

DAFTAR PUSTAKA

- Abdel Hadi, A. (2015). Incidence of retinal redetachment after silicone oil removal in cases of severe eye injuries operated during the 25th of January Egyptian Revolution. *Journal of the Egyptian Ophthalmological Society*, 108(1), 15. <https://doi.org/10.4103/2090-0686.160331>
- Adhi, M. I., & Siyal, N. (2019). Retinal re-detachments after removal of silicone oil: Frequency and timings in a retrospective clinical study. *JPMA. The Journal of the Pakistan Medical Association*, 69(12), 1822–1826. <https://doi.org/10.5455/JPMA.4988>
- Alovisi, C., Panico, C., Sanctis, U. De, & Eandi, C. M. (2017). Vitreous Substitutes: Old and New Materials in Vitreoretinal Surgery. *Journal of Ophthalmology*, 2017. <https://doi.org/10.1155/2017/3172138>
- American Academy of Ophthalmology. (2022). Retina and Vitreous. In *Basic and Clinical Science Course* (Issue 2). American Academy of Ophthalmology.
- Ananikas, K., Stavrakas, P., Kroupis, C., Christou, E. E., Brouzas, D., Petrou, P., & Papaconstantinou, D. (2022). Molecular biologic milieu in rhegmatogenous retinal detachment and proliferative vitreoretinopathy: a literature review. *Ophthalmic Research*. <https://doi.org/10.1159/000525530>
- Asaria, R. H. Y. (2004). Silicone oil concentrates fibrogenic growth factors in the retro-oil fluid. *British Journal of Ophthalmology*, 88(11), 1439–1442. <https://doi.org/10.1136/bjo.2003.040402>
- Asensio-Sánchez, V. M., Collazos, J. M., & Cantón, M. (2015). Interleukin-6 concentrations in the vitreous body of patients with retinal detachment. *Archivos de La Sociedad Española de Oftalmología (English Edition)*, 90(11), 527–530. <https://doi.org/10.1016/j.oftale.2015.08.016>
- Barca, F., Caporossi, T., & Rizzo, S. (2014). Silicone Oil : Different Physical Proprieties and Clinical Applications. *BioMed Research International*, 2014. <https://doi.org/10.1155/2014/502143>
- Brazitikos, P. D., Androudi, S., D'Amico, D. J., Papadopoulos, N., Dimitrakos, S. A., Derekis, D. L., Alexandridis, A., Lake, S., & Stangos, N. T. (2003). Perfluorocarbon liquid utilization in primary vitrectomy repair of retinal detachment with multiple breaks. *Retina*, 23(5), 615–621. <https://doi.org/10.1097/00006982-200310000-00002>
- Burton, B. Y. T. C. (1989). THE INFLUENCE OF REFRACTIVE ERROR AND LATTICE DEGENERATION ON THE INCIDENCE OF RETINAL DETACHMENT *. *Tr. Am. Ophthalmology Society*, LXXXVII.
- Charteris, D. G. (1995). Proliferative vitreoretinopathy: Pathobiology, surgical management, and adjunctive treatment. *British Journal of Ophthalmology*, 79(10), 953–960. <https://doi.org/10.1136/bjo.79.10.953>
- Christensen, U., & Villumsen, J. (2005). Prognosis of pseudophakic retinal detachment. *Journal of Cataract and Refractive Surgery*, 31(2), 354–358. <https://doi.org/10.1016/j.jcrs.2004.04.067>
- Colthurst, M. J., Williams, R. L., Hiscott, P. S., & Grierson, I. (2000). Biomaterials used in the posterior segment of the eye. *Biomaterials*, 21, 649–665.
- Cox, M. S., Schepens, C. L., & Freeman, H. M. (1966). Retinal Detachment Due to Ocular Contusion. *Archives of Ophthalmology*, 76(5), 678–685. <https://doi.org/10.1001/archopht.1966.03850010680010>

- Crisp, A. (2015). *Effect of Silicone Oil Viscosity*.
