
Mechanical Valve Vs Tissue Valve

Core Topics in Cardiac Anesthesia

Mitral Valve Surgery

Heart Valves

Identification and Control of 3D Mechanical Stimulation Conditions for Heart Valve

Tissue Engineering Using Microdevice Arrays

Calcific Aortic Valve Disease

Aortopathy

Ten-year Comparison of Pericardial Tissue Valves Versus Mechanical Prostheses for

Aortic Valve Replacement in Patients Younger Than 60 Years of Age

Cardiac Valve Prostheses

Atlas of Cardiac Surgical Techniques E-Book

The Patient's Guide to Heart Valve Surgery

From Biology to Clinical Management: An Update on Aortic Valve Disease. 2nd Edition

Pathology of Heart Valve Replacement

Guide to Prosthetic Cardiac Valves

Stentless Bioprosthesis

The Development of a Biodegradable Scaffold for a Tissue Engineered Heart Valve
Surgery for Heart Valve Disease
The Aortic Valve
Biotextiles as medical implants
Indications for Heart Valve Replacement by Age Group
Thrombosis, Embolism and Bleeding
Heart Valve Replacement and Reconstruction
Mitral Valve Repair
Advanced Concepts in Endocarditis
Cardiac Problems in Pregnancy
Cardiac Valve Replacement
Aortic Root Surgery
Update in Heart Valve Replacement
Diagnosis and Management of Adult Congenital Heart Disease E-Book
Replacement Cardiac Valves
Percutaneous Heart Valve Replacement
Principles of Heart Valve Engineering
Learning Cardiac Auscultation
Tissue Heart Valves
The Role of Fiber Bundle and Membrane Subunits in Aortic Valve Function

Comparison of Heart Valve Flow Dynamics Assessment Between Echocardiography and Pulse Duplication

The Aortic Valve

Heart Valve Surgery

Aortic Valve Preservation

Cardiac Imaging in Clinical Practice

*Mechanical
Valve Vs
Tissue Valve*

*Downloaded
from
dev.mabts.edu
by guest*

MAURICIO DORSEY

Core Topics in Cardiac

Anesthesia Springer

Dr Rose honoured me

with a request for a

Foreword. I am delighted

to oblige. The treatment

of valvular heart disease

has improved remarkably

in the past 40 years. Many factors have contributed; not least being the introduction of artificial heart valves for treatment, more than 25 years ago. Their use has shown that they are good, but not an ideal substitute for native valves. A galaxy of pathological changes are associated with the insertion and malfunction

of artificial heart valves. Each has to be defined, classified and related to clinical procedures or problems with a prosthesis; then a means sought to prevent them. Often, in understanding their cause, investigative procedures have/will improve patient care and broaden knowledge in other spheres. Dr Rose

has been a student of this pathology for many years and has made many contributions. No doubt his interest in the area was whetted by colleagues in Cape Town, leaders in the field of cardiovascular medicine and surgery. This monograph provides a collected review of his experience. In it one finds lessons in geographic pathology, in considering the causes of valvular heart disease in Cape Town and valuable information regarding the identification of artificial

heart valves and a means of examining a heart bearing one.

Mitral Valve Surgery

Steinkopff

In the current state of medical technology, there exists the need for a quality medical device to replace a failing heart valve. Presently, mechanical valves as well as donor tissue valves, either from humans or animals are used to replace failing heart valves. These valves although they can operate in the heart satisfactorily are not equal to the body

replacing its own valve. Tissue Engineering in simple terms is the field of helping the body replace its own failing organ. In scientific terms, Tissue Engineering is a relatively young field, a majority of the major advancements have come in the last ten years. Currently, work is feverishly being done to develop a tissue engineered heart valve both at MIT and at the Harvard Medical School. In this thesis, the author will detail a group of tissue engineering

scaffolds that were developed and tested which are comprised of biodegradable materials. As the quantity of heart valve cells increases the polymer thickness needs to be decreased, or degraded whereby keeping the overall heart valve thickness within its physiological limitations. Also, in this thesis, the author will detail the initial and then final solvent casting process used to develop the test samples. The first process manufactured a three dimensional test sample

whereas the final process was used to develop two dimensional flat rectangular samples. These samples produced from the final processing method showed promising results as well as a manufacturing process capable of producing repeatable results with varying compositions. Finally, the author will detail the recommended design and development paths both with the material and the sample preparation process. *Heart Valves* John Wiley & Sons

