

## DAFTAR PUSTAKA

1. Khurshid S, Choi SH, Weng L-C, Wang EY, Trinquart L, Benjamin EJ, et al. Frequency of cardiac rhythm abnormalities in a half million adults. *Circulation: Arrhythmia and Electrophysiology*. 2018;11(7):e006273.
2. Shan R, Ning Y, Ma Y, Liu S, Wu J, Fan X, et al. Prevalence and risk factors of atrioventricular block among 15 million Chinese health examination participants in 2018: a nation-wide cross-sectional study. *BMC Cardiovascular Disorders*. 2021;21:1-9.
3. Sofian Johar UP, Aamir Hameed Khan, Wataru Shimizu, Dicky A Hanafy, Seil Oh, Ching Chi Kepngmn. White book. Asia Pasific Rhytm Society. 2021:25-30.
4. Carrión-Camacho MR, Marín-León I, Molina-Doñoro JM, González-López JR. Safety of permanent pacemaker implantation: a prospective study. *Journal of clinical medicine*. 2019;8(1):35.
5. Cicchitti V, Radico F, Bianco F, Gallina S, Tonti G, De Caterina R. Heart failure due to right ventricular apical pacing: the importance of flow patterns. *Ep Europace*. 2016;18(11):1679-88.
6. Ko J, Kim NH. Prevalence and Clinical Predictors of Right Ventricular Dysfunction in Patients with Chronic Right Ventricular Pacing. *International Journal of Arrhythmia*. 2016;17(2):74-9.
7. Gupta H, Showkat HI, Aslam N, Tandon R, Wander G, Gupta S, et al. Chronology of cardiac dysfunction after permanent pacemaker implantation: an observational 2 year prospective study in North India. *International Journal of Arrhythmia*. 2021;22(1):11.
8. Sinkar K, Bachani N, Bagchi A, Jadwani J, Panicker GK, Bansal R, et al. Is the right ventricular function affected by permanent pacemaker? *Pacing and Clinical Electrophysiology*. 2021;44(5):929-35.
9. Saito M, Iannaccone A, Kaye G, Negishi K, Kosmala W, Marwick TH. Effect of right ventricular pacing on right ventricular mechanics and tricuspid regurgitation in patients with high-grade atrioventricular block and sinus rhythm (from the protection of left ventricular function during right ventricular pacing study). *The American Journal of Cardiology*. 2015;116(12):1875-82.

10. Yu Y-J, Chen Y, Lau C-P, Liu Y-X, Wu M-Z, Chen Y-Y, et al. Nonapical right ventricular pacing is associated with less tricuspid valve interference and long-term Progress of tricuspid regurgitation. *Journal of the American Society of Echocardiography*. 2020;33(11):1375-83.
11. Zaidi A, Knight DS, Augustine DX, Harkness A, Oxborough D, Pearce K, et al. Echocardiographic assessment of the right heart in adults: a practical guideline from the British Society of Echocardiography. *Echo Research and Practice*. 2020;7(1):G19-G41.
12. Fabiani I, Pugliese NR, Santini V, Conte L, Di Bello V. Speckle-tracking imaging, principles and clinical applications: A review for clinical cardiologists. *Echocardiography in Heart Failure and Cardiac Electrophysiology*. 2016:85-114.
13. Ji M, Wu W, He L, Gao L, Zhang Y, Lin Y, et al. Right Ventricular Longitudinal Strain in Patients with Heart Failure. *Diagnostics*. 2022;12(2):445.
14. Hoit BD. Right ventricular strain comes of age. *Am Heart Assoc*; 2018. p. e008382.
15. Bhattacharyya S, Munshi NV. Development of the cardiac conduction system. *Cold Spring Harbor perspectives in biology*. 2020;12(12):a037408.
16. Mohan R, Boukens BJ, Christoffels VM. Lineages of the cardiac conduction system. *Journal of Cardiovascular Development and Disease*. 2017;4(2):5.
17. Feher JJ. *Quantitative human physiology: an introduction*: Academic press; 2017.
18. Lilly LS. *Pathophysiology of heart disease: a collaborative project of medical students and faculty*: Lippincott Williams & Wilkins; 2012.
19. Kusumoto FM, Schoenfeld MH, Barrett C, Edgerton JR, Ellenbogen KA, Gold MR, et al. 2018 ACC/AHA/HRS guideline on the evaluation and management of patients with bradycardia and cardiac conduction delay: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Journal of the American College of Cardiology*. 2019;74(7):e51-e156.