- Dai, Y., Dai, C., & Sun, T. (2020). Inflammatory mediators of proliferative vitreoretinopathy: hypothesis and review. *International Ophthalmology*, 40(6), 1587–1601. <https://doi.org/10.1007/s10792-020-01325-4>
- Dinareello, C. A. (2000). Proinflammatory cytokines. *Chest*, 118(2), 503–508. <https://doi.org/10.1378/chest.118.2.503>
- Donati, S., Caprani, S. M., Airaghi, G., Vinciguerra, R., Bartalena, L., Testa, F., Mariotti, C., Porta, G., Simonelli, F., & Azzolini, C. (2014). Vitreous substitutes: The present and the future. *BioMed Research International*, 2014. <https://doi.org/10.1155/2014/351804>
- Doslak, M. J. (1988). A Theoretical study of the effect of silicone oil on the electroretinogram. *Investigative Ophthalmology and Visual Science*, 29(12), 1881–1884.
- Duan, A., She, H., & Qi, Y. (2011). Complications after heavy silicone oil tamponade in complicated retinal detachment. *Retina*, 31(3), 547–552. <https://doi.org/10.1097/IAE.0b013e3181eef2fd>
- Ehrlich, R., Niederer, R., Ahmad, N., & Polkinghorne, P. (2013). Timing of acute macula-on rhegmatogenous retinal detachment repair. *Retina*, 33(1), 105–110. <https://doi.org/10.1097/IAE.0b013e318263ceca>
- Feltgen, N., & Walter, P. (2014). Rhegmatogenous Retinal Detachment—an Ophthalmologic Emergency.pdf. *Deutsches Arzteblatt International*, 111, 12–22.
- Ferreira, L. B., Ashander, L. M., Appukuttan, B., Ma, Y., Williams, K. A., Best, G., & Smith, J. R. (2023). Human retinal endothelial cells express functional interleukin-6 receptor. *Journal of Ophthalmic Inflammation and Infection*, 13(1). <https://doi.org/10.1186/s12348-023-00341-6>
- Garg, A., & Alio Jorge, L. (2010). Surgical Techniques in Ophthalmology (Retina and Vitreous Surgery). *Surgical Techniques in Ophthalmology (Retina and Vitreous Surgery)*. <https://doi.org/10.5005/jp/books/11712>
- Garweg, J. G., Zandi, S., Pfister, I., Rieben, R., Skowronska, M., & Tappeiner, C. (2019). Cytokine profiles of phakic and pseudophakic eyes with primary retinal detachment. In *Acta Ophthalmologica* (Vol. 97, Issue 4, pp. e580–e588). <https://doi.org/10.1111/aos.13998>
- Ghasemi, H. (2018). Roles of IL-6 in Ocular Inflammation: A Review. In *Ocular Immunology and Inflammation* (Vol. 26, Issue 1, pp. 37–50). Taylor and Francis Ltd. <https://doi.org/10.1080/09273948.2016.1277247>
- Goffstein, R., & Burton, T. C. (n.d.). Differentiating Traumatic From Nontraumatic Retinal Detachment. *Ophthalmology*, 89(4), 361–368. [https://doi.org/10.1016/S0161-6420\(82\)34783-1](https://doi.org/10.1016/S0161-6420(82)34783-1)
- Haarman, A. E. G., Enthoven, C. A., Willem Tideman, J. L., Tedja, M. S., Verhoeven, V. J. M., & Klaver, C. C. W. (2020). The complications of myopia: A review and meta-analysis. *Investigative Ophthalmology and Visual Science*, 61(4), 1–3. <https://doi.org/10.1167/iovs.61.4.49>
- Heijink, I. H., Vellenga, E., Borger, P., Postma, D. S., De Monchy, J. G. R., & Kauffman, H. F. (2002). *Interleukin-6 promotes the production of interleukin-4 and interleukin-5 by interleukin-2-dependent and-independent mechanisms in freshly isolated human T cells*.

