

BAB 7

KESIMPULAN DAN SARAN

7.1 Kesimpulan

Pada penelitian ini, peneliti ingin mengetahui apakah ada perbedaan lama rawat inap antara pasien *hip fracture* dengan dan tanpa komorbid serta komplikasi di Rumah Sakit Orthopedi dan Traumatologi Surabaya. Penelitian ini merupakan analitik observational dengan desain penelitian *cross sectional*. Penelitian dilakukan secara retrospektif dengan menggunakan rekam medis pasien *hip fracture*. Uji statistik yang digunakan adalah uji regresi logistik. Hasil yang didapatkan adalah nilai $p=0,660$ ($p=0,05$). Dapat disimpulkan bahwa tidak terdapat perbedaan lama rawat inap antara pasien *hip fracture* dengan dan tanpa komorbid serta komplikasi.

7.2 Saran

7.2.1 Bagi Tenaga Kesehatan

Memberikan edukasi kepada tenaga kesehatan terhadap penanganan pre-op dan post-op serta mengikuti *clinical pathway* khusus untuk *hip fracture*.

7.2.3 Bagi Peneliti Selanjutnya

Penelitian selanjutnya dapat dilakukan mencari mengenai kualitas hidup pasien dan *survival rate* pasca operasi. Peneliti juga dapat dilakukan di Rumah Sakit Umum agar mencari perbedaan pada lama rawat inap dan komorbid dengan penanganan yang berbeda.

DAFTAR PUSTAKA

1. Solomon L, Warwick D, Nayagam S. Apley and Solomon ' s. 2014.
2. Michael Lewiecki E, Wright NC, Curtis JR, Siris E, Gagel RF, Saag KG, et al. Hip fracture trends in the United States, 2002 to 2015. *Osteoporos Int* [Internet]. 2017;1–6. Available from: <https://link-springer-com.ezproxy.ub.gu.se/content/pdf/10.1007%2Fs00198-017-4345-0.pdf>
3. Osteoporosis IF. Hip fracture incidence map. 2013; Available from: <http://www.iofbonehealth.org/facts-and-statistics/hip-fracture-incidence-map>
4. Basques B a, Bohl DD, Golinvaux NS, Leslie MP, Baumgaertner MR, Grauer JN. Postoperative length of stay and thirty-day readmission following geriatric hip fracture: an analysis of 8,434 patients. *J Orthop Trauma* [Internet]. 2014;29(3):115–20. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25210835>
5. Rodriguez-Fernandez P, Adarraga-Cansino D, Carpintero P. Effects of delayed hip fracture surgery on mortality and

- morbidity in elderly patients. Clin Orthop Relat Res. 2011;469(11):3218–21.
6. Novack V, Jotkowitz A, Etzion O, Porath A. Does delay in surgery after hip fracture lead to worse outcomes? A multicenter survey. Int J Qual Heal Care. 2007;19(3):170–6.
 7. Ireland AW, Kelly PJ, Cumming RG. Total hospital stay for hip fracture: Measuring the variations due to pre-fracture residence, rehabilitation, complications and comorbidities. BMC Health Serv Res. 2015;15(1):1–9.
 8. Menzies IB, Mendelson DA, Kates SL, Friedman SM. The Impact of Comorbidity on Perioperative Outcomes of Hip Fractures in a Geriatric Fracture Model. Geriatr Orthop Surg Rehabil. 2012;3(3):129–34.
 9. Standring S, Borley NR, Collins P, Crossman AR, Gatzoulis MA, Healy JC, et al. Gray's Anatomy For Students. Vol. 57, Gray's Anatomy. 2015. 225-397 p.
 10. Davenport M. Hip fracture in emergency medicine [Internet]. 2016. Available from: <https://emedicine.medscape.com/article/825363-overview#a4>
 11. Marshall LM; Zmuda JM; Chan BK; Barrett-Connor E; Cauley JA; Ensrud KE; Lang TF; Orwoll ES. Race and ethnic

variation in proximal femur structure and BMD among older men. *Var femur Prox Fract*. 2008;

