

DAFTAR PUSTAKA

- Abbott, D., Comby, P., Charuel, C., Graepel, P., Hanton, G., Leblanc, B., Lodola, A., Longeart, L., Paulus, G., Peters, C., & Stadler, J. 2004. Preclinical safety profile of sildenafil. *International journal of impotence research*; 16(6), 498–504. <https://doi.org/10.1038/sj.ijir.3901232>.
- Afify, H., Kong, A., Bernal, J., Elgendy, I. 2022. Pulmonary Hypertension in Pregnancy: Challenges and Solutions. *Integr Blood Press Control*. 2;15:33-41. doi: 10.2147/IBPC.S242242. PMID: 35401013; PMCID: PMC8985908.
- Aggarwal N, Suri V, Kaur H, Chopra S, Rohila M, Vijayvergiya R. 2009. Retrospective analysis of outcome of pregnancy in women with congenital heart disease: single-centre experience from North India. *Aust N Z J Obstet Gynaecol*;49:376–381. DOI: 10.1111/j.1479-828X.2009.01029.
- Anjum H, Surani S. Pulmonary Hypertension in Pregnancy. 2021. A Review. *Medicina (Kaunas)*; Mar 11;57(3):259. doi: 10.3390/medicina57030259. PMID: 33799910; PMIKD: PMC8000005.
- Arkles JS, Opatowsky AR, Ojeda J, Rogers F, Liu T, Prassana V. 2011. Shape of the right ventricular Doppler envelope predicts hemodynamics and right heart function in pulmonary hypertension. *Am J Respir Crit Care Med*;183:268–276.
- Augustine DX, Coates-Bradshaw LD, Willis J, Harkness A, Ring L, Grapsa J, Coghlan G, Kaye N, Oxborough D, Robinson S, Sandoval J, Rana BS, Siva A, Nihoyannopoulos P, Howard LS, Fox K, Bhattacharyya S, Sharma V, Steeds RP, Mathew T. 2018. Echocardiographic assessment of pulmonary hypertension: a guideline protocol from the British Society of Echocardiography. *Echo Res Pract*. Sep;5(3):G11-G24. doi: 10.1530/ERP-17-0071. PMID: 30012832; PMIKD: PMC6055509.
- Ayala, D.E.; Hermida, C. 2013. Ambulatory blood pressure monitoring for the early identification of hypertension in pregnancy. *Chronobiol. Int*, 30, 233–259.
- Ballard, W., Dixon, B., McEvoy, C., Verma, A. 2021. Pulmonary Arterial Hypertension in Pregnancy. *Cardiol Clin* ;39(1):109-118.
- Barnett, C. F., & Machado, R. F. 2006. Sildenafil in the treatment of pulmonary hypertension. *Vascular health and risk management*; 2(4), 411–422. <https://doi.org/10.2147/vhrm.2006.2.4.411>
- Barst RJ, McGoon M, McLaughlin VV, Tapsen V, Rich S, Rubin L, Wasserman K, Oudiz R, Shapiro S, Robbins I, Channick R, Badesch BD, Rayburn BK, Flinchbaugh R, Sigman J, Arneson K, Jeffs R. 2003. Beraprost therapy for pulmonary arterial hypertension. *J Am Coll Cardiol*; 41:2119 – 2125.
- Baumgartner, H., Backer, J., Narayan, S., Budts, W., Chessa, M., Diller, G., Lung, B., Kluin, J., Lang, I., Meijboom, F., Moons, F., Mulder, B., Oechslin, E., Hesselink, J., Schwerzmann, M., Sondergaard, L., Zeppenfeld, K. 2020. ESC guidelines for management of adult congenital heart disease. *European Heart Journal*; 42, 563-645.
- Bedard E, Dimopoulos K, Gatzoulis MA. 2009. Has there been any progress made

- on pregnancy outcomes among women with pulmonary arterial hypertension? *Eur Heart J*; 30(3):256-65.
- Bernstein IM, Horbar JD, Badger GJ, Ohlsson A, Golan A. 2000. Morbidity and mortality among very-low-birth-weight neonates with intrauterine growth restriction. The Vermont Oxford Network. *Am J Obstet Gynecol*; 182(1pt 1):198–206
- Bhogal, S., Khraisha, O., Al Madani, M., Treece, J., Baumrucker, S. J., & Paul, T. K. 2019. Sildenafil for Pulmonary Arterial Hypertension. *American journal of therapeutics*; 26(4), e520–e526. <https://doi.org/10.1097/MJT.0000000000000766>.
- Bredy, C., Ministeri, M., Kempny, A., Gonzalez, R., Swan, L., Uebing, A., Diller, G., Gatzoulis, M., Dimopoulos, K. 2018. New York Heart Association (NYHA) classification in adults with congenital heart disease: relation to objective measures of exercise and outcome. *European Heart Journal - Quality of Care and Clinical Outcomes* : 4, 51–58.
- Brida M, Nashat H, Gatzoulis MA. 2020. Pulmonary arterial hypertension: closing the gap in congenital heart disease. *Curr Opin Pulm Med*; 26:422–8.
- Brittain, E.L.; Pugh, M.E.; Wheeler, L.A.; Robbins, I.M.; Loyd, J.E.; Newman, J.H.; Austin, E.D.; Hemnes, A.R. 2013. Prostanoids but not oral therapies improve right ventricular function in pulmonary arterial hypertension. *JACC Heart Fail*; 1, 300–307.
- Chang, K., Duval, S., David, B., Badesch, T., Bull, M., Chakinala, Teresa, M., Robert, P., Anna, H., Stephen, C., Erika, B., John, J., Thenappan, T. 2022. Mortality in Pulmonary Arterial Hypertension in the Modern Era: Early Insights From the Pulmonary Hypertension Association Registry. *Journal of the American Heart Association*. 2022;11:e024969. <https://doi.org/10.1161/JAHA.121.024969>.
- Condliffe, R. 2020. Pulmonary arterial hypertension associated with congenital heart disease: classification and pathophysiology. *Journal of Congenital Cardiology*. 4(Suppl 1):16.
- Cousins LM, Poeltler DM, Faron S, Catanzarite V, Daneshmand S, Casele H. Nonstress testing at ≤ 32.0 weeks' gestation: a randomized trial comparing different assessment criteria. *American journal of obstetrics and gynecology* 2012; 207(4): 311 e1-7.
- Cunningham, G., Leveno, K., Dashe, J., Hoffman, B., Spong, C., Casey, B. 2022. Williams Obstetric 26th Edition. New York United States : Mc Graw Hill.
- Dachlan, E., Amirah, Cinta, N., Pranadyan, R., Putri, A., Oktaviono, Y., Akbar, M. 2021. High Maternal Neonatal Mortality and Morbidity in Pregnancy with Eisenmenger Syndrome. *Journal of Pregnancy*. Volume. 8.
- Dadelszen, V., Dwinnell S, Magee L, Carleton B, Gruslin A, Lee B. 2011. Sildenafil Citrate therapy for severe early-onset intrauterine growth restriction. *BJOG An Int J Obstet Gynaecol*;118(5):624e8.
- Dastjerdi MV, Hosseini S, Bayani L. 2012. Sildenafil Citrate and uteroplacental perfusion in fetal growth restriction. *J Res Med SIK*; 17(7):632–6. PMID: 23798922

