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and abdominal aortic/jugular test, also known as abdominal/jugular reflux (AJR), is a physical exam test useful in diagnosing the dysfunction of the right ventricle, particularly the right ventricular insufficiency. The reflux in this context means the reverse course of the circulatory system and should not be confused with reflex. The procedure of the patient is asked to lie down at 30 degrees with a tilt of the head at 45 degrees to the left. The oblique light is then used to illuminate the jugular area of the neck to help determining the inner jugular vein. It is necessary to take care not to confuse it with its vision in the upper part of the neck and skull. The doctor presses tightly either on the right upper quadrant of the abdomen (i.e. above the liver) or on the center of the abdomen for 10 seconds with pressure of 20 to 35 mm Hg. St., observing the swelling of the inner jugular vein in the neck, as well as watching to make sure that the patient is not performing the Valsalva maneuver. On an otherwise healthy person, jugular venous pressure remains constant or temporarily rises to a heartbeat or two before returning to normal. This negative result will indicate the absence of swelling of the jugular vein. adominojugular reflux Budd-Kiari syndrome. A positive result is differently defined as a sustained increase in JVP by at least 3 cm or more, or a drop of 4 cm or more after the expert releases the pressure. According to AJR, sensitivity is between 24% and 72% and specificity from 93% to 96%. The large discrepancy in sensitivity can be explained by the higher value reported while working in optimal cardiac laboratory conditions, while the lower value was from the study in the emergency room. Inquiries: b Wiese, J. (July 2000). Abdominojugular test: technique and hemodynamic correlates. Annals of Internal Medicine. 100 (4): 456-60. doi:10.7326/0003-4819-100-4-456. PMID 10936479. b a c d Ewy G (1988). Abdominojugular test: technique and hemodynamic correlates. Annals of Internal Medicine. 108 (6): 456-60. doi:10.7326/0003-4819-108-6-456. PMID 3415106. Elsvier, Dorland Medical Dictionary Illustrated, Elsevier, a b Cook D, Simel D (1996). Rational clinical examination. Does this patient have abnormal central venous pressure?. Jama. 275 (8): 630-4. doi:10.1001/jama.1996.03530320054034. PMID 8594245. Marantz, Kaplan M., Alderman M (1990). Clinical diagnosis of congestive heart failure in patients with acute shortness of breath. Breast. 97 (4): 776-81. doi:10.1378/chest.97.4.776. PMID 2182296. Extracted from (Skip to Content) This website uses cookies. By continuing to use this website, you consent to the use of cookies. For information about cookies and how to disable them, visit our privacy and cookie policy. I got it, thank you! Ho KK, Pinsky JL, Cannell WB, Levi D. Epidemiology of Heart Failure: Framingham Study. J Am Coll Cardiol. 1993 Oct 22 (4 suppl A):6A-13A. (Medline). (Full text). American Heart Association. Heart failure classes. Available by . Updated: May 8, 2017; Access: June 18, 2017 (Guide) Yancy CW, Jessup M, Bozkurt B, et al. American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. 2013 ACCF/AHA Guide to Heart Failure Management: Report by the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013 Oct 15. 128(16):e240-327. (Medline). (Full text). (Guide) Ponikowski P, Voors AA, Anker SD, et al., for authors/task force members. ESC 2016 Guidelines for the Diagnosis and Treatment of Acute and Chronic Heart Failure: Task Force on Acute Diagnosis and Treatment and heart failure of the European Society of Cardiology (ESC). Developed with a special contribution from the Heart Failure Association (HFA) ESC. Eur Heart J. 2016 July 14. 37 37 (Medline). (Full text). (Guide) Lindenfeld J, Albert N.M., Boehmer JP, et al., for the Society of Heart Failure of America. HFSA 2010 Comprehensive Heart Failure Practice Guide. J Cards Fail. 2010 June 16 (6):e1-194. (Medline). (Full text). Stiles S. THE FDA approves a heart sympathetic activity imaging agent to evaluate HF. Medscape News from WebMD. March 22, 2013. Available by . Access: April 5, 2013 Brownwald E. Pathogenes congested heart failure: then and now. Medicine. 1991 January 70 (1):68-79. (Full text). Brownwald E, Ross J Jr., Sonnenblick EH. Mechanisms of normal compression and heart failure. 