20. Sidhu S, Marine JE. Evaluating and managing bradycardia. *Trends in cardiovascular medicine*. 2020;30(5):265-72.
21. Hanafy DA, Yuniadi Y, Raharjo SB, Tondas AE, Rahadian A, Yamin M, et al. Pedoman Terapi Memakai Alat Elektronik Kardiovaskular Implan (Aleka) Perhimpunan Dokter Spesialis Kardiovaskular Indonesia 2014. *Indonesian Journal of Cardiology*. 2014:171-245.
22. Glikson M, Nielsen JC, Kronborg MB, Michowitz Y, Auricchio A, Barbash IM, et al. 2021 ESC Guidelines on cardiac pacing and cardiac resynchronization therapy: Developed by the Task Force on cardiac pacing and cardiac resynchronization therapy of the European Society of Cardiology (ESC) With the special contribution of the European Heart Rhythm Association (EHRA). *EP Europace*. 2022;24(1):71-164.
23. Davies A. Permanent pacemakers: An overview. *British Journal of Cardiac Nursing*. 2009;4(6):261-9.
24. Hurst JW, Walsh RA, Fuster V, Fang JC. *Hurst's the heart manual of cardiology*: McGraw-Hill; 2013.
25. Nakamura H, Mine T, Kanemori T, Ohyanagi M, Masuyama T. Effect of right ventricular pacing site on QRS width. *Asian Cardiovascular and Thoracic Annals*. 2011;19(5):339-45.
26. Keene D, Shun-Shin M, Arnold A, Whinnett Z. Pacing supplement: his-bundle pacing—UK experience and HOPE for the future. *Br J Cardiol*. 2018;25:25-9.
27. Iqbal M, Endamatriza GR, Lampita I, Hendrawansyah S, Laksono S, Hasan M, et al. The Influence of Right Ventricular Pacing Location, Pacing Burden and Paced QRS Duration to Subclinical Left Ventricular Systolic Dysfunction as Shown by Global Longitudinal Strain Echocardiography. *Acta Medica Indonesiana*. 2021;53(3):245-53.
28. Spartalis M, Tzatzaki E, Spartalis E, Damaskos C, Athanasiou A, Livanis E, et al. Pathophysiology and Current Evidence for Detection of Dyssynchrony. *Cardiology Research*. 2017;8(5):179.
29. Sweeney MO, Prinzen FW. Ventricular pump function and pacing: physiological and clinical integration. *Circulation: Arrhythmia and Electrophysiology*. 2008;1(2):127-39.

30. Ferrari A, Bartholomay E, Velho F. Atrioventricular dyssynchrony in patients with permanent pacemaker due to sinus node dysfunction and first-degree atrioventricular block: does the long PR syndrome exist. *J Cardiol Curr Res*. 2022;15(5):124-31.
31. Soliman A, Fareed W, Katta A, Yaseen R. The Pacing Effects on Myocardial Mechanics of the Right Ventricle Using Two-Dimensional Strain Imaging. *World Journal of Cardiovascular Diseases*. 2020;10(05):247.
32. D'Andrea A, Caso P, Galderisi M, Ducceschi V, Scherillo M, Sarubbi B, et al. Ventricular interdependence in patients with dual-chamber pacing: A Doppler tissue imaging study. *Echocardiography*. 2002;19(4):289-97.
33. Bouali Y, Donal E. Ventricular Interdependence and Biventricular Failure: Key Concept for Heart Failure Management. *Romanian Journal of Cardiology*. 2021;31(2):234-57.
34. Naeije R, Badagliacca R. The overloaded right heart and ventricular interdependence. *Cardiovascular research*. 2017;113(12):1474-85.
35. Chiramel S, Gupta PN, Viswanathan S, Koshy A, Radhakrishnan V. CHANGES IN RIGHT VENTRICULAR STRAIN ECHOCARDIOGRAPHY IN PACED PATIENTS. *Journal of the American College of Cardiology*. 2020;75(11\_Supplement\_1):1822-.
36. Iqbal M, Santosa Putra IC, Bunawan R, Goenawan H, Akbar MR, Kartasasmita AS, et al. The soluble suppression of tumorigenicity 2 as a biomarker of early cardiac remodeling in bradycardia patients receiving permanent pacemaker therapy. *Future Science OA*. 2023;9(1):FSO831.
37. Kaye GC, Linker NJ, Marwick TH, Pollock L, Graham L, Pouliot E, et al. Effect of right ventricular pacing lead site on left ventricular function in patients with high-grade atrioventricular block: results of the Protect-Pace study. *European heart journal*. 2015;36(14):856-62.
38. Konstam MA, Kiernan MS, Bernstein D, Bozkurt B, Jacob M, Kapur NK, et al. Evaluation and management of right-sided heart failure: a scientific statement from the American Heart Association. *Circulation*. 2018;137(20):e578-e622.