- De Bie, F.R.; Basurto, D.; Kumar, S.; Deprest, J.; Russo, F.M. 2022. Sildenafil during the 2nd and 3rd Trimester of Pregnancy: Trials and Tribulations. *Int. J. Environ. Res. Public Health*, 19, 11207. <https://doi.org/10.3390/ijerph191811207>
- Dewangga, M., Nasution, A. Harimurti, G., Atmosudigdo, I., Siagian, S. 2021. *Pedoman Diagnosis dan Tatalaksana Hipertensi Pulmonal, edisi pertama.*, Perhimpunan Dokter Spesialis Kardiovaskular Indonesia, Jakarta.
- Diller, G., Körten, M., Bauer, U., Miera, O., Tutarel, O., Kaemmerer, H., Berger, F., Baumgartner, H. 2016. German Competence Network for Congenital Heart Defects Investigators. Current therapy and outcome of Eisenmenger syndrome: data of the German National Register for congenital heart defects. *Eur Heart J*. May 7;37(18): 1449-55.
- Dinarti, L.K., Hartopo, A.B., Kusuma, A.D. *et al.* 2020. The COngenital HeART Disease in adult and Pulmonary Hypertension (COHARD-PH) registry: a descriptive study from single-center hospital registry of adult congenital heart disease and pulmonary hypertension in Indonesia. *BMC Cardiovasc Disord* 20, 163. <https://doi.org/10.1186/s12872-020-01434-z>.
- Drenthen W, Pieper PG, Roos-Hesselink JW, van Lottum WA, Voors AA, Mulder BJ, van Dijk AP, Vliegen HW, Yap SC, Moons P, Ebels T, van Veldhuisen DJ. 2007. Outcome of pregnancy in women with congenital heart disease: a literature review. *J Am Coll Cardio* ;49:2303–11.
- Duan R, Xu X, Wang X, 2016. Pregnancy outcome in women with Eisenmenger's syndrome: a case series from west China. *BMC Pregnancy Childbirth* 2016;16:356. DOI 10.1186/s12884-016-1153.
- Duarte, A.G.; Thomas, S.; Safdar, Z.; Torres, F.; Pacheco, L.D.; Feldman, J.; deBoisblanc, B. 2013. Management of pulmonary arterial hypertension during pregnancy: A retrospective, multicenter experience. *Chest*; 143, 1330–1336.
- Dunn, L., Greer, R., Flenady, V., & Kumar, S. 2017. Sildenafil in Pregnancy: A Systematic Review of Maternal Tolerance and Obstetric and Perinatal Outcomes. *Fetal diagnosis and therapy*; 41(2), 81–88. <https://doi.org/10.1159/000453062>
- El-Sayed MA, Saleh SA, Maher MA, Khidre AM. 2017. Utero-placental perfusion Doppler indices in growth restricted fetuses: effect of sildenafil Citrate. *J Matern Fetal Neonatal Med*:1–6.
- Ferreira RDDS, Negrini R, Bernardo WM, Simões R, Piato S. 2019. The effects of sildenafil in maternal and fetal outcomes in pregnancy: A systematic review and meta-analysis. *PLoS One*; Jul 24;14(7):e0219732. doi: 10.1371/journal.pone.0219732. PMID: 31339910; PMIKD: PMC6655684.
- Forfia, P., Fisher, M., Mathai, S., Houston, T., Hemnes, A., Borlaug, B., Chamera, E., Corretti, M., Champion, H., Abraham, T., Girgis, R., Hassoun, P. 2006. Tricuspid annular displacement predicts survival in pulmonary hypertension. *Am J Respir Crit Care Med*. 1;174(9):1034-41. doi: 10.1164/rccm.200604-547OC. Epub 2006 Aug 3. PMID: 16888289.

