Perkutane edge-to-edge-Reparatur bei primärer Mitralklappeninsuffizienz

J. von Stein, S. Baldus, R. Pfister

1. Lung B et al. Contemporary presentation and management of valvular heart disease: The EURObservational research programme valvular heart disease II survey. Circulation 2019; 140(14): 1156–69
2. Deutsche Herzstiftung e.V. Mortalität und Morbidität der Herzkrankheiten – ein Überblick. In: Deutscher Herzbericht 2020. S. 38–41. (https://www.herzstiftung.de/system/files/2021-06/Deutscher-Herzbericht-2020.pdf). Zugegriffen am: 05.07.2022
3. Carpentier A. Cardiac valve surgery: The 'French correction'. J. Thorac. Cardiovasc. Surg. 1983; 86(3); 323–37
4. Dziadzko V et al. Causes and mechanisms of isolated mitral regurgitation in the community: Clinical context and outcome. Eur. Heart J. 2019; 40(27): 2194–202
5. Suri RM et al. Association between early surgical intervention vs watchful waiting and outcomes for mitral regurgitation due to flail mitral valve leaflets. JAMA - J. Am. Med. Assoc. 2013; 310(6): 609–16
6. Mauri V et al. Wachsende klinische Relevanz Epidemiologie und Diagnostik der Mitralklappeninsuuzienz Fortbildung Schwerpunkt Kardiologie. Cardiovasc 2019; 19(4): 26–9. (www.springermedizin.de/cardiovasc). Zugegriffen am: 05.07.2022
7. P. D. . Erin C. Dowd, M.D.a, Michael J. Frank, Ph.D.b, Anne Collins, Ph.D.c, James M. Goldd, and Deanna M. Barch and Kuschner, "Outcome and undertreatment of mitral regurgitation: a community cohort study," *Physiol. Behav.*176(3): 139–48
8. Chakravarty T et al. Transcatheter Edge-to-Edge Mitral Valve Repair With the MitraClip G4 System. JACC Cardiovasc. Interv. 2020; 13(20): 2402–14
9. Lim DS et al. Transcatheter Valve Repair for Patients With Mitral Regurgitation: 30-Day Results of the CLASP Study. JACC Cardiovasc. Interv. 2019; 12(14): 1369–78
10. Szerlip M et al. 2-Year Outcomes for Transcatheter Repair in Patients With Mitral Regurgitation From the CLASP Study. JACC Cardiovasc. Interv. 2021: 14(14): 1538–48
11. Gerçek M et al. PASCAL mitral valve repair system versus MitraClip: comparison of transcatheter edge-to-edge strategies in complex primary mitral regurgitation. Clin. Res. Cardiol. 2021; 110(12): 1890–9
12. Hahn RT. Transcathether Valve Replacement and Valve Repair: Review of Procedures and Intraprocedural Echocardiographic Imaging. Circ. Res. 2016; 119(2): 341–56
13. Feldman, Ted, et al. "Percutaneous repair or surgery for mitral regurgitation." *N Engl J Med* 2011; 364(15): 1395–1406
14. Feldman T et al. Randomized Comparison of Percutaneous Repair and Surgery for Mitral Regurgitation 5-Year Results of EVEREST II. J. Am. Coll. Cardiol. 2015; 66(25): 2844–54
15. Glower DD et al. Percutaneous mitral valve repair for mitral regurgitation in high-risk patients: Results of the EVEREST II study. J. Am. Coll. Cardiol. 2014; 64(2): 172–81

16. Lim DS et al. Improved functional status and quality of life in prohibitive surgical risk patients with degenerative mitral regurgitation after transcatheter mitral valve repair. J Am Coll Cardiol 2014; 64(2): 182–92

17. Maisano F et al. Percutaneous mitral valve interventions in the real world: Early and 1-year results from the ACCESS-EU, A prospective, multicenter, nonrandomized post-approval study of the Mitraclip therapy in Europe. J Am Coll Cardiol 2013; 62(12): 1052–61

18. Nickenig G et al. Percutaneous mitral valve edge-to-edge Repair: In-hospital results and 1-year follow-up of 628 patients of the 2011-2012 pilot European Sentinel Registry. J Am Coll Cardiol 2014; 64(9): 875–84

19. Baldus S et al. Mitra Clip therapy in daily clinical practice: Initial results from the German transcatheter mitral valve interventions (TRAMI) registry. Eur. J. Heart Fail 2012; 14(9): 1050–5

20. Benfari G et al. Association of transcatheter edge-to-edge repair with improved survival in older patients with severe, symptomatic degenerative mitral regurgitation. Eur Heart J 2022; 66: 1626–35

21. Vahanian A et al. 2021 ESC/EACTS Guidelines for the management of valvular heart disease. Eur Heart J 2022; 43(7): 561–632

