

DAFTAR PUSTAKA

- Adhikary et al., 2014, 2014. Coagulation testing in the perioperative period 58: 565–572. doi:10.4103/0019-5049.144657
- Al-Attar, N., Johnston, S., Jamous, N., Mistry, S., Ghosh, E., Gangoli, G., Danker, W., Etter, K., Ammann, E., 2019. Impact of bleeding complications on length of stay and critical care utilization in cardiac surgery patients in England. *J. Cardiothorac. Surg.* 14: 1–10. doi:10.1186/s13019-019-0881-3
- Anand, S.S., Yusuf, S., Pogue, J., Ginsberg, J.S., Hirsh, J., 2003. Relationship of activated partial thromboplastin time to coronary events and bleeding in patients with acute coronary syndromes who receive heparin. *Circulation* 107: 2884–2888. doi:10.1161/01.CIR.0000077530.53367.E9
- Arun, O., Celik, G., Oc, B., Unlu, A., Celik, J.B., Oc, M., Duman, A., 2015. Renal effects of coronary artery bypass graft surgery in diabetic and non-diabetic patients: A study with urinary neutrophil gelatinase-associated lipocalin and serum Cystatin C. *Kidney Blood Press. Res.* 40: 141–152. doi:10.1159/000368490
- Bartoszko, J., Karkouti, K., 2021. Managing the coagulopathy associated with cardiopulmonary bypass. *J. Thromb. Haemost.* 19: 617–632. doi:10.1111/jth.15195
- Butterwoth John, mackey David, W.J., 2019. Morgan & Mikhail's Clinical anesthesia. 6th ed, in: Clinical Anesthesiology 6th Edition. pp. 117–121.
- Cho, L., Kibbe, M.R., Bakaeen, F., Aggarwal, N.R., Davis, M.B., Karmalou, T., Lawton, J.S., Ouzounian, M., Preventza, O., Russo, A.M., Shroyer, A.L.W., Zwischenberger, B.A., Lindley, K.J., 2021. Cardiac Surgery in Women in the Current Era: What Are the Gaps in Care? *Circulation* 144: 1172–1185. doi:10.1161/CIRCULATIONAHA.121.056025
- Colson, P.H., Gaudard, P., Fellahi, J.L., Bertet, H., Fauconie, M., Amour, J., Blanloieil, Y., Lanquetot, H., Ouattara, A., Picot, M.C., 2016. Active bleeding after cardiac surgery: A prospective observational multicenter study. *PLoS One* 11: 1–14. doi:10.1371/journal.pone.0162396
- Davis, P.J., Wilson, A.S., Landsman, I.S., Pigula, F., Siewers, R., Fertal, K.M., 1998. the Effects of Cardiopulmonary Bypass on Remifentanil Pharmacokinetics. *Anesthesiology* 89: 1319A. doi:10.1097/00000542-199809210-00075
- Doelare, S.A.N., Oukrich, S., Ergin, K., Jongkind, V., Wiersema, A.M., Lely, R.J., Ebbin, H.P., Yeung, K.K., Hoksbergen, A.W.J., 2023. Major Bleeding During Thrombolytic Therapy for Acute Lower Limb Ischaemia: Value of Laboratory Tests for Clinical Decision Making, 17 Years of Experience. *Eur. J. Vasc. Endovasc. Surg.* 65: 398–404. doi:10.1016/j.ejvs.2022.11.010
- Drolz, A., Horvatits, T., Roedl, K., Rutter, K., Staufer, K., Kneidinger, N.,



Holzinger, U., Zauner, C., Schellongowski, P., Heinz, G., Perkmann, T., Kluge, S., Trauner, M., Fuhrmann, V., 2016. Coagulation parameters and major bleeding in critically ill patients with cirrhosis. *Hepatology* 64: 556–568. doi:10.1002/hep.28628

Dudas et al., 1992, 1992. Heparin Management Protocol for Cardiopulmonary Bypass Influences Postoperative Heparin Rebound but Not Bleeding. *Anesthesiology* 76: 393–401.

El-Hilali, Hilali H, E., BI, D., BM, T., 2016. Blood Transfusion Utility During Cardiopulmonary Bypass and Correlation with Key-Biochemical Laboratory Findings: A New Approach to Identify Preventive and Risk Factors (1-Year Practice at University Hospital Hassan-II of Fez). *Biochem. Anal. Biochem.* 5. doi:10.4172/2161-1009.1000290

Espinosa, A., Stenseth, R., Videm, V., Pleym, H., 2014. Comparison of three point-of-care testing devices to detect hemostatic changes in adult elective cardiac surgery: A prospective observational study. *BMC Anesthesiol.* 14: 1–7. doi:10.1186/1471-2253-14-80

Garg, R., Grover, A., McGurk, S., Rawn, J.D., 2013. Predictors of hyperglycemia after cardiac surgery in nondiabetic patients. *J. Thorac. Cardiovasc. Surg.* 145: 1083–1087. doi:10.1016/j.jtcvs.2012.07.089

Garton, H.J.L., 2016. Coagulation studies in preoperative neurosurgery patients. *Anticoagulation Hemost. Neurosurg.* 285–296. doi:10.1007/978-3-319-27327-3_21

Gibbs, N.M., 2019. Hensley's Practice Approach to Cardiothoracic Anesthesia. 6th edition.