- Galderisi M, Cosyns B, Edvardsen T, Cardim N, Delgado V, Di Salvo G. 2017. Standardization of adult transthoracic echocardiography reporting in agreement with recent chamber quantification, diastolic function, and heart valve disease re-commendations: an expert consensus document of the European Association of Cardiovascular Imaging. *Eur Heart J Cardiovasc Imaging*;18:1301–1310.
- Galie` N, Badesch BD, Oudiz R, Simonneau G, McGoon M, Keogh A, Frost A, Zwicke D, Naeije R, Shapiro RS, Olschewski H, Rubin L. 2005. Ambrisentan therapy for pulmonary arterial hypertension. *J Am Coll Cardiol*;46:529–535.
- Galie N, Ghofrani HA, Torbicki A, Barst RJ, Rubin LJ, Badesch D, Fleming T, Parpia T, Burgess G, Branzi A, Grimminger F, Kurzyna M, Simonneau G. Sildenafil Citrate therapy for pulmonary arterial hypertension. *N Engl J Med*. 2005;353:2148 –2157.
- Galie, N., Humbert, M., Vachiery, J., Gibbs, S., Lang, I., Torbicki, A., Simonneau, G., Peacock, A., Vonk, N., Beghetti, M., Ghofrani, A., Gomez, M., Hansmann, G., Klepetko, W., Lancellotti, P., Matucci, M., McDonagh, T., Pierard, L., Trindade PT, Zompatori M, Hoeper M, Aboyans V, Vaz Carneiro A, Achenbach S, Agewall S, Allanore Y, Asteggiano R, Paolo Badano L, Albert Barbera J, Bouvaist H, Bueno H, Byrne RA, Carerj S, Castro G, Erol C, Falk V, Funck- Brentano C, Gorenflo M, Granton J, Iung B, Kiely DG, Kirchhof P, Kjellstrom B, Landmesser U, Lekakis J, Lionis C, Lip GY, Orfanos SE, Park MH, Piepoli MF, Ponikowski P, Revel MP, Rigau D, Rosenkranz S, Voller H, Luis Zamorano J. 2015. ESC/ERS guidelines for the diagnosis and treatment of pulmonary hypertension. *Eur Heart J*;37:67–119.
- Galie, N.; McLaughlin, V.V.; Rubin, L.J.; Simonneau, G. 2019. An overview of the 6th World Symposium on Pulmonary Hypertension. *Eur. Respir. J.*, 53.
- Gantt, A., Metz, T., Kuller, J., Louis, J., Cahill, A., Turrentine, M. 2022. Pregnancy at Age 35 Years or Older. *American College of Obstetricians and Gynecologists*. Number 11. VOL. 140, NO. 2.
- Ganzevoort, W., Alfrevic, Z., von Dadelszen, P., Kenny, L., Papageorgiou, A., van Wassenae-Leemhuis, A., Gluud, C., Mol, B. W., & Baker, P. N. 2014. STRIDER: Sildenafil Therapy In Dismal prognosis Early-onset intrauterine growth Restriction--a protocol for a systematic review with individual participant data and aggregate data meta-analysis and trial sequential analysis. *Systematic reviews*, 3, 23. <https://doi.org/10.1186/2046-4053-3-23>
- Ghio, S., Pica, S., Klersy, C., Guzzafame, E., Scelsi, L., Raineri, C., Turco, A., Schirinzi, S., Visconti, L. 2016. Prognostic value of TAPSE after therapy optimisation in patients with pulmonary arterial hypertension is independent of the haemodynamic effects of therapy. *Open Heart*. May 9;3(1):e000408. doi: 10.1136/openhrt-2016-000408. PMID: 27175288; PMCID: PMC4860853.
- Ghofrani HA, Galie` N, Grimminger F, Grunig E, Humbert M, Jing ZC, Keogh

- AM, Langleben D, Kilama MO, Fritsch A, Neuser D, Rubin LJ. 2013. Riociguat for the treatment of pulmonary arterial hypertension. *N Engl J Med*;369:330–340.
- Goldstein SA., Krasuski RA. 2020. Pulmonary Hypertension in Adults with Congenital Heart Disease. *Cardiol Clin*: 40 (2022) 55–67. <https://doi.org/10.1016/j.ccl.2021.08.006>.
- Groom, K.M.; Ganzevoort, W.; Alfirevic, Z.; Lim, K.; Papageorgiou, A.T.; Consortium, S. 2018. Clinicians should stop prescribing sildenafil for fetal growth restriction (FGR): Comment from the STRIDER Consortium. *Ultrasound Obstet. Gynecol.*, 52, 295–296.
- Hardee, I., Wright, L., McCracken, C., Lawson, E., Matthew, E. 2021. Maternal and Neonatal Outcomes of Pregnancies in Women With Congenital Heart Disease: A Meta-Analysis. *J Am Heart Assoc.* 2021;10:e017834. DOI: 10.1161/JAHA.120.017834.
- Hartono, P. 2016. *Pedoman Nasional Pelayanan Kedokteran Diagnosis dan Tatalaksana Preeklamsia*. Perkumpulan Obstetri dan Ginekologi Indonesia.
- Hartono, P. 2016. *Pedoman Nasional Pelayanan Kedokteran Pengelolaan Kehamilan dengan Pertumbuhan Janin Terhambat*. Perkumpulan Obstetri dan Ginekologi Indonesia.
- Hartopo AB, Anggrahini DW, Nurdianti DS, Emoto N, Dinarti LK. 2019. Severe pulmonary hypertension and reduced right ventricle systolic function associated with maternal mortality in pregnant uncorrected congenital heart diseases. *Pulm Circ*; 9:2045894019884516.
- Hartopo, AB., Panda, AL. 2021. *Pedoman Diagnosis dan Tatalaksana Hipertensi Pulmonal, edisi pertama.*, Perhimpunan Dokter Spesialis Kardiovaskular Indonesia, Jakarta.
- Hayward RM, Foster E, Tseng ZH. 2017. Maternal and fetal outcomes of admission for delivery in women with congenital heart disease. *JAMA Cardiol.* 2017;2:664–671. DOI: 10.1001/jamacardio.0283.
- Hemnes AR, Kiely DG, Cockrill BA. 2015. Statement on pregnancy in pulmonary hypertension from the Pulmonary Vascular Research Institute. *Pulm Circ*; 5: 435–465.
- Herrera, E., Zárate, J., Solano, J., Martínez, L., Zamudio, T., Bautista, E. 2008. Clinical-hemodynamic correlation of the NYHA/WHO system in idiopathic pulmonary artery hypertension. Clinical, therapeutic and long-term prognosis implications]. *Arch Cardiol Mex.* 2008 Apr-Jun;78(2):148–61. Spanish. PMID: 18754406.
- Hjortshøj, A., Jensen, K., Sørensen, E., Bengt, J., Thomas, K., Mikael, D., Mette-Elise, E., Henrik, H., Maila, T. 2017. “Epidemiological changes in Eisenmenger syndrome in the Nordic region in 1977–,” *Heart*, vol. 103, pp. 1353–1358.
- Hoepfer MM, Humbert M, Souza R, Idrees M, Kawut SM, Sliwa-Hahnle K. 2016. A global view of pulmonary hypertension. *Lancet Respir Med*;4:306–322.
- Hoepfer, M., Markevych, I., Spiekerkoetter, E. 2005. Goal-oriented treatment and combination therapy for pulmonary arterial hypertension. *Eur Respir J*; 26:

858–863.

- Humbert, M., Kovacs. G, Hoeper, M., Badagliacca, R., Berger, R., Brida, M., Carlsen, J., Coats, A., Escribano-Subias,P., Ferrari, P. 2022. ESC/ERS Guidelines for the diagnosis and treatment of pulmonary hypertension: Developed by the task force for the diagnosis and treatment of pulmonary hypertension of the European Society of Cardiology (ESC) and the European Respiratory Society (ERS). Endorsed by the International Society for Heart and Lung Transplantation (ISHLT) and the European Reference Network on rare respiratory diseases (ERN-LUNG)., *European Heart Journal*, 2022;, ehac237, <https://doi.org/10.1093/eurheartj/ehac237>.
- Hurdman J, Condliffe R, Elliot CA, Swift A, Rajaram S, Davies C. 2013. Pulmonary hypertension in COPD: results from the ASPIRE registry. *Eur Respir J*;41: 1292–1301.
- IversenK, JensenAS, JensenTV, VejlstrupNG, S ndergaardL. 2010. Combination therapy with bosentan and sildenafil in Eisenmenger syndrome: a randomized, placebo-controlled, double-blinded trial. *Eur Heart J*;31:1124–1131.
- Janda, S., Shahidi, N., Gin, K., Swiston, J. 2011. Diagnostic accuracy of echocardiography for pulmonary hypertension: a systematic review and meta-analysis. *Heart*;97:612e622. doi:10.1136/hrt.2010.212084.
- Kalantari S, Gomberg-Maitland M. 2016. Group 5 pulmonary hypertension: the orphan’s orphan disease. *Cardiol Clin*;34:443–449.
- Keilman, C., Shanks, A. 2022. *Oligohidramnion*. Pubmed. PMID: 32965997.
- Kempny, A., Cristel S rensen Hjortsh j, Lars S ndergaard, Michael A. Gatzoulis. 2021. Mortality in adult patients with Eisenmenger Syndrome: 5-Years perspective. *International Journal of Cardiology Congenital Heart Disease*, Volume 2, ,100070, ISSN 2666-6685, <https://doi.org/10.1016/j.ijcchd.2020.100070>.
- Khalil A, Sharp A, Cornforth C, Jackson R, Mousa H, Stock S, Harrold J, Turner MA, Kenny LC, Baker PN, Johnstone ED, Von Dadelszen P, Magee L, Papageorgiou AT, Alfievic Z. 2020. Effect of sildenafil on maternal hemodynamics in pregnancies complicated by severe early-onset fetal growth restriction: planned subgroup analysis from a multicenter randomized placebo-controlled double-blind trial. *Ultrasound Obstet Gynecol*. Feb;55(2):198-209. doi: 10.1002/uog.20851. PMID: 31432556.
- Kiely, D.G.; Condliffe, R.; Webster, V.; Mills, G.H.; Wrench, I.; Gandhi, S.V.; Selby, K.; Armstrong, I.J.; Martin, L.; Howarth, E.S.; et al. 2010. Improved survival in pregnancy and pulmonary hypertension using a multiprofessional approach. *BJOG*, 117, 565–574.
- Kim, N. H., Delcroix, M., Jenkins, D. P., Channick, R., Darteville, P., Jansa, P., Lang, I., Madani, M. M., Ogino, H., Pengo, V., & Mayer, E. 2013. Chronic thromboembolic pulmonary hypertension. *Journal of the American College of Cardiology*, 62(25 Suppl), D92–D99. <https://doi.org/10.1016/j.jacc.2013.10.024>
- Klaeboe, L.G., Edvardsen, T., 2019. Echocardiographic assessment of left ventricular systolic function. *J. Echocardiogr*. 17: 10–16.