39. Gavaghan C. Pacemaker Induced Cardiomyopathy: An Overview of Current Literature. *Current Cardiology Reviews*. 2022;18(3).
40. Porapakkham P, Porapakkham P, Assavahanrit J, Kijsanayotin B, Shing KW. Impact of right ventricular pacing on right ventricular function. *J Med Assoc Thai*. 2012;2013(Suppl 8):S44-50.
41. Rudski LG, Lai WW, Afilalo J, Hua L, Handschumacher MD, Chandrasekaran K, et al. Guidelines for the echocardiographic assessment of the right heart in adults: a report from the American Society of Echocardiography: endorsed by the European Association of Echocardiography, a registered branch of the European Society of Cardiology, and the Canadian Society of Echocardiography. *Journal of the American society of echocardiography*. 2010;23(7):685-713.
42. Haque T. Myocardial strain imaging using two and three-dimensional speckle tracking echocardiography: clinical applications. *Cardiovascular Journal*. 2019;11(2):167-82.
43. Purwowiyoto SL. Aplikasi Klinis Ekokardiografi Dua Dimensi Speckle Tracking pada Pasien Gagal Jantung. *Jurnal Kedokteran YARSI*. 2017;25(1):052-67.
44. Kocabay G, Muraru D, Peluso D, Cucchini U, Mihaila S, Padayattil-Jose S, et al. Normal left ventricular mechanics by two-dimensional speckle-tracking echocardiography. Reference values in healthy adults. *Revista Española de Cardiología (English Edition)*. 2014;67(8):651-8.
45. Morris DA, Krisper M, Nakatani S, Köhncke C, Otsuji Y, Belyavskiy E, et al. Normal range and usefulness of right ventricular systolic strain to detect subtle right ventricular systolic abnormalities in patients with heart failure: a multicentre study. *European Heart Journal-Cardiovascular Imaging*. 2017;18(2):212-23.
46. Di Salvo G, Pergola V, Fadel B, Al Bulbul Z, Caso P. Strain echocardiography and myocardial mechanics: from basics to clinical applications. *Journal of cardiovascular echography*. 2015;25(1):1.
47. Lee J-H, Park J-H. Strain analysis of the right ventricle using two-dimensional echocardiography. *Journal of cardiovascular imaging*. 2018;26(3):111-24.

48. Sugimoto T, Dulgheru R, Bernard A, Ilardi F, Contu L, Addetia K, et al. Echocardiographic reference ranges for normal left ventricular 2D strain: results from the EACVI NORRE study. *European Heart Journal-Cardiovascular Imaging*. 2017;18(8):833-40.
49. Zou C, Song J, Li H, Huang X, Liu Y, Zhao C, et al. Right ventricular outflow tract septal pacing is superior to right ventricular apical pacing. *Journal of the American Heart Association*. 2015;4(4):e001777.
50. Xu H, Xie X, Li J, Zhang Y, Xu C, Yang J. Early right ventricular apical pacing-induced gene expression alterations are associated with deterioration of left ventricular systolic function. *Disease markers*. 2017;2017.
51. Zhuang L, Mao Y, Wu L, Niu W, Chen K. Effects of right ventricular septum or His-bundle pacing versus right ventricular apical pacing on cardiac function: a systematic review and meta-analysis of randomized controlled trials. *Journal of International Medical Research*. 2018;46(9):3848-60.
52. Keene D, Shun-Shin MJ, Arnold AD, March K, Qureshi N, Ng FS, et al. Within-patient comparison of His-bundle pacing, right ventricular pacing, and right ventricular pacing avoidance algorithms in patients with PR prolongation: Acute hemodynamic study. *Journal of Cardiovascular Electrophysiology*. 2020;31(11):2964-74.
53. Zungsontiporn N, Wu R. Can His bundle pacing prevent right ventricular pacing-induced cardiomyopathy, heart failure, or death? *Journal of Thoracic Disease*. 2018;10(Suppl 26):S3192.
54. Yang Y, Bo G, Yuan L, Tian-Tian X, Zhang S-S, Xiao-Li L, et al. His bundle pacing versus left bundle branch pacing on ventricular function in atrial fibrillation patients referred for pacing: a prospective crossover comparison. *Journal of Geriatric Cardiology: JGC*. 2023;20(1):51.
55. Teima SM, Bedier AI, Eladawy AH, Maaty ARA, Singh J, Mahfouz EME. Assessment of left ventricular dyssynchrony after permanent cardiac pacing by using two dimensional speckle tracking echocardiography. *World Heart Journal*. 2020;12(1):41-50.
56. Dawood M, Elsharkawy E, Abdel-Hay MA, Nawar M. Effects of cardiac pacemakers on left ventricular volumes and function assessed by 3D

