesis. Twenty-year and 25-year survival were 51.4±4.4%

and 33.8±5.3%, respectively, in patients implanted with a tissue prosthesis, and 43.2±5.7% and 40.8±5.9% in those with a mechanical prosthesis.

Number of cohort patients at beginning of each interval

	170	115	82	-
Tissue	170	115	82	-
Mechanical	144	77	35	10



IV. DISCUSSION

There are advantages and disadvantages to both the biological valve and the mechanical valve. The principle advantage of mechanical valves is their durability. However, patients with a mechanical valve must take blood thinners to reduce their risk of blood clots. The advantage of the biological or tissue valve is that there is much less risk of getting a blood clot. However, their disadvantage is that they have more limited durability in comparison to the mechanical valve. On average the prosthetic heart valve costs between \$5,000 and \$7,000 (expensive for people without insurance). However, there are additional hospital costs such as the surgery and the stay in the hospital.

This surgery will help to improve the quality of life of individuals who suffer mitral valve regurgitation. Patients who suffer the shortness of breath, light headedness, and other symptoms will feel back to normal after this surgery.

References

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