Percutaneous Mitral Valve Leaflet Repair (PMLR) offers millions of patients with mitral valve disease an opportunity to avoid surgery, possibly leading to compensation remodeling of the left ventricle. This can result in reduced functional capacity, poor quality of life, repeat hospitalizations, and even death from heart failure. Open, arrested heart

Impact of the Introduction of Percutaneous Edge-to-Edge Mitral Valve Reconstruction on Clinical Practice in Germany Compared to Surgical Mitral Valve Repair—Lutz Frankenstein 2021 Abstract: Background: The introduction of percutaneous mitral valve (MV) repair had an effect on clinical practice in comparison with surgery, to an unknown extent. Complete volume data, however, are not available. Methods: We analyzed preoperative echocardiographic imaging data in order to evaluate complications and outcomes for percutaneous procedures performed in Germany between 2009 and 2015. Results: 12,664 percutaneous edge-to-edge and 22,825 surgical MV reparations were reviewed. Operative numbers increased steadily, albeit more rapidly in the percutaneous edge-to-edge group (858,479 vs. 308,360 with surgical MV repair). Patients with percutaneous edge-to-edge MV repair were older (75.6 ± 8.8 vs 61.5 ± 13.4 years, P 0.001) and at higher operative risk (estimated logistic EuroSCORE 12.3% vs 10.2% P 0.001). However, in-hospital mortality did not differ (2.9% vs. 2.8%; P 0.05). This was also true for the subset of 2133 patients at intermediate operative risk as defined by a logistic EuroSCORE of 5%-10%. There was no significant difference in the rate of acute kidney injury were more favorable in patients undergoing percutaneous edge-to-edge reconstruction

Secondary Mitral Valve Regurgitation—Kluit Fattouch 2014-11-11 Ischemic or idiopathic mitral valve disease affects several million people worldwide. A smaller but important group consists of patients with secondary MVP, which is defined by a physiological increase in the volume of the left ventricle in response to the reduced constriction of the mitral valve. The most common causes include mitral valve prolapse, MVP due to ischemia, and left atrial myxoma. MVP can be classified according to its severity as mild, moderate, or severe, based on the size of the regurgitant orifice. Moderate to severe MVP is a well-established indication for surgical mitral valve intervention, whereas mild MVP is typically managed with medical therapy. Therefore, this group of patients lie in a grey-area and physicians looking after them cannot count on proper recommendations. The main purpose of this book is to review the most relevant knowledge about secondary MVP and its management, including anatomy, definition, classification, diagnosis and prevalence to the up-to-date surgical and medical management.

Transcatheter Valve Repair—Ziyad M. Hijazi 2015-08-28 Transcatheter Valve Repair discusses all aspects related to transcatheter mitral valve repair and replacement, with an emphasis on practical methods and evidence-based approach. This book will guide the reader in covering all four valves and other topics as well. Each section contains several chapters discussing everything related to the valve, the procedure, and the post-operative period with the patient. Chapters written by the world’s authorities, and structured in a step-by-step guide to the surgical technique employed in edge-to-edge repair today provides the basis for the edge technique for mitral repair, which was introduced into the surgical armamentarium in 1991 by one of the specialty to communicate their experience, successes, failures and complications with each other. Written by the leaders in this breakthrough field, the Atlas is anticipated to be a very valuable reference manual and to provide cardiologists with true examples of basic and complex cases of percutaneous valve repairs, as well as a guide to the pitfalls and how to use the MitraClip system. The reader will learn all aspects of percutaneous edge-to-edge repair, which is performed under Percutaneous Mitral Valve Interventions (repair): Current Indications and Future Perspectives

edge-to-edge mitral repair—from surgical to percutaneous approach

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without the disadvantages. Moreover, newer repair strategies, such as autologous pericardial leaflet augmentation and artificial chordal replacements, have been introduced for treatment of various valve pathologies, with excellent long-term results as compared to prosthetic valve replacement. At present, mitral repair is the dominant surgical option for treating mitral valve disease, and the book focuses on presenting a comprehensive overview of all the critical aspects of valve repair and 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 established mitral valve reconstruction guidelines are the main focus of the book. The book provides an up-to-date overview of surgical interventions with a focus on imaging and case-based presentation, and new chapters on cardiac MR and CT imaging for valvular heart disease. 

Valvular Heart Disease—Catherine M. Otto 2009 Valvular Heart Disease is now an even better source for all your questions and answers on the setting and importance of the heart's valves. In the third edition, Catherine M. Otto is joined by Robert Bonow and a team of expert contributors to bring you the latest developments in imaging and treatment. The full-color photographs and illustrations reflect the cutting-edge imaging and diagnostic modalities—Denis Attila Mihael si an international expert in cardiology and imaging of valvular heart disease who has written extensively on the subject. The book is designed to help you choose a course of action based on individual research findings. Now, a multidisciplinary team of international experts puts catheter-based and surgical options for mitral valve repair into perspective.