2nd Ed. Boston: Little Brown and Co.; 1976. Grayson CR. The pathophysiology of the right ventricle of failure. Crete Care Med. 2008 January 30 (1 suppl):S57-65. (Medline). Haddad F, Doyle R, Murphy DJ, Hunt SA. The function of the right ventricle in cardiovascular diseases. Part II: pathophysiology, clinical significance and management of the right ventricular insufficiency. Circulation. 2008 Apr 1. 117 (13):1717-31. (Medline). Onwunyi A, Taylor M. Acute decompensated heart failure: pathophysiology and treatment. Am J Cardiol. 2007 March 26. 99 (6B):25D-30D. (Medline). Ross J Jr., Brownwald E. Research on Starling Heart Law. IX. Consequences that encroach on the venous recoil from a normal and unperfused left ventricle. Circulation. 1964 November 30. 719-27. (Medline). (Full text). Georgiade M, Pan PS. Acute heart failure syndromes. J Am Coll Cardiol. 2009 Feb 17. 53 (7):557-73. (Medline). Kajstura J, Leri A, Finato N, Di Loreto C, Beltram CA, Anversa P. Myocyte proliferation at the end of the stage of heart failure in humans. Proc Natl Acad Sci U S. A. 1998 July 21. 95 (15):8801-5. (Medline). (Full text). Con JN. Structural basis of heart failure. Ventricular remodeling and its pharmacological inhibition. Circulation. 1995 May 15. 91 (10):2504-7. (Medline). Cody RJ. Hormonal changes in heart failure. In: Hosenpud JB, Greenberg BH, eds. Congestive heart failure: Pathophysiology, Diagnostics and a comprehensive approach to management. Philadelphia: PA: Lippincott Williams and Wilkins; 2000. 199-212. Anversa, Nadal-Gibard B. Miocyt upgrade and ventricular remodeling. Nature. 2002 Jan 10. 415 (6868):240-3. (Medline). Leri A, Claudio PP, Lee Key et al. Stretching indirectly release angiotensin II causes myocytes apoptosis by activating p53, which enhances the local renin-angiotensin system and reduces the ratio of Bcl-2-to-Bax protein in the cell. J Wedge Invest. 1998 Apr 1. 101 (7):1326-42. (Medline). (Full text). Kajstura J, Leri A, Castaldo C, Nadal-Giné B, Anversa. Myocyte growth in the absence of heart. Surgut Wedge North Am. 2004 February 84 (1):161-77. (Medline). Henes J. Systolic heart failure: diagnosis and therapy. Curr Opin Anesthesia. 2016 February 29 (1):55-60. (Medline). Nikoara A, Jones-Heywood M. Diastolic Heart Heart diagnosis and therapy. Curr Opin Anesthesia. 2016 February 29 (1):61-7. (Medline). Feldman AM, Combs A, Wagner D, et al. Role factor necrosis tumor in pathophysiology of heart failure. J Am Coll Cardiol. 2000 March 1. 35 (3):537-44. (Medline). Gary R., Davis L. Diastolic Heart Failure. Heart lung. 2008 November-December. 37 (6):405-16. (Medline). Morris DA, Gailani M, Vaz Perez A, et al. Right ventricular myocardial systolic and diastolic dysfunction in heart failure with normal left ventricular ejection fraction. J Am Soc Echocardiogr. 2011 Aug 24 (8):886-97. (Medline). Jousilahti P, Harald K, Jula A, et al, for the National Institute of Health and Social Security-THL - Helsinki - Finland. Salt intake and risk of heart failure (abstract 1192). Presented at the Congress of the European Society of Cardiology 2017; August 27, 2017; Barcelona, Spain. Eur Heart J. Aug 2017. 38 (suppl 1):240. (Full text). Davenport L. High salt intake is associated with an increased risk of heart failure. Medscape News from WebMD. August 28, 2017. Available by . Access: September 1, 2017 Lam CS, Lyass A, Krayer-Krainer E, et al. Cardiac Dysfunction and Noncardiac Dysfunction as precursors of heart failure with a reduced and preserved ejection fraction in the community. Circulation. 2011 July 15. 124 (1):24-30. (Medline). Ho KK, Anderson KM, Cannell WB, Grossman W, Levi D. Survival after the onset of congestive heart failure in the Framingham Heart Study subjects. Circulation. 1993 July 88 (1):107-15. (Medline). Halley CM, Houghtaling PL, Khalil MK, Thomas JD, Jaber WA. Mortality in patients with diastolic dysfunction and normal systolic function. Arch Intern Med. 2011 June 27. 171 (12):1082-7. (Medline). Murphy RT, Starling RC. Genetics and cardiomyopathy: where are we now? Clive Wedge J Med. 2005 June 72 (6):465-6, 469-70, 472-3 passim. (Medline). Benjamin EJ, Blahla MJ, Chiave SE, et al., for the American Heart Association Statistical Committee and Subcommittee on Stroke Statistics. Statistics of Heart Disease and Stroke-2017 Update: Report by the American Heart Association. Circulation. 2017 March 7. 135 (10):e146-e603. (Medline). (Full text). Ni H, Syu J. The latest trends in heart failure-related deaths: U.S., 2000-2014. Centers for Disease Control and Prevention. December 31, 2015. Available by . Access: January 5, 2016 Brauser D. CDC: The death rate associated with heart failure rises after a decade-long decline. Heart wire from Medscape. January 4, 2016. Available by . Available: January 5, 2016 Chen J, Normand SL, Wang Y, Krumholz HM. National and trends in hospitalization of heart failure and mortality of Medicare beneficiaries, 1998-2008. Jama. 2011 Oct 19. 