doi:10.1007/s12574-018-0405-5

- Kramm T, Wilkens H, Fuge J, Schäfers H-J, Guth S, Wiedenroth CB. 2018. Incidence and characteristics of chronic thromboembolic pulmonary hypertension in Germany. *Clinical research in cardiology: official journal of the German Cardiac Society* 1–6. doi:10.1007/s00392-018-1215-5.
- Lacassie HJ, Germain AM, Valdes G. 2004. Management of Eisenmenger syndrome in pregnancy with sildenafil and L-arginine. *Obstet Gynecol*; 103: 1118–1120.
- Lam CS, Roger VL, Rodeheffer RJ, Borlaug BA, Enders FT, Redfield MM. 2009. Pulmonary hypertension in heart failure with preserved ejection fraction: a community-based study. *J Am Coll Cardiol*;53:1119–1126.
- Lan, N., Massam, B. D., Kulkarni, S. S., & Lang, C. C. 2018. Pulmonary Arterial Hypertension: Pathophysiology and Treatment. *Diseases* (Basel, Switzerland), 6(2), 38. <https://doi.org/10.3390/diseases6020038>.
- Lang RM, Badano LP, Mor-Avi V, Afilalo J, Armstrong A, Ernande L. 2015. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. *Eur Heart J Cardiovasc Imaging*;16:233–270.
- Lau EMT, Giannoulatou E, Celermajer DS, Humbert M. 2017. Epidemiology and treatment of pulmonary arterial hypertension. *Nat Rev Cardiol*;14:603–614.
- LeberL,Beaudet A,Muller A. 2021. Epidemiology of pulmonary arterial hypertension and chronic thromboembolic pulmonary hypertension: identification of the most accurate estimates from a systematic literature review. *Pulm Circ*;11: 2045894020977300.
- Lepore, J., Maroo, A., Bigatello., L., Dec, G., Zapol, W., Bloch K., Semigran M. 2005. Hemodynamic effects of sildenafil in patients with congestive heart failure and pulmonary hypertension: combined administration with inhaled nitric oxide. *Chest* : 127(5):1647-53. doi: 10.1378/chest.127.5.1647. PMID: 15888841.
- Li H, Gudmundsson S, Olofsson P. Prospect for vaginal delivery of growth restricted fetuses with abnormal umbilical artery blood flow. *Acta obstetrica et gynecologica Scandinavica* 2003; **82**(9): 828-33.
- Li Q, Dimopoulos K, Liu T, Xu Z, Liu Q, Li Y, Zhang J, Gu H. Peripartum outcomes in a large population of women with pulmonary arterial hypertension associated with congenital heart disease. *Eur J Prev Cardiol*. 2019 Jul;26(10):1067-1076. doi: 10.1177/2047487318821246. Epub 2019 Apr 11. PMID: 30971116.
- Liu, Y., Li, Y., Zhang, J., Zhang, D., Li, J., Zhao, Y., Liu, K., Ma, X., Bai, C., Gu, H., Fan, X., Wang, J. 2022. Maternal and fetal outcomes of pregnant women with pulmonary arterial hypertension associated with congenital heart disease in Beijing, China: A retrospective study. *Pulm Circ*. Apr 22;12(2):e12079. doi: 10.1002/pul2.12079. PMID: 35514772; PMICD: PMC9063973.
- Luo, J., Shi, H., Xu, L, Su, W., Li, J. 2020. Pregnancy Outcome in Patient with

- pulmonary arterial hypertension. Luo et al. *Medicine* (2020) 99:23. <http://dx.doi.org/10.1097/MD.00000000000020285>.
- Madden BP. 2009. Pulmonary hypertension and pregnancy. *Int J Obstet Anesth*; 18: 156–164.
- Maged, M., Wageh, A., Shams, M., Elmetwally, A. 2018. Use of sildenafil Citrate in cases of intrauterine growth restriction (IUGR) : a prospective trial. *Taiwanese Journal of Obstetrics & Gynecology* 57 (2018) 483e486. <https://doi.org/10.1016/j.tjog.2018.06.002>
- Maher MA, Sayyed TM, Elkhoully N. 2017. Sildenafil Citrate therapy for oligohydramnios: A Randomized Controlled Trial. *Obstet Gynecol*; 129(4):615–20. <https://doi.org/10.1097/AOG.0000000000001928> PMID: 28277352
- Marshall, W., Gee, S., Lim, W., Lastinger, L. 2022. Maternal and fetal outcomes in pregnant women with pulmonary hypertension: The impact of left heart disease. *International Journal of Cardiology Congenital Heart Disease*. Volume 8. <https://doi.org/10.1016/j.ijcchd.2022.100354>.
- McCurdy CM Jr, Seeds JW. 1993. Oligohydramnios: problems and treatment. *Semin Perinatol*;17:183–96.
- Meng ML, Landau R, Victorsdottir O, Banayan J, Grant T, Bateman B, Smiley R, Reitman E. Pulmonary Hypertension in Pregnancy: A Report of 49 Cases at Four Tertiary North American Sites. *Obstet Gynecol*. 2017 Mar;129(3):511-520. doi: 10.1097/AOG.0000000000001896. PMID: 28178055.
- Montani D, Girerd B, Jais X, Laveneziana P, Lau EMT, Bouchachi A. 2020. Screening for pulmonary arterial hypertension in adults carrying a BMPR2 mutation. *The Eur Respir J*;58:2004229.
- Nathan SD, Barbera JA, Gaine SP, Harari S, Martinez FJ, Olschewski H. 2019. Pulmonary hypertension in chronic lung disease and hypoxia. *Eur Respir J*; 53:1801914.
- Neick IS, Beghetti M. 2020. Issues related to the management and therapy of paediatric pulmonary hypertension. *Eur Respir Rev*: 19; 118, 331–339 DOI: 10.1183/09059180.00008510
- NHS Digital. National Audit of Pulmonary Hypertension 10th Annual Report, Great Britain, 2018-19. <https://digital.nhs.uk/data-and-information/publications/statistical/national-pulmonary-hypertension-audit/2019#> (24 March 2022, date last accessed 22 July 2022).
- Olschewski H, Simonneau G, Galie` N, Higenbottam T, Naeije R, Rubin LJ, Nickkho S, Sitbon O, Speich R, Hoeper M, Behr J, Winkler J, Seeger W. 2002. Inhaled iloprost in severe pulmonary hypertension. *N Engl J Med*: 347;322–329.
- Olsson KM, Jais X. 2013. Birth control and pregnancy management in pulmonary hypertension. *Semin Respir Crit Care Med*: 34; 681–688.
- Olsson, K., Channick, R. 2016. Pregnancy in pulmonary arterial hypertension. *Eur Respir Rev*: 25: 431-437.
- Paauw, N., Terstappen, F., Ganzevoort, W., Joles, J., Gremmels, H., Lely, T. 2017. Sildenafil During PregnancyA Preclinical Meta-Analysis on Fetal