Atlas of Robotic Cardiac Surgery—R. Randolph Chitwood 2014-06-13 Robotic surgery is currently viewed as adequate materialistic necessity to facilitate daily application in cardiological and surgical practice. This book represents the compilation of more than 2500 cases and 4,000 videos collected using the da Vinci surgical system, the new standard in robotic surgery. It will define the operative pathway of each procedure, from the beginning, to end, for surgeons who wish to become a complete robotic cardiac surgeon and include lists and procedural pitfalls derived from the experiences of hundreds of robotic cardiologists. This book is written with high yielding information and surgical operations where appropriate. Leading surgeons have contributed to the book and provided sample illustrations for these recommended procedures. The book contains the details of each operation and each surgical team is included and selected references will be provided to emphasize evidence-based outcomes.

Catheter-Based Valve Repair and Aortic Surgery—Goree Allah 2014-08-28 This text provides a comprehensive, state-of-the-art resource for catheter-based and percutaneous valve repair and replacement. The scope encompasses all the current and upcoming transcatheter aortic valve technologies as well as mitral, pulmonary and tricuspid valvular disease. The book addresses the potential for minimally invasive transcatheter valve repair techniques as an alternative to surgical approaches, and the upcoming techniques designed to repair native aortic defects, traumatic injury, and ascending arch stent repair are highlighted. Catheter-Based Valve and Aortic Surgery will be a useful tool for cardiac and vascular surgeons, interventional radiologists, and clinical researchers with an interest in these exciting new developments in structural heart and vascular diseases.

Three-Dimensional Echocardiography—Thomas Buck 2009-09-09 Three-dimensional echocardiography is the most recent fundamental advancement in echocardiography. Since real-time 3D echocardiography became commercially available in 2002, it has rapidly been accepted in echo labs worldwide. This book covers all clinically relevant aspects of 3D echocardiography, including anatomy, physiology, pathophysiology, image acquisition, methods, and practical aspects of clinical application, and detailed descriptions of specific uses in the broad spectrum of clinical applications. The book also provides an extensive and comprehensive overview of the clinical utility of 3D echocardiography in the field, who have not only been involved in the scientific and clinical evolution of 3D echocardiography since its inception but are also intensively involved in expert training courses. As a result, the focus of this book is on the application of 3D echocardiography in daily clinical routine with tips and tricks for both beginners and experts, accompanied by more than 150 case examples comprehensively illustrated in more than 800 images and 300 original videos to provide an in-depth understanding of the most recent developments in real-time 3D echocardiography. This book represents an invaluable reference work for beginners and experts of 3D echocardiography.

Ventricular Image-Guided Interventions—Chick Weiss 2015-05-04 Veterinary Image-Guided Interventions is the only book dedicated to interventions guided by imaging technology. Written and edited by leading experts in the field, Veterinary Image-Guided Interventions provides a comprehensive overview of the history and background of the procedures, patient work-up, equipment lists, detailed procedural instructions, potential complications, patient follow-up protocols, and expected outcomes. Split into four major sections, the book covers both real-time echocardiography and surgical versus transcatheter interventions with excellent long-term results as compared to prosthetic valve replacement. At present, mitral repair is the dominant surgical option for treating mitral valve disease, and the book focuses on presenting a comprehensive overview of all the critical aspects of valve repair and disease.

Textbook of Interventional Cardiology—Eric Topol 2011-10-10 The 6th Edition of the indispensable Textbook of Interventional Cardiology is an essential resource and has been thoroughly updated to include the latest techniques and technology. The book includes new chapters on clinical cardiology, including cardiac MR and CT imaging for valvular heart disease to provide you with a full understand of the tools for the modern interventional cardiologist, general cardiologists, and clinicians and researchers with an interest in these exciting new developments in structural heart and vascular diseases.

Cardiovascular Interventions in Clinical Practice—Johannes Haase 2010-04-04 Until the publication of this book, there have been no comprehensive textbooks available that cover the full spectrum of sonography of the heart in one volume. This book covers all the essential aspects from normal anatomy and physiology of the heart and the great vessels to the history and background of the procedures, patient work-up, equipment lists, detailed procedural instructions, potential complications, patient follow-up protocols, and expected outcomes. Split into four major sections, the book covers both real-time echocardiography and surgical versus transcatheter interventions with excellent long-term results as compared to prosthetic valve replacement.
Elevated Mitral Valve Pressure Gradient is Predictive of Long-term Outcome After Percutaneous Edge-to-edge Mitral Valve Repair in Patients with Degenerative Mitral Regurgitation (MR), But Not in Functional MR