306 (15):1669-78. (Medline). Kotte D, Abbott JD, Aronow HD. Interventional therapy for failures in the elderly. Heart Fail Wedge. 2017 July 13 (3):535-70. (Medline). Dharmarajan K., Rich MW. Epidemiology, pathophysiology and prognosis of heart failure in the elderly. Heart Fail Wedge. 2017 July 13 (3):417-26. (Medline). Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. N Engl J Med. 2009 April 2. 360 (14):1418-28. (Medline). Stuart S, Wilkinson D, Hansen C, et al. Prevalence of Heart Failure in the Soweto Heart Study cohort: Emerging Problems for Urban African Communities. Circulation. 2008 Dec 2. 118 (23):2360-7. (Medline). Damasceno A, Cotter G, Dzudie A, Siliva K, Mayosi BM. Heart failure in sub-Saharan Africa: time for action. J Am Coll Cardiol. 2007 Oct 23. 50 (17):1688-93. (Medline). Mbewo A, Mbanya JC. Cardiovascular disease. In: Jamison DT, Feachem RG, McGoba MW, et al, eds. Diseases and mortality in sub-Saharan Africa. 2nd o. Washington, D.C.: World Bank Publications; 2006. 305-28. Dries DL, Exner DV, Domanski MJ, Greenberg B, Stevenson LW. Predictive effects of renal failure in asymptomatic and symptomatic patients with left ventricular systolic dysfunction. J Am Coll Cardiol. 2000, March 1. 35 (3):681-9. (Medline). Fonarow GC, Adams KF Jr., Abraham WT, Yancey CW, Boscardin WJ, ADHERE Scientific Advisory Committee, et al. Stratification Risk for Inpatient Mortality in Acutely Decompensated Heart Failure: Classification and Regression Analysis of Trees. Jama. 2005 Feb 2. 293 (5):572-80. (Medline). Levi D, Kenchaiah S, Larson MG, et al. Long-term trends in morbidity and survival with heart failure. N Engl J Med. 2002 Oct 31. 347 (18):1397-402. (Medline). Lucas C, Johnson W, Hamilton MA, et al. Freedom from congestion predicts good survival despite symptoms of heart failure of the previous Class IV. Am Heart J. 2000 December 140 (6):840-7. (Medline). McIntyre K, Capewell S, Stuart S, et al. Evidence of improved prognosis of heart failure: trends in fatalities in 66,547 patients hospitalized between 1986 and 1995. Circulation. 2000 September 5. 102 (10):1126-31. (Medline). Ketchum ES, Levi WC. Setting a prognosis for heart failure: a multi-marker approach. Prog Cardiowk Dis. 2011 Sep-Oct. 54 (2):86-96. (Medline). Van Dijen S, Bacal JA, McAllister FA, Ilezkowitz JA. Mortality and readmission of patients with heart failure, atrial fibrillation or coronary heart disease who underwent non-cardiac surgery: analysis of 38,047 patients. Circulation. 2011 July 19. 124 (3):289-96. (Medline). Bursi F, McNallan SM, Redfield MM, et al. Lung Pressure and Death in Heart Failure: Community Study. J Am Coll Cardiol. 2012 Jan 17. 59 (3):222-31. (Full text). Ho Jay, Liu Xi, Liasse A and others Galekint-3, a marker of cardiac fibrosis, predicts a case of heart failure in society. J Am Coll Cardiol. 2012 Oct 2. 60 (14):1249-56. (Medline). Dunley S, Evelit Shah ND, McNeilan SM, Roger VL. Commitment to medication among patients with heart failure. Mayo Wedge Proc. 2011 April 86 (4):273-81. (Medline). DeWal DA, Shillingford R, Duo B, et al. Multi-site randomized trial of a single session compared to multi-session literacy sensitive self-care interventions for patients with heart failure. Circulation. 2012 June 12. 125 (23):2854-62. (Medline). Lainscak M, Cleland JG, Lenzen MJ, Follath F, Komajda M, Swedberg K. International differences in treatment and co-occurrence of left ventricular systolic dysfunction: data from the EuroHeart Rejection Survey. Eur J Heart Fail. 2007 March 9 (3):292-9. (Medline). Panjarrat G, Ahmed A. Diagnosis and management of heart failure in the elderly. Heart Fail Wedge. 2017 Jul. 13 (3):427-44. (Medline). Stevenson LW, Perloff JK. Limited reliability of physical signs to assess hemodynamics in chronic heart failure. Jama. 1989 Feb 10. 261 (6):884-8. (Medline). Steinhardt B, Thorpe KE, Bayoumi AM, Mo G, Januzzi JL Jr., Mazer CD. Improving the diagnosis of acute heart failure with a proven forecasting model. J Am Coll Cardiol. 2009 Oct 13. 54 (16):1515-21. (Medline). (Guide) Yancy CW, Jessup M, Bozkurt B, et al. 2017 ACCF/AHA/HFSA Targeted Update 2013 ACCF/AHA Heart Failure Management Guide: Report by the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and Heart Failure Society of America. Circulation. 2017 Aug 8. 