

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



جامعة عين شمس

التوثيق الإلكتروني والميكرو فيلم

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لم ترد بالأصل



Post-Operative Echocardiographic follow up After Mitral Valve Replacement By Different Types Of Biological Valves

Thesis

**Submitted For Partial Fulfilment of Master Degree in
Cardio-Thoracic Surgery**

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Introduction

The high rate of degeneration of the first bioprostheses that were implanted in younger patients led to a renewed preference for mechanical heart valves (*ACC/AHA,2006*) ⁽¹⁾.

The increased use of biological cardiac valvular prostheses is justified by current state of the data on biological prostheses of the most recent generation, which are proving to be more durable than previous generations (*Daniel et al.,2006*) ⁽²⁾.

Some younger patients are averse to oral anticoagulation and therefore prefer a biological valvular prosthesis, despite the known risk of degeneration and reoperation in persons under 60 years of age. The operative risk of a second valve replacement has significantly decreased, however, mainly because of advances in cardio-protection. Thus, younger patients opting for a bioprosthesis can enjoy a normal quality of life without anticoagulation for many years but may need to undergo a second valve replacement procedure with an acceptable degree of risk.

Persons suffering from coronary heart disease in addition to their valvular disease have a lower life expectancy, so that bioprostheses can be chosen more frequently for patients in this group (*Vongpatanasin et al.,1996*).

In the coming years, the durability of stented bioprosthetic valves is likely to improve, because of further advances in methods of bioprosthesis construction and preservation (*Hoffmann et al.,2008*).

The choice of heart valve prosthesis should be tailored to each patient taking into account the patient's age, life expectancy, comorbidities, and life style (*Choudhary et al.,2016*).

There are important differences between biological valvular prostheses of animal origin and mechanical valvular prostheses. Mechanical prostheses have the advantage of durability but are accompanied with the risk of thromboembolism, problems of long-term anticoagulation and associated risk of bleeding. In contrast bioprosthetic valves do not require long-term anticoagulation, but carry the risk of structure valve degeneration and re-operation. A mechanical valve is favoured in young patient (<40 years) if reliable anticoagulation is ensured. In elderly patients (>60 years), A bioprosthesis is a suitable substitute. In middle aged patients (40-60 years), risk of re-operation in a bioprosthesis is equal to that of bleeding in a mechanical valve.

Traditionally, A bioprosthesis is opted in patients with limited life expectancy. Calculation of life expectancy, based solely upon chronological age, is erroneous. In developing countries, the calculated life expectancy is much lower than that of western population, Hence age related western cut-offs are not valid in developing countries. Beside age, cardiac condition of the patient, systemic illness, socio-economic status, gender and geographical location also decide the life expectancy of the patients. Selection of the prosthetic valve substitute should be based on : Aspiration of the patient, life expectancy, socio-economic status and educational background, occupation of the patient, availability, cost, monitoring of anti-coagulation, monitoring of valve function and other valve related complications, and possibility of re-operation (*Sievers et al.,2005*).

Biological valvular prostheses are classified into a number of subtypes. A human heart valve that is harvested from, and implanted into, the same person is called an autograft (*Ngele et al.,2000*).