- echocardiography, Doppler method, and global longitudinal strain. *The Egyptian Heart Journal*. 2021;73(1):1-11.
57. Damy T, Ghio S, Rigby AS, Hittinger L, Jacobs S, Leyva F, et al. Interplay between right ventricular function and cardiac resynchronization therapy: an analysis of the CARE-HF trial (Cardiac Resynchronization–Heart Failure). *Journal of the American College of Cardiology*. 2013;61(21):2153-60.
58. Ahmed A, Sahu AK, Goel PK. Comparing long-term effect of right ventricular septal versus apical pacing on left ventricular function. *Journal of Indian College of Cardiology*. 2020;10(3):116-20.
59. Piepoli MF, Hoes AW, Agewall S, Albus C, Brotons C, Catapano AL, et al. European Guidelines on cardiovascular disease prevention in clinical practice. *European Heart Journal*. 2016;37:2315-81.
60. Soelistijo SA, Novida H, Rudijanto A, Soewondo P, Suastika K, Manaf A, et al. *Konsensus Pengelolaan dan Pencegahan Diabetes Melitus Tipe 2 di Indonesia*. PB PERKENI. 2015.
61. Kurl S, Mäkikallio TH, Rautaharju P, Kiviniemi V, Laukkanen JA. Duration of QRS complex in resting electrocardiogram is a predictor of sudden cardiac death in men. *Circulation*. 2012;125(21):2588-94.
62. Lang RM, Badano LP, Mor-Avi V, Afilalo J, Armstrong A, Ernande L, et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. *European Heart Journal-Cardiovascular Imaging*. 2015;16(3):233-71.
63. Chen R-H, Chen K-P, Hua W, Xu J, Chen L, Su Y-G, et al. The gender difference of utilization of cardiac implantable electronic device in China: data from Arrhythmia Interventional Therapy Data Registry. *Journal of Geriatric Cardiology: JGC*. 2018;15(4):310.
64. Vijayarajan V, Kritharides L, Brieger D, Cheng Y-Y, Chow V, Ng ACC. Sex differences in rates of permanent pacemaker implantation and in-hospital complications: A statewide cohort study of over 7 million persons from 2009–2018. *Plos one*. 2022;17(8):e0272305.

65. Vogler J, Breithardt G, Eckardt L. Bradyarrhythmias and conduction blocks. *Revista Española de Cardiología (English Edition)*. 2012;65(7):656-67.
66. Sharifi Kia D, Shen Y, Bachman TN, Goncharova EA, Kim K, Simon MA. The effects of healthy aging on right ventricular structure and biomechanical properties: A pilot study. *Frontiers in Medicine*. 2022;8:751338.
67. Benetos A, Petrovic M, Strandberg T. Hypertension management in older and frail older patients. *Circulation Research*. 2019;124(7):1045-60.
68. Varvarousis D, Kallistratos M, Poulimenos L, Triantafyllis A, Tsinivizov P, Giannakopoulos A, et al. Cardiac arrhythmias in arterial hypertension. *The Journal of Clinical Hypertension*. 2020;22(8):1371-8.
69. Groeneveldt JA, de Man FS, Westerhof BE. The right treatment for the right ventricle. *Current opinion in pulmonary medicine*. 2019;25(5):410.
70. Chan N-Y, Kwong N-P, Cheong A-P. Venous access and long-term pacemaker lead failure: comparing contrast-guided axillary vein puncture with subclavian puncture and cephalic cutdown. *EP Europace*. 2017;19(7):1193-7.
71. Badano LP, Muraru D. Subclinical right ventricular dysfunction by strain analysis: refining the targets of echocardiographic imaging in systemic sclerosis. *Am Heart Assoc*; 2016. p. e005009.
72. Chen JY, Tsai WC, Liu YW, Li WH, Li YH, Tsai LM, et al. Long-Term Effect of Septal or Apical Pacing on Left and Right Ventricular Function after Permanent Pacemaker Implantation. *Echocardiography*. 2013;30(7):812-9.