136 (8):e137-e161. (Medline). (Full text). Rich MW, McSherry F, Williford WO, Yusuf S, for Digitalis Investigation Group. Effect of age on mortality, hospitalization and reaction to digoxin in patients with heart failure: DIG study. J Am Coll Cardiol. 2001 Sep. 38 (3):806-13. (Medline). (Guide) Yancey CW, Jessup M, Bozkurt B, et al., for members of the Writing Committee. 2016 ACC/AHA/HFSA focused updates on new pharmacological heart failure therapy: update of the 2013 ACCF/AHA Heart Failure Management Guide: A report by the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Society of Heart Failure of America. Circulation. 2016, September 27. 134 (13):e282-93. (Medline). (Full text). Badve SV, Roberts MA, Hawley CM, et al. Effects of beta-adrenergic antagonists in patients with chronic kidney disease: systematic review and meta-analysis. J Am Coll Cardiol. 2011 September 6. 58 (11):1152-61. (Medline). Maisel AS, Krishnaswamy P, Novak RM, et al, for breathing is not properly multinational investigators study. Rapid measurement of natriuretic type B peptide in case of emergency heart failure. N Engl J Med. 2002 July 18. 347 (3):161-7. (Medline). Januzzi JL Jr., Camargo CA, Anwarwalla S, et al. N-terminal pro-BNP investigation into shortness of breath in the emergency department (PRIDE) study. Research. J Cardiol. 2005 April 15. 95 (8):948-56. (Medline). Van CS, Fitzgerald JM, Schulzer M, Mack E, Ayas NT. Does this dyspneic patient have congestive heart failure in the emergency room? Jama. 2005 Oct 19. 295 (15):1944-56. (Medline). Maisel AS, McCord J, Novak RM, et al, for breathing is not properly multinational investigators investigation. Bedside B-Type natriuretic peptide in an extra diagnosis of heart failure with a reduced or saved emission fraction. The results of breathing are not correct multinational research. J Am Coll Cardiol. 2003 June 4. 41 (11):2010-7. (Medline). Januzzi JL, van Kimmenade R, Lainchbury J, et al. NT-proBNP testing for diagnosis and short-term acute prognosis destabilized heart failure: international collaborative analysis of 1,256 patients: International collaboration of NT-proBNP study. Eur Heart J. 2006 February 27 (3):330-7. (Medline). Maeda K, Tsutamoto T, Wada A, Hisanaga T, Kinoshita M. Plasma natriuretic peptide as a biochemical marker of high left ventricle of final diastolic pressure in patients with symptomatic dysfunction of the left ventricle. Am Heart J. 1998 May. 135 (5 Pt 1):825-32. (Medline). Fisher C, Berry C, Blue L, Morton JJ, McMurray J. N-terminal pro B-type natriuretic peptide, but not the new active heart hormone relaxin, predicts prognosis in patients with chronic heart failure. Heart. 2003 August 9. 89 (8):879-81. (Medline). (Full text). Hall C, Rufo JL, My L, et al. N-terminal natriuretic factor. Independent predictor of long-term prognosis after myocardial infarction. Circulation. 1994 May. 89 (5):1934-42. (Medline). Andersson B, Hall C. N-terminal proatrial natriuretic peptide and prognosis in patients with heart failure and preserved systolic function. J Cards Fail. 2000 September 6 (3):208-13. (Medline). Chen HH, Burnett JC. Natriuretic peptides in pathophysiology of congestive heart failure. Am J Cardiol. 2001 February 37 (2):386-91. (Medline). Cowie MR, Struthers AD, Wood DA, et al. Value of natriuretic peptides when evaluating patients with possible new heart failure in primary care. Lancet. 1997 November 8. 350 (9088):1349-53. (Medline). Tao Kew, Krishnaswami, Kazanegara R, et al. Usefulness of natriuretic peptide type B in the diagnosis of congestive heart failure in emergency rooms. J Am Coll Cardiol. 2001 February 37 (2):379-85. (Medline). Maeda K, Tsutamoto T, Wada A, Hisanaga T, Kinoshita M. Plasma peptide as a biochemical marker of the high left ventricle of the final diastolic pressure in patients with symptomatic dysfunction of the left ventricle. Am Heart J. 1998 May. 135 (5 pt 1):825-32. (Medline). Maisel AS, Kun J, Hope J, et al. Fast Fast the test for the brain's natriuretic peptide accurately predicts cardiac function in patients on whom echocardiography is directed. Am Heart J. 2001. 141:374-9. Masson S, Vago T, Baldi G, et al. Comparative dimension of N-terminal pro-brain natriuretic peptide and natriuretic brain peptide in outpatient patients with heart failure. Wedge Lab Med. 2002 Aug 40 (8):761-3. (Medline). Song BG, Jeong ES, Kim YH, et al. Correlation between levels of N-terminal pro-B-type natriuretic peptide and degree of heart failure. Korean J Intern Med. 2005 March 20 (1):26-32. (Medline). Hobbs FD, Davis RC, Roaf AK, Hare R, Davis MK, Kenkre JE. Reliability of N-terminal pro-brain natriuretic peptide analysis in the diagnosis of heart failure: a cohort study in representative and high-risk community populations. BMJ. 2002 June 22. 