This book provides a concise guide to echocardiography, SPECT, CT and MRI, including both the basics of cardiac imaging as well as tables of normal/abnormal values and guidelines. With advances in technology, cardiac CT and MRI are becoming more popular but are often limited to larger medical centers. By including the basics of these modalities, this book provides a comprehensive guide for a wide range of medical professionals. As

physicians outside of cardiology often do not have sufficient exposure to nuclear stress tests, this book contains SPECT and stress test protocols in order to facilitate decision-making when ordering tests and interpreting results. *Cardiac Imaging in Clinical Practice* is a quick reference guide and will be useful at multiple levels of training, enabling the book to be used as a basic and advanced reference source. As such, it is appropriate for students, residents,

fellows and staff attendings who want a practical and handy reference to the diagnostic options open to them.

Identification and Control of 3D Mechanical Stimulation Conditions for Heart Valve Tissue Engineering Using Microdevice Arrays
Springer Science & Business Media
Cardiac Valve Replacement: Current Status is the proceedings of the Fourth International Symposium on the ST. JUDE MEDICAL@

valve. The first three symposia on this topic were held primarily for designated investigators involved in clinical trials of the ST. JUDE MEDICAL valve. The last meeting, chaired by Michael E. DeBakey, M.D., was held in November 1982 [1], immediately before the valve was released for general clinical use in the United States by the Food and Drug Administration. These proceedings then are the first comprehensive compilation of clinical data since that time; and

they include, particularly in the discussions, the experience of physicians other than the original clinical investigators. Over the past 5 years the character of these symposia has changed. Whereas the first two dealt almost entirely with the ST. JUDE MEDICAL valve, the last two have evolved into a more generic cardiac valvular surgery meeting, focusing primarily on valve replacement rather than valve repair [2]. Thus, these proceedings contain a wide spectrum

of topics, including a keynote presentation on criteria for selection of cardiac valve substitutes in 1984, complications of cardiac valve replacement and their treatment, a review of the current status of cardiac valve substitutes other than the ST. JUDE MEDICAL valve and a consideration of cardiac valve replacement in special circumstances. Among these special circumstances are four presentations on pediatric use of the ST. JUDE MEDICAL valve.

Calcific Aortic Valve

Disease Elsevier Health Sciences

The book contains a series of core auscultation “lessons”. All are case based and describe auscultation as it relates to a patient and in terms of the gold standard for interpretation of heart sounds. Auscultation is the term for listening to the internal sounds of the body, usually using a stethoscope. It is performed for the purposes of examining the circulatory system and respiratory system (heart sounds and breath

sounds). As a topic it is one of the oldest in cardiology but its utility should never be underestimated. In this era of hugely expensive imaging tests, auscultation is a cornerstone of efficient diagnosis and therefore needs a fresh look. The core content of this book describes the search for diagnostic clues within patients' heart sounds and as such this book provides superb practical advice in the form of a series of clinical pearls reflecting what accurate

diagnosis with auscultation can mean to patient prognosis and outcome. This often subtle but ultimately simple subject often produces complex results and these must be considered in light of modern next-level diagnostic methods and patient management.

Aortopathy Springer Nature

This chapter discusses the potential of textiles used as heart valve leaflet replacement material. The chapter first reviews the anatomy of the aortic

valve, before describing the diseases the valve may undergo and the limits of the noninvasive technologies available to replace the faulty valve. It then presents textile valve manufacture, and the performance that can be obtained in vitro in both the short and long term. Early animal in vivo results are presented in the last section.