Guzzetta, N.A., Allen, N.N., Wilson, E.C., Foster, G.S., Ehrlich, A.C., Miller, B.E., 2015. Excessive Postoperative Bleeding and Outcomes in Neonates Undergoing Cardiopulmonary Bypass 120: 405–410. doi:10.1213/ANE.0000000000000531

Hamilton, L.A., Abbott, G. V, Cooper, J.B., 2022. High-Risk Non-ST Elevation Acute Coronary Syndrome Outcomes in Patients Treated with Unfractionated Heparin Monitored Using Anti-Xa Concentrations Versus Activated Partial Thromboplastin Time 48: 389–395. doi:10.1310/hpj4805-389

Hirsh, J., Anand, S.S., Halperin, J.L., Fuster, V., 2001. Guide to anticoagulant therapy: Heparin: A statement for healthcare professionals from the American Heart Association. *Circulation* 103: 2994–3018. doi:10.1161/01.CIR.103.24.2994

Hirsh, J., Dalen, J.E., Deykin, D., Toller, L., 1992. Heparin: Mechanism of Action, Pharmacokinetics, Dosing Considerations, Monitoring, Efficacy, and Safety. *Chest* 102: 337S–351S. doi:10.1378/chest.102.4_supplement.337s



- Huang, X., Cheng, Z., Xu, Y., Xia, L., Zhan, Z., Xu, T., Cao, Y., Han, Z., 2021. Associations of Clinical Characteristics and Etiology With Death in Hospitalized Chinese Children After Spontaneous Intracerebral Hemorrhage: A Single-Center, Retrospective Cohort Study. *Front. Pediatr.* 8: 1–8. doi:10.3389/fped.2020.576077
- Jousilahti, P., Vartiainen, E., Tuomilehto, J., Puska, P., 1999. Sex, age, cardiovascular risk factors, and coronary heart disease: A prospective follow-up study of 14 786 middle-aged men and women in Finland. *Circulation* 99: 1165–1172. doi:10.1161/01.CIR.99.9.1165
- Kaya, K., Cavalli, R., Telli, A., Soyal, M.F.T., Aslan, A., Gokaslan, G., Mursel, S., Tasoz, R., 2010. Off-pump versus on-pump coronary artery bypass grafting in acute coronary syndrome: A clinical analysis. *J. Cardiothorac. Surg.* 5: 1–8. doi:10.1186/1749-8090-5-31
- Kemenkes RI, 2014. Situasi kesehatan jantung. *Pus. data dan Inf. Kementeri. Kesehat. RI* 3. doi:10.1017/CBO9781107415324.004
- Kendir, C., van den Akker, M., Vos, R., Metsemakers, J., 2018. Cardiovascular disease patients have increased risk for comorbidity: A cross-sectional study in the Netherlands. *Eur. J. Gen. Pract.* 24: 45–50. doi:10.1080/13814788.2017.1398318
- Liu, D., Liu, B., Liang, Z., Yang, Z., Ma, F., Yang, Y., Hu, W., 2021. Acute Kidney Injury following Cardiopulmonary Bypass: A Challenging Picture. *Oxid. Med. Cell. Longev.* 2021. doi:10.1155/2021/8873581
- Maharani, A., Sujarwoto, Praveen, D., Oceandy, D., Tampubolon, G., Patel, A., 2019. Cardiovascular disease risk factor prevalence and estimated 10-year cardiovascular risk scores in Indonesia: The SMARTHealth Extend study. *PLoS One* 14: 1–13. doi:10.1371/journal.pone.0215219
- Murphy, G.S., Hessel, E.A., Groom, R.C., 2009. Optimal perfusion during cardiopulmonary bypass: An evidence-based approach. *Anesth. Analg.* 108: 1394–1417. doi:10.1213/ane.0b013e3181875e2e
- Nadeem, R., Agarwal, S., Jawed, S., Yasser, A., Altahmody, K., 2019. Impact of Cardiopulmonary Bypass Time on Postoperative Duration of Mechanical Ventilation in Patients Undergoing Cardiovascular Surgeries: A Systemic Review and Regression of Metadata. *Cureus* 11: 1–7. doi:10.7759/cureus.6088
- Ozolina, A., Strike, E., Harlamovs, V., Porite, N., 2009. Excessive Bleeding After Cardiac Surgery in Adults: Reasons and Management. *Acta Chir. Latv.* 9: 86–91. doi:10.2478/v10163-010-0017-2
- Ozolina, A., Strike, E., Sondore, A., Vanags, I., 2012. Coagulation tests and their association with postoperative blood loss after cardiac surgery with cardiopulmonary bypass. *Acta medica Litu.* 19: 166–171.

doi:10.6001/actamedica.v19i3.2442

Paparella, D., Brister, S.J., Buchanan, M.R., 2004. Coagulation disorders of cardiopulmonary bypass: A review. *Intensive Care Med.* 30: 1873–1881.
doi:10.1007/s00134-004-2388-0

Rahajuningsih, Sukorini, U., Hernaningsih, Y., Hajat, A., 2019. Pemeriksaan Hemostasis, I. ed. Perhimpunan Dokter Spesialis Patologi Klinik dan Kedokteran Laboratorium Indonesia, JAKARTA.