324 (7352):1498. (Medline). Redfield MM, Rodeheffer RJ, Jacobsen SJ, Mahoney DW, Bailey KR, Burnett JC Jr. Plasma concentration of natriuretic peptide: the effect of age and gender. J Am Coll Cardiol. 2002, September 4. 40 (5):976-82. (Medline). Sp St. Peter, Hartley GG, Murakami MM, Apple FS. B-type natriuretic peptide (BNP) and N-terminal pro-BNP in obese patients without heart failure: ratio to body mass index and gastric bypass. Wedge Chem. 2006 April 52 (4):680-5. (Medline). Rivera M, Cortez R, Salvador A, et al. Obesity subjects with heart failure have lower N-terminal pro-brain natriuretic peptide plasma levels, regardless of etiology. Eur J Heart Fail. 2005 December 7 (7):1168-70. (Medline). Herman-Arnhoft K, Hanush-Ensener U, Kaestenbauer T, et al. N-terminal pro-B-type natriuretic peptide as an indicator of possible cardiovascular disease in people with severe obesity: comparison with patients at different stages of heart failure. Wedge Chem. 2005 Jan. 51 (1):138-43. (Medline). Seino Y, Ogawa A, Yamashita T, et al. Application of NT-proBNP and BNP measurements in cardiac care: a more discerning marker for the detection and evaluation of heart failure. Eur J Heart Fail. 2004 March 15. 6 (3):295-300. (Medline). Colucci WS, Elkayam U, Horton DP, et al. Intra-venous nesodulin, natriuretic peptide, in the treatment of decompensated congestive heart failure. A group to study non-syridine. N Engl J Med. 2000 July 27. 343 (4):246-53. (Medline). Jezeckovitz JA, Hernandez AF, Starling RC, et al. Standardization of Care for Acute Decompensated Heart Failure in Large Megafat: An Approach to Acute Research on Clinical Effacyide in Subjects with Decompensated Heart Failure (ASCEND-HF). Am Heart J. 2009 February 157 (2):219-28. (Medline). Mills RM, LeJemtel TH, Horton DP, et al. Sustained Hemodynamic Impact nitide (human b-type natriuretic peptide) in heart failure: randomized, double-blind, placebo-controlled clinical trial. Natrecor training group. J Am Coll Cardiol. 1999 July 34 (1):155-62. (Medline). Silver MA, MA, DP, Ghali JK, Elkayam U. Effect of nedirits vs. dobutamine on short-term outcomes in the treatment of patients with acutely decompensated heart failure. J Am Coll Cardiol. 2002, March 6. 39 (5):798-803. (Medline). Miller WL, Hartman KA, Burritt MF, Borgeson DD, Burnett JC Jr., Jaffe AS. Biomarker reactions during and after treatment with nesodulin in patients with decompensated chronic heart failure. Wedge Chem. 2005 Mar. 51 (3):569-77. (Medline). Fitzgerald RL, Cremo R, Gardetto N, et al. Effect of nitide in combination with standard therapy on serum concentration of stryuretic peptides in patients hospitalized for decompensated congestive heart failure. Am Heart J. 2005 Sep. 150 (3):471-7. (Medline). Mixex VV, Mall PP, Miller FA, et al. Frequency of family-extended cardiomyopathy in a number of patients with idiopathic advanced cardiomyopathy. N Engl J Med. 2002 January 9. 326 (2):77-82. (Medline). Baig MK, Goldman JH, Cafrio AL, Kunar AS, Keeling PJ, McKenna WJ. Family advanced cardiomyopathy: cardiac abnormalities are common in asymptomatic relatives and may represent early disease. J Am Coll Cardiol. 1998 January 31 (1):195-201. (Medline). Grunig E, Tasman JA, Kucher H, Franz W, Kubler W, Katus HA. Frequency and phenotypes of family extended cardiomyopathy. J Am Coll Cardiol. 1998 January 31 (1):186-94. (Medline). McNally E, Macleod H, Dellefave-Castillo L, et al. Arrhythmic right ventricular cardiomyopathy. GeneReviews. 1993. (Medline). (Full text). Cheitlin MD, Alpert JS, Armstrong WF, et al. ACC/AHA guidelines for clinical application of echocardiography. Report by the American College of Cardiology/American Heart Association Task Force on Clinical Application of Echocardiography. Developed in collaboration with the American Echocardiography Society. Circulation. 1997, March 18. 95 (6):1686-744. (Medline). Patel AR, Alsheikh Ali AA, Mukherjee J et al. 3D echocardiography to assess the right atrium in acutely decompensated correlation of heart failure with invasive hemodynamics. JACC Cardiovasc Images. 