Perkutane Verfahren zur Mitralklappenreparatur bei sekundärer Insuffizienz

D. Berliner, T. Kempf

1. Vahanian A et al. 2021 ESC/EACTS Guidelines for the management of valvular heart disease: Developed by the Task Force for the management of valvular heart disease of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS). Eur Heart J 2021; 43: 561–632

2. Bursi F et al. Heart failure and death after myocardial infarction in the community: the emerging role of mitral regurgitation. Circulation 2005; 111: 295–301

3. Stolfo D et al. Early improvement of functional mitral regurgitation in patients with idiopathic dilated cardiomyopathy. Am J Cardiol 2015; 115: 1137–43

4. Deferm S et al. Atrial Functional Mitral Regurgitation: JACC Review Topic of the Week. J Am Coll Cardiol 2019; 73: 2465–76

5. McDonagh TA et al. 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: Developed by the Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC) With the special contribution of the Heart Failure Association (HFA) of the ESC. Eur Heart J 2021; 42: 3599–726

6. Feldman T et al. Percutaneous mitral valve repair using the edge-to-edge technique: six-month results of the EVEREST Phase I Clinical Trial. J Am Coll Cardiol 2005; 46: 2134–40

7. Feldman T et al. Percutaneous repair or surgery for mitral regurgitation. N Engl J Med 2011; 364: 1395–406

8. Feldman T et al. Randomized Comparison of Percutaneous Repair and Surgery for Mitral Regurgitation: 5-Year Results of EVEREST II. J Am Coll Cardiol 2015; 66: 2844–54

9. Maisano F et al. Percutaneous mitral valve interventions in the real world: early and 1-year results from the ACCESS-EU, a prospective, multicenter, nonrandomized post-approval study of the MitraClip therapy in Europe. J Am Coll Cardiol 2013; 62: 1052–61

10. Stone GW et al. Transcatheter Mitral-Valve Repair in Patients with Heart Failure. N Engl J Med 2018; 379: 2307–18

11. Obadia JF et al. Percutaneous Repair or Medical Treatment for Secondary Mitral Regurgitation. N Engl J Med 2018; 379: 2297–306

12. Ooms JF et al. Transcatheter Repair and Replacement Technologies for Mitral Regurgitation: a European Perspective. Curr Cardiol Rep 2021; 23: 125

13. Orban M et al. Impact of Proportionality of Secondary Mitral Regurgitation on Outcome After Transcatheter Mitral Valve Repair. JACC Cardiovasc Imaging 2021; 14: 715–25

14. Leurent G et al. Delayed hospitalisation for heart failure after transcatheter repair or medical treatment for secondary mitral regurgitation: a landmark analysis of the MITRA-FR trial. EuroIntervention 2022; 18: 514–23

15. Lindenfeld J et al. Association of Effective Regurgitation Orifice Area to Left Ventricular End-Diastolic Volume Ratio With Transcatheter Mitral Valve Repair Outcomes: A Secondary Analysis of the COAPT Trial. JAMA Cardiol 2021; 6: 427–36

16. Lim DS et al. Transcatheter Valve Repair for Patients With Mitral Regurgitation: 30-Day Results of the CLASP Study. JACC Cardiovasc Interv 2019; 12: 1369–78

17. Otto CM et al. 2020 ACC/AHA Guideline for the Management of Patients With Valvular Heart Disease: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. Circulation 2021; 143: e72–e227

18. Patterson T et al. Indirect Annuloplasty to Treat Functional Mitral Regurgitation: Current Results and Future Perspectives. Front Cardiovasc Med 2019; 6: 60

19. Schofer J et al. Percutaneous mitral annuloplasty for functional mitral regurgitation: results of the CARILLON Mitral Annuloplasty Device European Union Study. Circulation 2009; 120: 326–33

20. Lipiecki J et al. Coronary sinus-based percutaneous annuloplasty as treatment for functional mitral regurgitation: the TITAN II trial. Open Heart 2016; 3: e000411

21. Witte KK et al. The REDUCE FMR Trial: A Randomized Sham-Controlled Study of Percutaneous Mitral Annuloplasty in Functional Mitral Regurgitation. JACC Heart Fail 2019; 7: 945–55

22. Baldus S et al. Interventionelle Therapie von AV-Klappenerkrankungen – Kriterien für die Zertifizierung von Mitralklappenzentren. Der Kardiologe 2020; 14: 339–63

23. Messika-Zeitoun D et al. Transcatheter mitral valve repair for functional mitral regurgitation using the Cardioband system: 1 year outcomes. Eur Heart J 2019; 40: 466–72

24. Muller DWM et al. Transcatheter Mitral Valve Replacement for Patients With Symptomatic Mitral Regurgitation: A Global Feasibility Trial. J Am Coll Cardiol 2017; 69: 381–91

25. Sorajja P et al. Initial Feasibility Study of a New Transcatheter Mitral Prosthesis: The First 100 Patients. J Am Coll Cardiol 2019; 73: 1250–60