Ranucci, M., Pistuddi, V., Di Dedda, U., Menicanti, L., De Vincentiis, C., Baryshnikova, E., 2019. Platelet function after cardiac surgery and its association with severe postoperative bleeding: the PLATFORtM study. *Platelets* 30: 908–914. doi:10.1080/09537104.2018.1535706

Ripoll, J.G., Warner, M.A., Hanson, A.C., Marquez, A., Dearani, J.A., Nuttall, G.A., Kor, D.J., Mauermann, W.J., Smith, M.M., 2023. Coagulation Tests and Bleeding Classification After Cardiopulmonary Bypass: A Prospective Study. *J. Cardiothorac. Vasc. Anesth.* 37: 933–941.
doi:10.1053/j.jvca.2023.01.038

Rivera et al., 2007, 2007. Factors associated with excessive bleeding in cardiopulmonary bypass patients: A nested case-control study. *J. Cardiothorac. Surg.* 2: 1–7. doi:10.1186/1749-8090-2-17

Samy, M., Fahmy, T.S., Effat, H., Ashour, A., 2017. Serum Cystatin C as a predictor of cardiac surgery associated-acute kidney injury in patients with normal preoperative renal functions. A prospective cohort study. *Egypt. J. Crit. Care Med.* 5: 41–47. doi:10.1016/j.ejccm.2017.02.002

Shekar, P.S., 2006. On-pump and off-pump coronary artery bypass grafting. *Circulation* 113: 51–52. doi:10.1161/CIRCULATIONAHA.105.566737

Sniecinski, R.M., Chandler, W.L., 2011. Activation of the Hemostatic System During 113: 1319–1333. doi:10.1213/ANE.0b013e3182354b7e

Soelistijo, S., 2021. Pedoman Pengelolaan dan Pencegahan Diabetes Melitus Tipe 2 Dewasa di Indonesia 2021. *Glob. Initiat. Asthma* 46.

Spahn, D.R., Bouillon, B., Cerny, V., Coats, T.J., Duranteau, J., Fernández-Mondéjar, E., Filipescu, D., Hunt, B.J., Komadina, R., Nardi, G., Neugebauer, E., Ozier, Y., Riddez, L., Schultz, A., Vincent, J.L., Rossaint, R., 2013. Management of bleeding and coagulopathy following major trauma: An updated European guideline. *Crit. Care* 17. doi:10.1186/cc12685

Surgery, C., 2022. Key Concepts Anesthesia for Cardiovascular Surgery : Introduction. *Anesth. Cardiovasc. Surg.* 1–51.

Tanaka, C., Wiargitha, K., Golden, N., 2018. Early coagulopathy as risk factor of mortality in abdominal trauma patients in Sanglah General Hospital period 2015-2016. *Medicina (B. Aires)*. 49: 382–387.



UNIVERSITAS
GADJAH MADA

Activated Partial Thromboplastin Time (APTT) sebagai Prediktor terhadap Derajat Keparahan Perdarahan

Pasien Operasi Bedah Jantung Cardiopulmonary Bypass

Sulistyowati, Dr.dr. Usi Sukorini, M. Kes, Sp.PK(K).; dr. Ira Puspitawati, M. Kes, Sp.PK(K)

Universitas Gadjah Mada, 2023 | Diunduh dari <http://etd.repository.ugm.ac.id/>

doi:10.15562/Medicina.v49i3.373

Taneja, R., Marwaha, G., Sinha, P., Quantz, M., Stitt, L., Gao, R., Subramanian, S., Schaus, M., Keeney, M., Chin-Yee, I., Murkin, J., 2009. Elevated activated partial thromboplastin time does not correlate with heparin rebound following cardiac surgery. *Can. J. Anesth.* 56: 489–496. doi:10.1007/s12630-009-9098-6

Truman, K.J., Jr, C.W.H., Spitznagel, E., Lappas, D.G., 1996. George J. Despotis, 13–21.

Vishwanathan, K., Chhajwani, S., Gupta, A., Vaishya, R., 2021. Evaluation and management of haemorrhagic shock in polytrauma: Clinical practice guidelines. *J. Clin. Orthop. Trauma* 13: 106–115.
doi:10.1016/j.jcot.2020.12.003

Woodman, B.R.C., Harker, L.A., 1990. Bleeding Complications Associated With Cardiopulmonary Bypass. *Blood* 76: 1680–1697.
doi:10.1182/blood.V76.9.1680.1680

Zhang, H., Tian, W., Qi, G., Sun, L., Wei, X., 2022. Activated Partial Thromboplastin Time and Mortality in Coronary Artery Bypass Grafting Patients. *Dis. Markers* 2022. doi:10.1155/2022/2918654