2011 Sep. 4 (9):938-45. (Medline). Before D, Collier J. Echocardiography in Heart Failure is a guide to general practice. Doctor Austin Pham. 2010 December 39 (12):904-9. (Medline). Kirkpatrick JN, Wiegers SE, Lang RM. Left ventricular auxiliary devices and other devices for the final stage of heart failure: the usefulness of echocardiography. Curr Cardiol Rep. 2010 May. 12 (3):257-64. (Medline). (Full text). Neuberg GW, Miller AB, Rodeheffer RJ, Jacobsen SJ, Prince C, etc. Cheyne-Stokes breathing and obstructive sleep apnea are independent risk factors for malignant ventricular arrhythmias requiring appropriate cardioverter defibrillator therapy in patients with congestive heart failure. Eur Heart J. 2011 Jan. 32 (1):61-74. (Medline). Groeneweld HF, Januzzi JL, Damman K, et al. Anemia and Mortality in Patients with Heart Failure: a systematic review and meta-analysis. J Am Coll Cardiol. 2008 September 2. 52 (10):818-27. (Medline). Ronco C, Haapoja M, House AA, Anavekar N, Bellomo R. Cardiorenal Syndrome. J Am Coll Cardiol. 2008 November 4. 52 (19):1527-39. (Medline). House AA, Haapoja M, Lassus J, Bellomo R, Ronco C, strategies for heart failure in cardiovascular syndromes. Am J Kidney Dis. 2010 Oct 56 (4):759-73. (Medline). Januzis JG, Butler J, Starling RC, et al. Effect of dopamine infusion on kidney function in hospitalized patients with heart failure: results of the dopamine study in acute decompensated heart failure (DAD-HF). J Cards Fail. 2010 December 16 (12):922-30. (Medline). Pleister AP, Baliga RR, Haas GJ. Acute study of clinical effectiveness of non-esirits in decompensated heart failure: non-zidrate redoubt. Cur Heart Fail Rep. 2011 Sep. 8(3):226-32. (Medline). O'Connor CM, Starling RC, Hernandez AF, et al. Standardization of Care for Acute Decompensated Heart Failure in Large Megafat: An Approach to Acute Research on Clinical Effacyide in Subjects with Decompensated Heart Failure (ASCEND-HF). Am Heart J. 2

H. et al. The volume of the left ventricle predicts postoperative course in patients with ischemic cardiomyopathy. *Ann Thorac Surg*. 1998 Feb 65 (2):434-8. (Medline). Mickleborough LL, Carson S, Ivanov J. Repair of dyskinetic or akinetic left ventricular aneurysm: results obtained with altered linear closure. *J Thorac Cardiovasc Surg*. 2001 Apr 121 (4):675-82. (Medline). Erk DA, Parra unemployment R, Cool DA, et al. Improvement of cardiac function after the resection of the left ventricular aneurysm: pre- and postoperative performance studies in 150 patients. *Tex Heart Inst J*. 1982 Sep 9 (3):267-73. (Medline). (Full text). Athanasiou CL, Buckberg GD, Stanley AW, et al., for the RESTORE group. Surgical restoration of the ventricle in the treatment of congestive heart failure due to post-pharmacemtient ventricular dilation. *J Am Coll Cardiol*. 2004 Oct 6, 44 (7):1439-45. (Medline). Jones RH, Velazquez EJ, Michler RE, et al for STICH Hypothesis 2 Investigators. Coronary bypass surgery with or without surgical reconstruction of the ventricle. *N Engl J Med*. 2009 Apr 23, 360 (17):1705-17. (Medline). (Full text). Timme D, Implantation help the device as a therapy approach in the post-REMATCH era: implications for patient selection. *Circulation*. 2007 July 31, 116 (5):497-505. (Medline). Donahueand M.A., Rajani K, Linta B et al. Left Ventricular help the device prescribing therapy compared to the expanded criteria of cardiac transplantation. *Ann Thorac Surg*. 2010 Apr 89 (4):1205-9; 1210. (Medline). U.S. Food and Drug Administration. Newly approved devices: HeartWare HVAD - P1000475050. Available by September 27, 2017. Updated October 31, 2017. Available: October 31, 2017 U.S. National Library of Medicine. Evaluatek 2000 Left Ventricular Assist System with post-asicard connector - prescribing therapy study. ClinicalTrials.gov. Available in-. Updated: October 16, 2017. Available: October 31, 2017. (Medline). Piclioni W, et al. Left ventricular auxiliary devices as a therapy destination: a new look at survival. *J Thorac Cardiovasc Surg*. 2005 January 129 (1):9-17. (Medline). Starling RC, Naka Y, Boyle AJ, et al. Results of post-U.S. Food and Drug Administration approval studies with a continuous stream of the left ventricle help the device as a bridge to heart transplantation: a prospective study using INTERMACS (Interagency Registry for Mechanical Circulatory Support). *J Am Coll Cardiol*. 2011 May 10, 57 (19):1890-8. (Medline). Ventura PA, Alharel R, Budge D, et al. Differential effects on post-transplant results between pulsating and continuous flow of left ventricle auxiliary devices. *Wedge's transplant*. 2011 July-August 25 (4):E390-5. (Medline). Slaughter MS, Pagani FD, Rogers JD, et al., for HeartMate II clinical researchers. Clinical management of the continuous flow of the left ventricle helps devices with progressive heart failure. *J Heart Transplant*. 