Ten-year Comparison of Pericardial Tissue Valves Versus Mechanical Prostheses for Aortic Valve Replacement in

Patients Younger Than 60 Years of Age

Elsevier Inc. Chapters
Get expert, step-by-step guidance on a wide variety of both open and interventional cardiac surgical techniques. *Atlas of Cardiac Surgical Techniques*, 2nd Edition, helps you expand your surgical repertoire and hone your skills with a vividly illustrated, easy-to-navigate text and pearls and pitfalls throughout. This revised atlas covers the surgical procedures you need to master, including minimally

invasive techniques, robotic surgery, aortic dissection, and much more. Seven brand-new chapters cover Hybrid Coronary Revascularization, Aortic Valve Repair Techniques, Transcatheter Aortic Valve Replacement, Robotic Mitral Valve Surgery, Surgery for Hypertrophic Cardiomyopathy, Approaches and Techniques to Extra-Corporeal Membrane Oxygenation, and Pulmonary Endarterectomy. Multiple new contributing authors

offer a fresh perspective in their areas of expertise. A consistent chapter format guides you quickly from surgical anatomy and preoperative considerations through operative steps and postoperative care. More than 400 full-color images, line drawings, and intraoperative photographs clearly depict the step-by-step progression of procedures.
Cardiac Valve Prostheses
BoD - Books on Demand
This book provides information on the aortic

valve. Written in a comprehensive style, it emphasizes the principles behind the development of artificial valves. It covers the principles of valve geometry, tissue structure and function relationships, valve dynamics, fluid dynamics, mechanical stresses, echocardiographic images, mechanisms of valve sounds, valvular pathology, and design and performance of bioprosthetic valves. It enhances our understanding of angiographic and

echocardiographic images and calcific stenosis, and will be of value in the development of better prostheses. The Aortic Valve is the ideal text for biomedical engineers and a unique resource for teaching interdisciplinary approaches to medical and engineering students. This work is also an indispensable source for cardiac surgeons, pathologists, cardiologists, and manufacturers of prosthetic valves. [Atlas of Cardiac Surgical Techniques E-Book](#)

Springer Science & Business Media
Surgical options for the treatment of degenerative, ischemic, inflammatory, and functional mitral valve diseases have expanded greatly in recent decades. Still, a dilemma exists with employing prosthetic mitral valves – in that mechanical valves exhibit good durability but require anticoagulation versus the unpredictable durability of biological valve prostheses. Over the past few years, it has become clear that

reconstruction of the mitral valve with autologous tissues effectively addresses this dilemma, with no need for anticoagulation and excellent durability, combining the best qualities of both prosthetic options without the disadvantages. Moreover, newer repair strategies, such as autologous pericardial leaflet augmentation and artificial choral replacement have expanded reparative approaches into virtually all pathologies, with

excellent long-term results as compared to prosthetic valve replacement. At present, mitral repair is becoming the dominant procedure for treatment of virtually all patients with mitral valve disease. This book is designed to illustrate contemporary and sometimes diverse surgical techniques for various types of mitral valve repair with contributions from many of the leaders in the field. Mitral Valve Repair and the recently published Aortic Root Surgery are

book publications arising from the Berlin Heart Valve Symposium 2008 entitled “ The Biological Solution”. The Mitral Valve Repair session was postponed to June 2009 and was featured as the Berlin Mitral Valve Symposium at the joint meeting of the Society for Heart Valve Diseases and the Heart Valve Society of America in Berlin. The book contains a collection of proceedings on current techniques and outcomes of mitral valve repair by many of the experts in this field which provide an

authoritative reference source for cardiac surgeons, family practitioners and clinicians.

The Patient's Guide to Heart Valve Surgery

Springer Science & Business Media

Indications for Heart Valve Replacement by Age

Group Springer Science & Business Media

From Biology to Clinical Management: An Update on Aortic Valve Disease.

2nd Edition McGraw-Hill Companies

As the proportion of older adults increases in the

U.S. population, the prevalence of degenerative heart valve disease is also increasing. Calcific aortic stenosis (narrowing) and ischemic and degenerative mitral regurgitation (leakage) are the most common valvular disorders in adults aged 70 years and older. For patients with severe valve disease, heart valve replacement involving open heart surgery can improve functional status and quality of life. A variety of conventional mechanical and bioprosthetic heart

valves are readily available. However, some individuals are considered too high risk for open heart surgery. These patients may benefit from a less invasive procedure. Percutaneous heart valve replacement is a relatively new interventional procedure involving the insertion of an artificial heart valve using a catheter, rather than through open heart surgery. The portal of entry is typically either via the femoral vein or artery, or directly through the myocardium via the apical

region of the heart. An expandable prosthetic heart valve is delivered and deployed at the site of the diseased native valve. The percutaneous heart valve replacement procedure usually takes less time to perform and is less invasive than open heart surgery. The Agency for Healthcare Research and Quality (AHRQ) has commissioned this Technical Brief to:

Describe the types of conventional and percutaneous heart valves now in use or in development and their

theoretical advantages and disadvantages for different patient populations; Describe the literature comparing various types of conventional heart valves in adults and determine whether a systematic review of this literature is feasible and needed; Describe the literature evaluating percutaneous heart valves in adults, including the patient populations and major outcomes studied to date; Describe implantation techniques for percutaneous heart

valves and the factors associated with surgery or setting that may impact outcomes. The research team further clarified and refined the overall research objectives and the key questions. The key questions addressed are as follows: Question 1. What are the different types of heart valves in use and in development (including tissue, mechanical, and percutaneous valves)? a. What are the existing or potential U.S. Food and Drug Administration (FDA) indications for each valve

(patient characteristics, etc.)? b. What are the theoretical advantages and disadvantages of different valves for different patient populations? Question 2. From a systematic literature scan of studies on different types of tissue and mechanical valves, describe the types of comparative studies, including basic study design, size of study, length of followup, and outcomes assessed. This literature scan will provide data to determine if a systematic review of this

literature is possible and needed, and to provide needed context for understanding the evaluation and development of percutaneous heart valves. Question 3. From a systematic literature scan of studies on different types of percutaneous heart valves, provide a synthesis of the following variables: a. Number for each type of valve. b. Type of studies—comparative and non-comparative randomized controlled

trials (RCTs), non-randomized controlled clinical trials, case series, etc. c. Variables associated with surgery (implantation technique), setting, etc. d. Size of studies/length of followup. e. Patient population/concurrent and prior treatments. f. Hemodynamic success rates reported. g. Harms reported. Question 4. What are the variables associated with surgery or setting that may impact outcomes for percutaneous heart valves? a. What are the

different implantation techniques (i.e., position of implantation, delivery, and axis techniques)? What is the evidence of success (i.e., absence of narrowing and regurgitation) and harms? i. For percutaneous aortic valves. ii. For percutaneous mitral valves.

Pathology of Heart Valve Replacement Springer Science & Business Media

This state-of-the-art handbook is dedicated to cardiac valve anatomy, models for testing and research methods, clinical

trials; and clinical needs and applications. In this new edition, chapters are updated with the latest research in addition to new chapters on complex repair of CHD requiring conduits, new trends for valve replacement like the Ozaki procedure, as well as complex procedures in TAV, SAV, HARPOON, and BASILICA, with case studies for each type of procedure. This volume serves as a helpful reference for patients, educators, students, device designers and developers,

clinical study specialists, clinicians, and other associated healthcare providers.

Guide to Prosthetic Cardiac Valves Routledge Weare entering an especially prolific era in reporting and publishing clinical experiences with cardiac valve replacement. A voluminous literature on this subject is already in existence, emanating from clinicians, surgeons, bioengineers, and other scientists. Additionally, information presented at heart valve symposia in

the form of bound collections reaches the shelves of the medical book stores every year. This activity reflects the dynamic state of cardiac valve technology, highlighted by the introduction each year of new valve designs that often utilize new materials. As a result, the authors recognized the need to update their book *The Pacemaker and Valve Identification Guide*, separating the contents into two volumes dealing with pacemakers* and cardiac valve technology.

For this Guide to *Prosthetic Cardiac Valves*, we have gathered a group of recognized authorities in the field, all of whom have contributed in depth analysis in their areas of expertise. New material dealing with the preoperative and postoperative care of the heart valve patient, pathology of cardiac valves, bioengineering problems of cardiac valve technology, and separate chapters on valve implantation in children and ultra sonography have been added. Chapter