- Growth and Maternal Blood Pressure. *AHA journals*. 1-8.
- Pels, A., Derks, J., Elvan-Taspinar, A., van Drongelen, J., de Boer, M., Duvekot, H., van Laar, J., van Eyck, J., Al-Nasiry, S., Sueters, M., Post, M., Onland, W., van Wassenaer-Leemhuis, A., Naaktgeboren, C., Jakobsen J.C., Gluud, C., Duijnhoven R.G., Lely, T., Gordijn, S., Ganzevoort, W. 2020. Maternal Sildenafil vs Placebo in Pregnant Women With Severe Early-Onset Fetal Growth Restriction: A Randomized Clinical Trial. *JAMA Netw Open*: 1;3(6): e205323. doi: 10.1001/jamanetworkopen. 2020. 5323.
- Pels, A.; Kenny, L.C.; Alfievic, Z.; Baker, P.N.; von Dadelszen, P.; Gluud, C.; Kariya, C.T.; Mol, B.W.; Papageorghiou, A.T.; van Wassenaer-Leemhuis, A.G. 2017. STRIDER (Sildenafil TheRapy in dismal prognosis early onset fetal growth restriction): An international consortium of randomised placebo-controlled trials. *BMC Pregnancy Childbirth*, 17, 440.
- Pieske B, Tschope C, de Boer RA, Fraser AG, Anker SD, Donal E. 2019. How to diagnose heart failure with preserved ejection fraction: the HFA-PEFF diagnostic algorithm: a consensus recommendation from the Heart Failure Association (HFA) of the *European Society of Cardiology (ESC)*. *Eur Heart J*;40:3297–3317.
- Rahajoe, A., Lukito, A., Soesanto, A., Hasanah, D., Anggrahini, DW., Sarvastati, D., Maharani, E., Rasyid, HE., Prameswari, H., Sukmawati, I., Dinarti, LK., Yanni, M., Yamin, PP., Roebiono, P., Sirait.S., Nauli, S., Indriani, S., Pintaningrum, Y. 2021. *Panduan Tatalaksana Penyakit Kardiovaskular pada Kehamilan*. Perhimpunan Dokter Spesialis Kardiovaskular Indonesia, Jakarta.
- Regitz-Zagrosek V, Blomstrom Lundqvist C, Borghi C. 2011. ESC Guidelines on the management of cardiovascular diseases during pregnancy. *Eur Heart J*: 32; 3147–3197.
- Regitz, Z.V, Roos,H. J., Bauersachs, J., Blomstrom,L., Cifkova, R., De Bonis, M., Iung, B., Johnson, M., Kintscher, U., Kranke, P., Lang I., Morais, J., Pieper, P, Presbitero, P., Price, S., Rosano, G., Seeland, U., Simonicni, T., Swan, L., Warnes, C. 2018. ESC Guidelines for the management of cardiovascular diseases during pregnancy. *Eur HeartJ*; 39:3165-3241.
- Rex, S., Devroe, S. 2016. Anesthesia for pregnant women with pulmonary hypertension. *Curr Opin Anaesthesiol*. Jun;29(3):273-81. doi: 10.1097/ACO.0000000000000310. PMID: 26978591.
- Rosenkranz S, Gibbs JS, Wachter R, De Marco T, Vonk-Noordegraaf A, Vachieri JL. 2016. Left ventricular heart failure and pulmonary hypertension. *Eur Heart J*;37: 942–954.
- Rosenkranz, S., Preston, I. 2015. Right heart catheterisation: best practice and pitfalls in pulmonary hypertension. *European Respiratory Review*: Dec 24 (138) 642-652; DOI: 10.1183/16000617.0062.
- Rubin, L. 2004. American College of Chest Physicians. Diagnosis and management of pulmonary arterial hypertension: ACCP evidence-based clinical practice guidelines. *Chest*. Jul;126(1 Suppl):7S-10S. doi: 10.1378/chest.126.1_suppl.7S. PMID: 15249491.
- Samangaya, R. A., Mires, G., Shennan, A., Skillern, L., Howe, D., McLeod, A.,