- Herrmann, W. A., Heimann, H., & Helbig, H. (2010). Effekt auf den hinteren Augenabschnitt. *Ophthalmologe*, 107(10), 975–986. <https://doi.org/10.1007/s00347-010-2236-2>
- Jakobsson, G., Sundelin, K., Zetterberg, H., & Zetterberg, M. (2015). Increased levels of inflammatory immune mediators in vitreous from pseudophakic eyes. *Investigative Ophthalmology and Visual Science*, 56(5), 3407–3414. <https://doi.org/10.1167/iovs.15-16837>
- Johansson, K., Malmström, M., & Ghosh, F. (2006). Tailored vitrectomy and laser photocoagulation without scleral buckling for all primary rhegmatogenous retinal detachments. *British Journal of Ophthalmology*, 90(10), 1286–1291. <https://doi.org/10.1136/bjo.2006.098202>
- Joussen, A. M., & Wong, D. (2008). The concept of heavy tamponades - Chances and limitations. In *Graefe's Archive for Clinical and Experimental Ophthalmology* (Vol. 246, Issue 9, pp. 1217–1224). <https://doi.org/10.1007/s00417-008-0861-0>
- Kartasasmita, A., Kusdiono, W., Virgana, R., & Boesorie, S. (2017). *In Vivo* Emulsification Analysis of 1000 cs and 5000 cs Silicone Oil after Rhegmatogenous Retinal Detachment Vitrectomy Surgery. *Open Journal of Ophthalmology*, 07(04), 231–239. <https://doi.org/10.4236/ojoph.2017.74031>
- Kim, M. S., Park, S. J., Park, K. H., & Woo, S. J. (2019). Different Mechanistic Association of Myopia with Rhegmatogenous Retinal Detachment between Young and Elderly Patients.pdf. *BioMed Research International*, 2019, 6.
- Kleinberg, T. T., Tzekov, R. T., Stein, L., Ravi, N., & Kaushal, S. (2011). Vitreous Substitutes: A Comprehensive Review. *Survey of Ophthalmology*, 56(4), 300–323. <https://doi.org/10.1016/j.survophthal.2010.09.001>
- Klettner, A., Harms, A., Waetzig, V., Tode, J., Purtskhvanidze, K., & Roider, J. (2020). Emulsified silicone oil is taken up by and induces pro-inflammatory response in primary retinal microglia. *Graefe's Archive for Clinical and Experimental Ophthalmology*, 258(9), 1965–1974. <https://doi.org/10.1007/s00417-020-04763-z>
- Kuhn, F., & Aylward, B. (2013). Rhegmatogenous retinal detachment: A reappraisal of its pathophysiology and treatment. *Ophthalmic Research*, 51(1), 15–31. <https://doi.org/10.1159/000355077>
- Kumar, A. (2018). *Retina Medical and Surgical Management* (A. Kumar & R. Ravani, Eds.). The Health Sciences Publisher.
- Kumar, A., Kumar, A., & Ravani, R. (2018). *Retina Medical and Surgical Management*. The Health Sciences Publisher.
- La Heij, E. C., Van De Waarenburg, M. P. H., Blaauwgeers, H. G. T., Kessels, A. G. H., Liem, A. T. A., Theunissen, C., Steinbusch, H., & Hendrikse, F. (2002). Basic fibroblast growth factor, glutamine synthetase, and interleukin-6 in vitreous fluid from eyes with retinal detachment complicated by proliferative vitreoretinopathy. *American Journal of Ophthalmology*, 134(3), 367–375. [https://doi.org/10.1016/S0002-9394\(02\)01536-2](https://doi.org/10.1016/S0002-9394(02)01536-2)
- Lang, G. K., Recker, D., Spraul, C. W., & Gerhard, K. (2000). *A Short Textbook : Ophthalmology*. Thieme.

- Lewis, H., Aaberg, T. M., & Abrams, G. W. (1991). Causes of failure after initial vitreoretinal surgery for severe proliferative vitreoretinopathy. *American Journal of Ophthalmology*, 111(1), 8–14. [https://doi.org/10.1016/S0002-9394\(14\)76889-8](https://doi.org/10.1016/S0002-9394(14)76889-8)
- Liu, Z., Fu, G., & Liu, A. (2017). The relationship between inflammatory mediator expression in the aqueous humor and secondary glaucoma incidence after silicone oil tamponade. *Experimental and Therapeutic Medicine*, 14(6), 5833–5836. <https://doi.org/10.3892/etm.2017.5269>
- Lucke, K., Laqua, H., Heidelberg, S. B., York, N., Paris, L., Hong, T., & Barcelona, K. (1990). *Silicone Oil in the Treatment of Complicated Retinal Detachments* (1st ed). Springer-Verlag. <https://doi.org/10.1007/978-3-642-84266-5> e-ISBN-13:978-3-642-84266-5 This
- Ludwig, C. A., Vail, D., Al-Moujahed, A., Callaway, N. F., Saroj, N., Moshfeghi, A., & Moshfeghi, D. M. (2023). Epidemiology of rhegmatogenous retinal detachment in commercially insured myopes in the United States. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-35520-x>
- Mesquida, M., Leszczynska, A., Llorenç, V., & Adán, A. (2014). Interleukin-6 blockade in ocular inflammatory diseases. In *Clinical and Experimental Immunology* (Vol. 176, Issue 3, pp. 301–309). <https://doi.org/10.1111/cei.12295>
- Mitry, D., Fleck, B. W., Wright, A. F., Campbell, H., & Charteris, D. G. (2010). Pathogenesis of rhegmatogenous retinal detachment: Predisposing anatomy and cell biology. *Retina*, 30(10), 1561–1572. <https://doi.org/10.1097/IAE.0b013e3181f669e6>
- Murray, P. I., Hoekzema, R., Von Haren, M. A. C., De Hon, F. D., & Kijlsra, A. (1990). Aqueous Humor Interleukin-6 Levels in Uveitis. In *Investigative Ophthalmology & Visual Science* (Vol. 31, Issue 5).