3, "The Radiology of Prosthetic Heart Valves," we feel will be particularly helpful to the physician in identifying a prosthetic valve and revealing the most likely complications. Chapter 10 is an atlas with descriptions to supply the reader with the essential features of the various prostheses when he or she is faced with a new patient bearing an implanted cardiac valve. *Stentless Bioprostheses* Academic Press
Cardiac Problems in Pregnancy offers clinicians the most

detailed and comprehensive guide to diagnosing and managing pregnancy-associated cardiovascular diseases currently available. Covering a wide spectrum of congenital and acquired cardiovascular conditions, its extensive contents examine diseases of the heart with an expert awareness of the implications of pregnancy and the attendant physiological changes it brings. Such guidance is vitally required in an age in which congenital and

acquired heart diseases are the leading causes of non-obstetrical maternal morbidity and mortality. Featuring 36 new or extensively revised chapters, this fourth edition of the book complements coverage of the latest research and clinical advances with a complete and up-to-date bibliography of literature on pregnancy in women with cardiovascular conditions. It also serves as a practical, step-by-step companion for those caring for heart disease patients during

pregnancy, labor, and the post-partum period. Contents include: Coverage of all elements of maternal cardiology Newly written chapters featuring fresh research and data Guidance on performing risk assessments and interventions both prior to and during gestation Explanations of a range of diagnostic and therapeutic approaches to cardiovascular disease in pregnant patients Drawing on expertise from across the fields of cardiovascular medicine,

obstetrics, anesthesiology, cardiac surgery, pharmacology, and clinical science, Cardiac Problems in Pregnancy is designed to give invaluable support to all medical professionals involved in maximizing the safety and success of cardiologically complex pregnancies.

The Development of a Biodegradable Scaffold for a Tissue Engineered Heart Valve Butterworth-Heinemann
Part of the Monographs in Cardiac Surgery Series - Introducing 'basic science

into the cardiac operating room'. Fast systematic review of small areas of cardiac surgery including up-to-date information. This will allow more rapid publication than the alternative cardiac surgery 'tomes'. This entry into the series will provide readers with a complete review of the current understanding in mitral valve surgery and include extensive details on the diagnosis and surgical management of patients with mitral valve disease.
Surgery for Heart Valve

Disease Elsevier Health Sciences
Heart valve surgery and valvular heart disease still pose a significant threat to patients worldwide. The aortic valve doesn't remain healthy and has largely been the focus of innovation and the development of replacement heart valves. Improving the ability of blood to flow through a prosthetic valve while minimizing the load on the heart is regarded as one of the performance objectives of prosthetic heart valves. In order to

meet valvular performance objectives and to assess whether potential prosthetic heart valves meets hydrodynamic performance, testing simulated under in vivo flow conditions is necessary. Pulse duplication is widely accepted as a valid method to determine the performance of heart valves during their development. Few specialised centres exist to perform pulse duplication tests accurately and in

accordance to the required ISO and FDA standards for cardiovascular implants. Real-time patient data of prosthetic heart valves is however not obtained with pulse duplication but with echocardiography. Modern day pulse duplicators come equipped with viewing chambers that can allow for echocardiographic measurements. Therefore, the aim of this study was to perform pulse duplication and echocardiography simultaneously on five

different prosthetic heart valves using a commercial ViVitro pulse duplicator system. METHODS A hydrodynamic evaluation was performed on five prosthetic heart valves (i) Medtronic-Hall mechanical valve (tilting disc), (ii) Carbomedics mechanical valve (bileaflet), (iii) Glycar mechanical valve (Glycar), (iv) Edwards Perimount (tissue valve), (v) ViVitro reference (ViVitro) using pulse duplication and echocardiography. All the valves were inserted in the aortic position of the

pulse duplicator and echocardiographic measurements was performed simultaneously. Each of the valves were tested at 5 different testing conditions by varying the stroke volume and beats per minute. The study concludes with a comparison between the pulse duplicator data and the echocardiography data acquired. RESULTS Pulse duplication: -The Glycar valve had the largest pressure drop across the valve at the lowest CO (3.6 L/min) of

17.15 mmHg, although it increased steadily at a slower rate than the other four valves. The Glycar and tissue valve had the highest EOA of 1.885 cm² and 1.884 cm² respectively at a peak CO of 9.6 L/min. The bi-leaflet valve had the highest EOA of 2.002 cm² (CO 3.6 L/min), however the EOA deteriorated as the CO increased resulting in an EOA of 1.572 cm² at a CO of 9.6L/min. The tissue valve had the largest RF for all testing conditions, ranging from 16.3% (CO 8.0 L/min) to 25.6% (4.9