12. Hernlund E, Svedbom A, Ivergård M, Compston J, Cooper C, Stenmark J, et al. Osteoporosis in the European Union: Medical management, epidemiology and economic burden: A report prepared in collaboration with the International Osteoporosis Foundation (IOF) and the European Federation of Pharmaceutical Industry Associations (EFPIA). *Arch Osteoporos*. 2013;8(1–2).
13. Guerado E, Sandalio RM, Caracuel Z, Caso E. Understanding the pathogenesis of hip fracture in the elderly, osteoporotic theory is not reflected in the outcome of prevention programmes. *World J Orthop* [Internet]. 2016;7(4):218. Available from: <http://www.wjgnet.com/2218-5836/full/v7/i4/218.htm>
14. Stewart A, Calder LD, Torgerson DJ, Seymour DG, Ritchie LD, Iglesias CP, et al. Prevalence of hip fracture risk factors in women aged 70 years and over. *QJM - Mon J Assoc Physicians*. 2000;93(10):677–80.
15. Van Embden D, Rhemrev SJ, Genelin F, Meylaerts SAG, Roukema GR. The reliability of a simplified Garden

- classification for intracapsular hip fractures. *Orthop Traumatol Surg Res.* 2012;98(4):405–8.
16. Law MR, Hackshaw AK. A meta-analysis of cigarette smoking, bone mineral density and risk of hip fracture: recognition of a major effect. *BMJ.* 1997;315(7112):841–6.
 17. Tarazona-Santabalbina FJ, Belenguer-Varea Á, Rovira E, Cuesta-Peredó D. Orthogeriatric care: Improving patient outcomes. Vol. 11, *Clinical Interventions in Aging.* 2016. p. 843–56.
 18. Weinlein JC. Fractures and Dislocations of the Hip. In: *Campbell’s Operative Orthopaedics* [Internet]. 2013. p. 2725–2775.e7. Available from: <http://linkinghub.elsevier.com/retrieve/pii/B9780323072434000554>
 19. Giovanni D. Hip Fracture [Internet]. 2012. Available from: https://www.physio-pedia.com/Hip_Fracture
 20. Tay E. Hip fractures in the elderly: Operative versus nonoperative management. *Singapore Med J.* 2016;57(4):178–81.
 21. Liu J, Ahn J, Elkassabany NM. Optimizing perioperative care for patients with Hip fracture. *Anesthesiol Clin.*

2014;32(4):823–39.

22. Cooley MR, Koval KJMD. Hip Fracture: Epidemiology and Risk Factors. Tech Orthop Hip Fract Elder [Internet]. 2004;19(3):104–14. Available from: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=yrovftg&AN=00013611-200409000-00002>
23. Wong GTC, Sun NCH. Providing perioperative care for patients with hip fractures. Osteoporos Int [Internet]. 2010;21(S4):547–53. Available from: <http://link.springer.com/10.1007/s00198-010-1400-5>
24. Lawrence VA, Hilsenbeck SG, Noveck H, Poses RM, Carson JL. Medical complications and outcomes after hip fracture repair. Arch Intern Med. 2002;162(18):2053–7.
25. Fleisher L a., Fleischmann KE, Auerbach AD, Barnason S a., Beckman J a., Bozkurt B, et al. 2014 ACC/AHA Guideline on Perioperative Cardiovascular Evaluation and Management of Patients Undergoing Noncardiac Surgery [Internet]. Vol. 64, Journal of the American College of Cardiology. 2014. 77-137 p. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25091544>

26. Lakshminarasimhachar A, Smetana GW. Preoperative Evaluation. Estimation of Pulmonary Risk. Vol. 34, Anesthesiology Clinics. 2016. p. 71–88.
27. Montes De Oca M, Celli BR. Mouth occlusion pressure, CO₂ response and hypercapnia in severe chronic obstructive pulmonary disease. Eur Respir J. 1998;12(3):666–71.
28. Kanis J, Johnell O, Gullberg B, Allander E, Elffors L, Ranstam J, et al. Risk factors for hip fracture in men from southern europe: The MEDOS study. Osteoporos Int. 1999;9(1):45–54.
29. Koval KJ, Rosenberg AD, Zuckerman JD, Aharonoff GB, Skovron ML, Bernstein RL, et al. Does blood transfusion increase the risk of infection after hip fracture? J Orthop Trauma [Internet]. 1997;11(4):260-5-6. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/9258823>
30. Najm WI. Peptic Ulcer Disease. Prim Care - Clin Off Pract [Internet]. 2011;38(3):383–94. Available from: <http://dx.doi.org/10.1016/j.pop.2011.05.001>
31. Parker MJ, Gurusamy K. Internal fixation versus arthroplasty for intracapsular proximal femoral fractures in adults. Cochrane database Syst Rev [Internet].