2010 Apr 29 (4 suppl):S1-39. (Medline). Kirklin JK, Naftel DC, Cormos RL, et al. Third Annual Report interMACS: The Evolution of Prescribing Therapy in the United States. *J Heart Transplant*. 2011 February 30 (2):115-23. (Medline). Taylor DO, Edwards LB, Boucek MM, et al. Register of the International Society for Heart and Lung Transplantation: The 22nd Official Report on Adult Heart Transplantation—2005. *J Heart Transplant*. 2005 Aug 24 (8):945-55. (Medline). Boucek MM, Edwards LB, Keck BM, Trulock EP, Taylor DO, Hertz MI. Registry of the International Society for Heart and Lung Transplantation: the eighth official report—2005. *J Heart Transplant*. 2005 Aug 24 (8):945-55. (Medline). Grey NA Jr., Seizman CH. The current state of the general artificial heart. *Am J 2006 Июл. 152 (1):4-10.* (Medline). Кутия Д, Hallman GL, Bloodwell RD, Лицман РД, Мичам ЙД. Органический сердечный протез для двухстороннего сердечного артификального Am J Cardiol. 1969 November 24 (5):341-6. (Medline). Roussel JC, Senage T, Baron O, et al. CardioWest (Janvik) general artificial heart: one center experience with 42 patients. *Ann Thorak Surg*. 2009 January 87 (1):124-9. (Medline). Anderson E, Jaroszewski D, Pierce C, DeValeira P, Arabia F. Parallel application of extracorporeal oxygenation membranes and CardioWest common artificial heart as a bridge for transplantation. *Ann Thorac Surg*. 2009 November 88 (5):1676-8. (Medline). Morris RJ. Full artificial heart - concepts and clinical application. *Semin Thorak Cardiovasc Surg*. Autumn, 20 (3):247-54. (Medline). Meyer A, Slaughter M. Full artificial heart. *Panminerva Med*. 2011 Sep 53 (3):141-54. (Medline). National Library of Medicine. European Clinical Assessment of the Overall Artificial Heart Carmat (advance HF). ClinicalTrials.gov. Available in-. Updated: November 1, 2017 Marcus FI, McKenna NJ, Sherrill D, et al. Diagnosis of right ventricular arrhythmia/dysplasia: a proposed modification of the Task Force criteria. *Eur Heart J*. 2010 April 31 (7):806-14. (Medline). Tracy CM, Epstein AE, Darbar D, et al. 2012 ACCF/AHA/HRS focused updates of 2008 guidelines for device-based heart rate therapy anomalies: a report by the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines and Heart Rhythm Society. (corrected). *Circulation*. 2012 Oct 2, 126 (14):1784-800. (Medline). (Full text). Priore SG, Blomstrom-Lundqvist C, Mazzanti A et al. Guidelines ESC 2015 for the treatment of patients with ventricular arrhythmia and the prevention of sudden cardiac death of the European Society of Cardiology (ESC). Approved: Association of European Pediatric and Congenital Cardiology (AEPCC). *Eur Heart J*. 2015 November 1. 36 (41):2793-867. (Medline). (Full text). Rihal CS, Naidu SS, Givertz MM, et al. Society for Cardiovascular Angiography and Intervention (SCAI). Heart Insufficiency Society of America (HISA), et al. 2015 SCAI/ACC/HISA/STS Clinical Expert Consensus Statement on the Use of Percutaneous Mechanical Circulatory Support Devices in Cardiovascular Care: Approved by the American Heart Association's Confirmation of Value by the Canadian Association of Interventional Cardiology/SCAI. *J Am Coll Cardiol*. 2015 May 19, 65 (19): e7-e26. (Medline). (Full text). Feldman D, Pamukyan S.V., JJ, et al., The International Society for Heart and Lung Transplantation. 2013 International Society for Heart Transplantation and Lung Guidelines for Mechanical Circulatory Support: Summary. *J Heart Transplant*. 2013 February 32 (2):157-87. (Medline). (Full text). Peura JL, Covin-Adams M, Francis GS, et al Recommendations for the use of mechanical circulatory support: device strategies and patient selection: scientific statement of the American Heart Association. *Circulation*. 2012 November 27, 126 (22):2648-67. (Medline). (Full text). Ackerman MJ, Priori SG, Willems S, et al, Heart Rhythm Society (HRS), European Heart Rhythm Association (EHRA) Expert Consensus Statement on the State of Genetic Testing for Canalopathy and Cardiomyopathy: this document was developed as a partnership between the Heart Rhythm Society (HRS) and the European Heart Rhythm Association (EHRA). Europe. 2011 Aug 13 (8):1077-109. (Medline). (Full text). Lloyd-Jones D, Adams RJ, BrownTM, et al., for the American Heart Association Statistics Committee and subcommittee on stroke statistics. Summary: Statistics of Cardiovascular Disease and Stroke-2010 Update: Report by the American Heart Association. *Circulation*. 