- & Baker, P. N. 2009. A randomised, double-blinded, placebo-controlled study of the phosphodiesterase type 5 inhibitor sildenafil for the treatment of preeclampsia. *Hypertension in pregnancy*: 28(4), 369–382. <https://doi.org/10.3109/10641950802601278>
- Sarah B, Ashrith G, Sandeep S. 2021. Evaluation, Diagnosis, and Classification of Pulmonary Hypertension. *Methodist Debakey Cardiovasc J.*: 17(2):86–91. Published 2021 Jul 1. doi:10.14797/ OCDF4453
- Sharp, A.; Cornforth, C.; Jackson, R.; Harrold, J.; Turner, M.A.; Kenny, L.; Baker, P.N.; Johnstone, E.D.; Khalil, A.; von Dadelszen, P.; 2019. Mortality in the UK STRIDER trial of sildenafil therapy for the treatment of severe early-onset fetal growth restriction. *Lancet Child Adolesc. Health*, 3, e2–e3.
- Sharp. 2018. Maternal sildenafil for severe fetal growth restriction (STRIDER): a multicentre, randomised, placebo-controlled, double-blind trial. *Lancet Child Adolesc Health*: Feb; 2(2):93–102. [https://doi.org/10.1016/S2352-4642\(17\)30173-6](https://doi.org/10.1016/S2352-4642(17)30173-6) PMID: 30169244
- Shehata, N.A.A.; Ali, H.A.A.; Fahim, A.S.; Katta, M.A.; Hussein, G.K. 2020. Addition of sildenafil citrate for treatment of severe intrauterine growth restriction: A double blind randomized placebo controlled trial. *J. Matern.-Fetal Neonatal Med*, 33, 1631–1637.
- Shi, Q., Wang, Z., Yang, N., Ma, Y., Chen, Y., Wei, H., Yao, H. 2022. Sildenafil for adult Asian patients with pulmonary arterial hypertension: a systematic review and meta-analysis. *Ann Palliat Med* : 11(1):339–351. doi: 10.21037/apm-21-3979.
- Simonneau G, Montani D, Celermajer DS, Denton CP, Gatzoulis MA, Krowka M, Williams PG, Souza R. 2018. Haemodynamic definitions and updated clinical classification of pulmonary hypertension. *Eur Respir J*: 53:1801913.
- Simonneau, G., Rubin, L., Galie, N., Barst, R., Fleming, T., Frost, A. 2008. Addition of sildenafil to longterm intravenous epoprostenol therapy in patients with pulmonary arterial hypertension: a randomized trial. *Ann Intern Med*;149:521e30.
- Singh T, Rohit M, Grover A, Malhotra S, Vijayvergiya R. 2006. A randomized, placebo- controlled, double-blind, crossover study to evaluate the efficacy of oral sildenafil therapy in severe pulmonary artery hypertension. *Am Heart J*: 151:851.e1– 851.e5.
- Sitbon, O., Humbert, M., Jaïs, X., Ioos, V., Hamid, A.M., Provencher, S., Garica, G., Parent, F., Hervé, P., Simonneau, G. 2005. Long-term response to calcium channel blockers in idiopathic pulmonary arterial hypertension. *Circulation*: 111, 3105–3111.
- Soelistijo, S., Lindarto, D., Decroli, E., Permana, H., Sucipto, K., Kusnadi, Y., Budiman, Ikhsan, R., Sasiarini, L., Sanusi, H. 2019. *Pedoman pengelolaan dan pencegahan Diabetes Melitus Tipe 2 Dewasa di Indonesia*. Perkumpulan Endokrinologi Indonesia.
- Soubrier, F., Chung, W. K., Machado, R., Grünig, E., Aldred, M., Geraic, M., Loyd, J. E., Elliott, C. G., Trembath, R. C., Newman, J. H., & Humbert,

- M. 2013. Genetics and genomics of pulmonary arterial hypertension. *Journal of the American College of Cardiology*: 62(25 Suppl), D13–D21. <https://doi.org/10.1016/j.jacc.2013.10.035>
- Stoddart P, O, Sullivan G. 1993. Eisenmenger's Syndrome in Pregnancy: A case report and review. *Internat J Obstet Anesth.*;2:159–68.
- Su, J., Chen, H., Wang, S. 2022. Pregnancy outcome analysis of 94 patients with pulmonary arterial hypertension during pregnancy. *European Review for Medical and Pharmacological Sciences*. 26: 1970-1977.
- Suciadi, L., Saboe, A., Rahimah, A., Kartika, A., Cool. C., Martini, H., Patimang, Y. 2021. *Pedoman Diagnosis dan Tatalaksana Hipertensi Pulmonal, edisi pertama.*, Perhimpunan Dokter Spesialis Kardiovaskular Indonesia, Jakarta.
- Sun, X., Wang, K., Wang, W., Li, B. 2014. Clinical study on sildenafil in treatment of pregnant women with pulmonary arterial hypertension. *Zhonghua Fu Chan Ke Za Zhi*: 49(6):414-8. Chinese. PMID: 25169631.
- Sysol, J. R., & Machado, R. F. 2018. Classification and pathophysiology of pulmonary hypertension. *Continuing Cardiology Education*: 4(1), <https://doi.org/10.1002/cce2.71>
- Takahama H, McCully RB, Frantz RP, Kane GC. 2017. Unraveling the RV ejection Doppler envelope: insight into pulmonary artery hemodynamics and disease severity. *JACC Cardiovasc Imaging*;10:1268–1277.
- Tello, K., Axmann, J., Ghofrani, H., Naeije, R., Naricn, N., Rieth, A., Seeger, W., Gall, H., Richter, M. 2018. Relevance of the TAPSE/PASP ratio in pulmonary arterial hypertension. *Int J Cardiol*. Sep 1;266:229-235. doi: 10.1016/j.ijcard.2018.01.053. PMID: 29887454.
- Terek D, Kayikicoglu M, Kultursay H. 2013. Pulmonary arterial hypertension and pregnancy. *J Res Med SIK*: 18; 73–76.
- Thompson, L., Pence L, Pinkas G, Song H, Telugu BP. 2016. Placental Hypoxia During Early Pregnancy Causes Maternal Hypertension and Placental Insufficiency in the Hypoxic Guinea Pig Model, *Biology of Reproduction*: Volume 95, Issue 6, 1 December, 128, 1–10, <https://doi.org/10.1095/biolreprod.116.142273>
- Tichelbacker T, Dumitrescu D, Gerhardt F, Stern D, Wissmuller M, Adam M. 2019. Pulmonary hypertension and valvular heart disease. *Herz*;44:491–501.
- Trapani, A., Jr, Gonçalves, L. F., Trapani, T. F., Vieira, S., Pires, M., & Pires, M. 2016. Perinatal and Hemodynamic Evaluation of Sildenafil Citrate for Preeclampsia Treatment: A Randomized Controlled Trial. *Obstetrics and gynecology*: 128(2), 253–259. <https://doi.org/10.1097/AOG.0000000000001518>.
- Turner J, Dunn L, Tarnow-Mordi W, Flatley C, Flenady V, Kumar S. 2020 . Safety and efficacy of sildenafil Citrate to reduce operative birth for intrapartum fetal compromise at term: a phase 2 randomized controlled trial. *Am J Obstet Gynecol*: May;222(5):401-414. doi: 10.1016/j.ajog.2020.01.025. Epub 2020 Jan 21. PMID: 31978434.
- Vachiéry, J. L., Adir, Y., Barberà, J. A., Champion, H., Coghlan, J. G., Cottin, V.,