2006;18(4):CD001708. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/17054139>

32. Jong W SR. Buku Ajar Ilmu Bedah. In: Buku Ajar Ilmu Bedah. 2005. p. 646.
33. Hhg H, Mj P, Handoll HHG, Parker MJ. Conservative versus operative treatment for hip fractures in adults. Cochrane database Syst Rev [Internet]. 2008;(3):CD000337. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/20827544>
34. Guay J, Parker MJ, Griffiths R, Kopp S. Peripheral nerve blocks for hip fractures. Vol. 2017, Cochrane Database of Systematic Reviews. 2017.
35. Mehta SP, Roy JS. Systematic review of home physiotherapy after hip fracture surgery. Vol. 43, Journal of Rehabilitation Medicine. 2011. p. 477–80.
36. Kenneth J. Koval JDZ. Hip Fractures: A Practical Guide to Management. 2000. 340 p.
37. Harris WH. Traumatic arthritis of the hip after dislocation and acetabular fractures: treatment by mold arthroplasty. Vol. 51, J Bone Joint Surg Am. 1969. p. 737–55.
38. Valderas JM, Starfield B, Sibbald B, Salisbury C, Rloand M. Defining comorbidity: implications for understanding health

and health services. *Ann Fam Med*. 2009;7:357–63.

39. Wukich DK. Diabetes and its negative impact on outcomes in orthopaedic surgery. *World J Orthop* [Internet]. 2015;6(3):331. Available from: <http://www.wjgnet.com/2218-5836/full/v6/i3/331.htm>
40. Dix P, Howell S. Survey of cancellation rate of hypertensive patients undergoing anaesthesia and elective surgery. *Br J Anaesth*. 2001;86(6):789–93.
41. Huang L, Li J, Jiang Y. Association between hypertension and deep vein thrombosis after orthopedic surgery: A meta-analysis. *Eur J Med Res*. 2016;21(1):1–7.
42. Mathew RO, Hsu WH, Young Y. Effect of comorbidity on functional recovery after hip fracture in the elderly. *Am J Phys Med Rehabil*. 2013;92(8):686–96.
43. Friedman SM, Menzies IB, Bukata S V., Mendelson DA, Kates SL. Dementia and Hip Fractures: Development of a Pathogenic Framework for Understanding and Studying Risk. *Geriatr Orthop Surg Rehabil*. 2010;1(2):52–62.
44. Lakomkin N, Kothari P, Dodd AC, Vanhouten JP, Yarlagadda M, Collinge CA, et al. Higher Charlson Comorbidity Index Scores Are Associated with Increased Hospital Length of Stay

- after Lower Extremity Orthopaedic Trauma. *J Orthop Trauma*. 2017;31(1):21–6.
45. Rotter T, Kinsman L, James EL, Machotta A, Gothe H, Willis J, et al. Clinical Pathways: Effects on Professional Practice, Patient Outcomes, Length of Stay and Hospital Costs. *Cochrane Database Syst Rev*. 2010;(3):q.
 46. Commission A, Healthcare Q. length of stay in hospital by peer group – 65 years and over Hip fracture average length of stay in hospital by peer group – 65 years and over. 2012;165–70.
 47. Graves N, Weinhold D, Tong E, Birrell F, Doidge S, Ramritu P, et al. Effect of Healthcare-Acquired Infection on Length of Hospital Stay and Cost. *Infect Control Hosp Epidemiol* [Internet]. 2007;28(3):280–92. Available from: https://www.cambridge.org/core/product/identifier/S0195941700050839/type/journal_article
 48. Article O. Gender differences for non-fatal unintentional fall related injuries among older adults. 2005;(December 2001):115–9.
 49. Mangram A, Moeser P, Corneille MG, Prokuski LJ, Zhou N, Sohn J, et al. Geriatric trauma hip fractures: is there a

difference in outcomes based on fracture patterns ? 2014;1–8.

50. Burgers PTPW, Lieshout EMM Van. Implementing a clinical pathway for hip fractures ; effects on hospital length of stay and complication rates in five hundred and twenty six patients. 2013;