L/min) where the bi-leaflet valve had the lowest (0.72% - 3.42%). Echocardiography: -The Glycar valve had the lowest overall pressure drop for all CO. The pulse duplicator pressure drop results were more consistent than three echocardiography results measured on the pulse duplicator. The bileaflet and Glycar valves EOA showed better consistency across the CO range than the ViVtro, tissue and tilting disk valves. The data showed that no definite

correlation between all the valves exists between echocardiography and pulse duplication for EOA. However, a correlation for pressure drop between the pulse duplicator and echocardiographic data was demonstrated for both the tissue and bi-leaflet valve.

The Aortic Valve CRC Press

This volume presents the interaction between medical and surgical cardiology, providing coverage of aspects of aortic valve disease.
Biotextiles as medical

implants Springer
The papers presented at the Fifth International Symposium on Heart Valves and published in this volume discuss clinical experience with heart valve replacement in pediatric patients, in adults (age 65 and younger), and in the elderly (age 66 and older). Special considerations in heart valve replacement, such as valve selection, reoperation, results of double valve implantation, quality of life, and the use of valved conduits are also

included. Finally, long term clinical follow-up with the ST. JUDE MEDICAL® heart valve, giving 7- and 8-year data is discussed. HEART VALVE REPLACEMENT IN PEDIATRIC PATIENTS
Anticoagulation
Anticoagulation in children is a difficult and interesting problem. Three principal considerations in the use of anticoagulants are patient education, timing, and anticoagulating substance. Additional considerations are patient tolerance and compliance.

Generally, the findings indicate, if pediatric patients receive anticoagulation following mechanical valve replacement, it is well accepted and results in few complications. If children are not anticoagulated, complications arise. Conflicting results regarding the efficacy of PERSANTINE® and the use of aspirin vs. COUMADIN® were reported. Doctor Sade's data address some of these questions. * After a 5-year study in * See J

Thorac Cardiovasc Surgery 1988; 95:533-561.
Indications for Heart Valve Replacement by Age Group
 Indications for Heart Valve Replacement by Age Group
 The four heart valves reside in the center of the heart. This indicates their crucial role in cardiac performance. Failure of function of the valves is a prerequisite for unidirectional forward movement of the blood, and such function is necessary to support the efforts of the cardiac atria and

ventricles. Healthy heart valves function gracefully and offer mechanical durability. Bioengineers have to marvel at the biomechanical evolution of these perfectly placed valves. Heart valves can be involved in pathological processes, however, and only then do we realize just how indispensable they really are. At one time, serious valve disorders used to be a matter of life and death for patients. Only in recent decades have surgeons been able to reverse the ominous

course of heart valve disease and of our patients a quality of life and life span comparable to that of healthy persons. The story of this effort began approximately 100 years ago, and today heart valve surgery is a substantial subspecialty of cardiac surgery, with accumulated experience in indications, procedures, risks, and outcomes. The aim of this book is to present a richly illustrated compendium of the present knowledge related to heart valve

surgery, based on the clinical expertise of the authors as well as the newest treatment modalities. The authors thank Dr. Alireeza Matloobi from the Mayo Clinic for his help in preparing the book. Springer Science & Business Media
Each year, over 250,000 heart valve repair and heart valve replacement operations are performed for conditions including stenosis, prolapse, insufficiency, aneurysm,

Tetralogy of Fallot and regurgitation. However, most patients and caregivers surveyed felt their expectations were mismanaged - both before and after surgery. The Patient's Guide to Heart Valve Surgery was written by Adam Pick, a double heart valve surgery patient, to address this troubling issue and prepare the patient and caregiver for the challenges and opportunities of valve surgery - from diagnosis through recovery.

Related with Mechanical Valve Vs Tissue Valve:

© [Mechanical Valve Vs Tissue Valve Ujk Parf Guide System Mark Ii](#)

© [Mechanical Valve Vs Tissue Valve Ufc Lightweight Champion History](#)

© [Mechanical Valve Vs Tissue Valve Ucsb Math Placement Test](#)