- De Marco, T., Galiè, N., Ghio, S., Gibbs, J. S., Martinez, F., Semigran, M., Simonneau, G., Wells, A., & Seeger, W. 2013. Pulmonary hypertension due to left heart diseases. *Journal of the American College of Cardiology*: 62(25 Suppl), D100–D108. <https://doi.org/10.1016/j.jacc.2013.10.033>
- Vizza CD, Badagliacca R, Posica R, Mezzapesa M, Noiconi M, Fedele F. 2012. Functional Classification of Pulmonary Hypertension According to World Health Organization. *European Cardiology*; 8(3):198–203. DOI: <https://doi.org/10.15420/ecr.2012.8.3.198>
- Von Dadelszen P, Dwinnell S, Magee LA, Carleton BC, Gruslin A, Lee B. 2011. Sildenafil Citrate therapy for severe early-onset intrauterine growth restriction. *BJOG*: 118(5):624–8. <https://doi.org/10.1111/j.1471-0528.2010.02879.x> PMID: 21392225.
- Wang, R., Jiang, F., Zheng, Q., Li, C., Peng, X., He, C., Luo, J., Liang, Z. 2014. Efficacy and safety of sildenafil treatment in pulmonary arterial hypertension : A systemic review. *Respiratory Medicine* 108, 531-537. <https://dx.doi.org/10.1016/j.rmed.2014.01.003>
- Wareing, M., Myers, J. E., O'hara, M., Kenny, L. C., Warren, A. Y., Taggart, M. J., Skillern, L., Machin, I., & Baker, P. N. 2004. Effects of a phosphodiesterase-5 (PDE5) inhibitor on endothelium-dependent relaxation of myometrial small arteries. *American journal of obstetrics and gynecology*: 190(5), 1283–1290. <https://doi.org/10.1016/j.ajog.2003.12.024>
- Waxman, A.B.; Zamanian, R.T. 2013. Pulmonary arterial hypertension: New insights into the optimal role of current and emerging prostacyclin therapies. *Am. J. Cardiol*: 111 (Suppl. 5), 1A–16A, quiz 17A–19A.
- Weber L, Rickli H, Haager PK, Joerg L, Weilenmann D, Brenner R. 2019. Haemodynamic mechanisms and long-term prognostic impact of pulmonary hypertension in patients with severe aortic stenosis undergoing valve replacement. *Eur J Heart Fail*;21:172–181.
- Yaghi S, Novikov A, Trandafirescu T. 2020. Clinical update on pulmonary hypertension. *J Investig Med*: 68(4):821-827. doi:10.1136/jim-2020-001291
- Yang JZ, Fernandes TM, Kim NH, Poch DS, Kerr KM, Lombardi S, Melber D, Kelly T, Papamatheakis DG. 2021. Pregnancy and pulmonary arterial hypertension: a case series and literature review. *Am J Obstet Gynecol MFM*. 2021 Jul;3(4):100358. doi: 10.1016/j.ajogmf.2021.100358. Epub Mar 27. PMID: 33785463.
- Yap SC, Drenthen W, Meijboom FJ, Moons P, Mulder BJ, Vliegen HW, van Dijk AP, Jaddoe VW, Steegers EA, Roos-Hesselink JW, Pieper PG. 2009. Comparison of pregnancy outcomes in women with repaired versus unrepaired atrial septal defect. *BJOG*: 116:1593–1601.
- Yuan, S.M. 2016. Eisenmeinger Syndrome in Pregnancy. *Braz J Cardiovasc Surg*: 31(4):325-9.
- Zeng WJ, Lu XL, Xiong CM, Shan GL, Liu ZH, Ni XH, Gu Q, Zhao ZH, Li JJ, He JG; 2011 .Sildenafil Therapy on Pulmonary Arterial Hypertension Assoicated With Different Types of Congenital Heart Disease Study

Group. The efficacy and safety of sildenafil in patients with pulmonary arterial hypertension associated with the different types of congenital heart disease. *Clin Cardiol*: Aug;34(8):513-8. doi: 10.1002/clc.20917. Epub 2011 Jun 15. PMID: 21678455; PMIKD: PMC6652345.

Zhang, Q., Xu, B., Lv, J., Wang, Z., Du, J. 2020. Safety and effect of sildenafil on treating paediatric pulmonary arterial hypertension : a meta-analysis on randomized controlled trials. *Cardiology in Young*. Page 1 of 8. Doi : 10.1017/S104795112000311X.

Zhou Q, Peng P, Liu X, Liu J, Gao J, Chen W. 2021 .Evaluation of maternal and fetal outcomes in pregnancy complicated with pulmonary arterial hypertension. *Ann Palliat Med*: Feb;10(2):1404-1410. doi: 10.21037/apm-20-551. Epub 2020 Oct 29. PMID: 33183028.