Jouhanna Puslitz 2019 Abstract: Background: This study analyzed the effects on long-term outcome of residual mitral regurgitation (MR) and mean mitral valve pressure gradient (MVPG) after percutaneous edge-to-edge mitral valve repair using the MitraClip system. Methods and Results: Two hundred fifty-five patients who underwent percutaneous edge-to-edge mitral valve repair were analyzed. Kaplan-Meier and Cox regression analyses were performed to evaluate the impact of residual MR and MVPG on clinical outcome. A combined clinical end point (all-cause mortality, MR surgery, redo procedures, implantation of a left ventricular assist device) was used. After percutaneous edge-to-edge mitral valve repair, mean MVPG increased from 1.4±1.0 to 3.1±1.5 mm Hg (P<0.001). Reduction of MR severity to ≤2+ postintervention was achieved in 98.4% of all patients. In the overall patient cohort, residual MR was predictive of the combined end point while elevated MVPG 4.4 mm Hg was not according to Kaplan-Meier and Cox regression analyses. We then analyzed the cohort with degenerative and that with functional MR separately to account for these different entities. In the cohort with degenerative MR, elevated MVPG was associated with increased occurrence of the primary end point, whereas this was not observed in the cohort with functional MR. Conclusions: MVPG >4.4 mm Hg after MitraClip implantation was predictive of clinical outcome in the patient cohort with degenerative MR. In the patient cohort with functional MR, MVPG >4.4 mm Hg was not associated with increased clinical events.

Mastery of Cardiothoracic Surgery
Larry Kaiser 2013-12-24 This volume in the acclaimed Mastery Series delivers clear, how-to guidance on the most commonly performed procedures in adult and pediatric thoracic surgery. As with other volumes in the series, Mastery of Cardiothoracic Surgery delivers expert commentary from master surgeons following each chapter. Invaluable for cardiothoracic fellows, as well as thoracic and cardiac surgeons.

Percutaneous Interventions for Structural Heart Disease
Bernhard Reimers 2017-05-16 This book presents the percutaneous techniques and technologies most frequently employed in structural interventional cardiology, focusing especially on how to optimize outcomes and minimize risk. Interventional procedures for aortic stenosis, mitral regurgitation, left atrial appendage closure, patent foramen ovale closure, and closure of interatrial and interventricular defects are clearly presented step by step with the aid of a wealth of images. These descriptions are complemented by a case-based analysis of the various structural pathologies and their complications. Clear guidance is also provided on patient selection, preprocedural evaluation, and choices of available devices. The authors are all acknowledged experts with extensive experience in laboratories and surgical units. The book fully reflects the rapid changes in structural interventional cardiology that have occurred during recent years. These advances are in particular due to the introduction of transcatheter aortic valve implantation, which allows cardiac surgeons to achieve excellent outcomes in patients at high surgical risk. Other exciting developments include new technologies that permit better treatment of other structural cardiac pathologies and valid alternatives to medical therapy in particular patient groups.

Practical Manual of Interventional Cardiology
Amalooraseni Kini 2021-05-27 The second edition of this essential book provides a practically applicable manual to a variety of procedures in interventional cardiology keeping up to date with the advancements in percutaneous interventions. All included chapters identify areas that have significantly developed, and feature step-by-step user guides for the latest cardiac intervention techniques for the treatment of various conditions and the use of devices. Many new topics have been discussed such as left main coronary interventions and how to use Cangrelor in patients requiring P2Y12 inhibition after surgery. New topics covered include how to select patients for transcatheter aortic valve replacement (TAVR), and appropriately apply in-stent restenosis methodologies. Practical Manual of Interventional Cardiology systematically describes the use of a range of simple and complex interventional cardiology procedures, and the challenges associated with utilizing these techniques. It is therefore ideal for use by practicing and trainee cardiologists seeking an easily accessible reference to apply in their everyday clinical practice.

Advances in Clinical Cardiovascular Imaging, Echocardiography & Interventions
HK Chopra 2019-02-28

Textbook of Three-Dimensional Echocardiography
Luigi P. Badano 2019-08-14 This thoroughly revised textbook provides a practically applicable guide to three-dimensional echocardiography (3DE). Background is provided on the evolution of the technology and physics that support the implementation of both transthoracic and transesophageal approaches to 3DE. The incremental value of 3DE to assess cardiac chambers is also described. Moreover, a range of cardiac valvular diseases including the mitral, aortic, and tricuspid valve have been portrayed and illustrated in detail. These include congenital abnormalities, regurgitation and stenosis. Emphasis is also placed on technical aspects of the technique and where it can provide added value, including post-surgery assessments and evaluation of cardiac masses. Textbook of Three-Dimensional Echocardiography enables readers to develop a deep understanding of how to use this imaging modality. It provides a valuable resource for the echocardiography trainee looking to develop their knowledge and for the experienced practitioner seeking a comprehensive up-to-date reference.

Atlas of 3D Echocardiography E-Book
Edward A. Gill 2011-08-19 Accurately identify complex geometrical distortions of cardiac anatomy using 3-D echocardiography and make more informed decisions regarding diagnosis and treatment. A highly visual, consistent, and practical format with online videos and more presents the authoritative, case-based, expert guidance you need to enhance your utilization and interpretation of this cutting-edge, dimensional diagnostic tool. Master the application of techniques to specific clinical situations with detailed case studies and discussions of challenging issues. See imaging findings as they appear in practice and discern subtle nuances with the aid of high-quality still images plus online videos. Reference the information you need quickly thanks to easy-to-follow, templated chapters, with an abundance of images and figures that facilitate visual learning. Take it with you anywhere! Access the full text, downloadable image library, videos, and more at www.expertconsult.com. Sharpen your interpretative and diagnostic skills in 3-D echo!