2010 Feb 23, 121 (7):948-54. (Medline). Temporelli PL, Scappellato F, Eleuteri E, Imaparato A, Giannuzzi P. Doppler echocardiography in advanced systolic heart failure: a non-invasive alternative to swan-ganz catheter. *Circus Heart Fail*. 2010 May 3 (3):387-94. (Medline). Miller R. AHA issues a mechanical guide to circulatory support for citing documents. *Medical news Medscape*. Available by: November 1, 2012. (Full text). (Guide) Bangalore S, Kumar S, Messerli FH. When conventional heart failure repair is not enough: angiotensin receptor blocker, direct renin inhibitor or aldosterone antagonist? The stagnation of the heart fail. 2013 May-June. 19 (3):107-15. (Medline). Cleland JG, Teerlink JR, Senior R, et al. Influence of cardiac activator myosin, omecamtiv mecarbil, on cardiac function in systolic heart failure: double-blind, placebo-controlled, crossover, dose-band phase 2 trials. *Lancet*. 2011 Aug 20, 378 (7972):676-83. (Medline). Elklin-Cervenka M, Benson L, Dalstrom W, Edner M, Rosenquist M, Lund LH. Association candesartan vs. losartan with all cause deaths in patients with heart failure. *Jama*. 2011 Jan 12, 305 (2):175-82. (Medline). Funoto H, Horvath DJ, Rao S, et al. In vivo acute performance cleveland Clinic self-regulating, continuous flow of the general artificial heart. *J Heart Transplant*. 2010 January 29 (1):21-6. (Medline). Jennings DL, Chamber RM, Shilling JM. Pharmacy Therapy HeartMate II, continuous left ventricular to help the device, in patients with advanced heart failure: the integration of disease, devices, and Ann Pharmacother. 2010 Oct 44 (10):1647-50. (Medline). Opie L.H. Digitalis, yesterday and today, but not forever. *Circus Cardiovasque Kval Results*. 2013, September 1, 6 (5):511-3. (Medline). Plank B, Kutyifa V, Moss AJ, et al. Smoking is associated with an increased risk of developing the first and recurrent ventricular tachyarrhythmias in ischemic and non-ischemic patients with mild heart failure. *MADIT-KRT*. Heart rate. 2014 May, 11 (5):822-7. (Medline). Stiles S. Doubling the RAAS blockade in HF? Aldosteron antagonists, not ARBs, says meta-analysis. *Medical news Medscape*. Available by: December 26, 2012. Access: December 31, 2012. Topil Y, Oh JK, Atchison FW, et al. Echocardiographic finds in stable outpatient clinics with well-functioning devices of left ventricular care HeartMate II. *J Am Soc Echocardiogr*. 2011 February 24 (2):157-69. (Medline). Haddad F, Elm-Saraby M, Fadel E, Mercier O, Deno AY. Pearls and pitfalls in the management of right heart failure in cardiac surgery. *Curr Opin Anesthesia*. 2016 February 29 (1):68-79. (Medline). Bois JP, Chareonthaitawee P. Radionuclide imaging for congestive heart failure: viability assessment, sarcoidosis and amyloidosis. *Cardiol Wedge*. 2016 February 34 (1):119-32. (Medline). Hansel GS, Dixon S, Goldstein JA. Priority and combination of treatments for heart failure in the era of mechanical assistive devices. *Interv Cardiol Wedge*. 2017 Jul 6 (3):465-80. (Medline). Geis N, Raake P, Mereles D, et al. Percutaneous repair of the heavy mitral regurgitation valve secondary to rupture chord in octogenarians with the help of MitraClip. *J Interv Cardiol*. 2017 Oct 12. (Medline). Falter FF, Bererebi A, Pedrazzini G et al. 3D transesophageal echocardiography: a new imaging tool for assessing mitral regurgitation and for directing percutaneous from the edge to the edge of the mitral repair valve. *Prog Cardiovasc Dis*. 2017 Oct 19. (Medline). Grote Beverborg N, van Veldhuizen DJ, van der Meer. Anemia in heart failure: still relevant?. *JACC Heart Fail*. 2017 November 8. (Medline). Beedkar A, Parikh R, Deshmukh P. Heart failure and iron deficiency. *J Assoc Doctors India*. 2017 November 65 (11):79-80. (Medline). Hoes MF, Gross Beverborg N, Klijstra JD, et al. Iron Deficiency worsens the number of human heart-myocytes as a result of reduced mitochondrial function. *Eur J Heart Fail*. 2018 Feb 27. (Medline). Rocha BML, Cunha GJL, Menezes Falcao LF. The burden of iron deficiency in heart failure: therapeutic approach. *J Am Coll Cardiol*. 2018 Feb 20, 71 (7):782-93. (Medline). Nayar, Yu F, Chandak A, Kang GL, Laws B, Apenteng BA. Risk factors for deaths of patients with heart failure in hospitals: is the countryside, payer or source of hospitalization important? *Rural health*. 2018 December 34 (1):103-8. (Medline). Imamura T, Chung B, Nguyen A, Sayer G, Uriel N. Clinical effects of hemodynamic evaluation during left ventricular therapy. *Ventricle*. The cardiol. 2018 Apr 71 (4):352-8. (Medline). (Medline). hepatojugular reflux adalah pdf

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