- Nagpal, M., & Videkar, R. (2012). Silicone oil removal. *Expert Review of Ophthalmology*, 9899(April), 87–96. <https://doi.org/10.1586/eop.11.79>
- Nakamura, K., Refojo, M. F., Crabtree, D. V, Pastor, J., & Leong, F. L. (1991). Ocular toxicity of low-molecular-weight components of silicone and fluorosilicone oils. *Investigative Ophthalmology and Visual Science*, 32(12), 3007–3020.
- Nakamura, K., Refojo, M. F., Crabtree, D. V, Pasror, J., & Leong, F.-L. (1991). *Investigative Ophthalmology & Visual Science Articles Ocular Toxicity of Low-Molecular-Weight Components of Silicone and Fluorosilicone Oils* (Vol. 32).
- Nakazawa, T., Kayama, M., Ryu, M., Kunikata, H., Watanabe, R., Yasuda, M., Kinugawa, J., Vavvas, D., & Miller, J. W. (2011). Tumor necrosis factor- α mediates photoreceptor death in a rodent model of retinal detachment. *Investigative Ophthalmology and Visual Science*, 52(3), 1384–1391. <https://doi.org/10.1167/iovs.10-6509>
- Odrobina, D., Gołębiewska, J., & Maroszyńska, I. (2017). CHOROIDAL THICKNESS CHANGES after VITRECTOMY with SILICONE OIL TAMPONADE for PROLIFERATIVE VITREORETINOPATHY RETINAL DETACHMENT. *Retina*, 37(11), 2124–2129. <https://doi.org/10.1097/IAE.0000000000001437>
- Olsen, T. W., Chang, T. S., & Sternberg, P. (1995). Retinal detachments associated with blunt trauma. *Seminars in Ophthalmology*, 10(1), 17–27. <https://doi.org/10.3109/08820539509059976>
- Oppenheim, J. J. (2001). Cytokines: Past, present, and future. *International Journal of Hematology*, 74(1), 3–8. <https://doi.org/10.1007/BF02982543>

- Pastor, J. C. (1998). MAJOR REVIEW Proliferative Vitreoretinopathy : An Overview. *SURVEY OF OPHTHALMOLOGY*, 43(1), 3–18.
- Peter, A. (1997). Pathogenic Vitreoretinopathy. *Archives of Ophthalmology*.
- Prazeres, J., Magalhães, O., Lucatto, L. F. A., Navarro, R. M., Moraes, N. S., Farah, M. E., Maia, A., & Maia, M. (2014). Heavy silicone oil as a long-term endotamponade agent for complicated retinal detachments. *BioMed Research International*, 2014. <https://doi.org/10.1155/2014/136031>
- Raczyńska, D., Mitrosz, K., Raczyńska, K., & Glasner, L. (2018). The Influence of Silicone Oil on the Ganglion Cell Complex After Pars Plana Vitrectomy for Rhegmatogenous Retinal Detachment. *Current Pharmaceutical Design*, 24(29), 3476–3493. <https://doi.org/10.2174/1381612824666180813115438>
- Ricker, L. J. A. G., Kijlstra, A., de Jager, W., Liem, A. T. A., Hendrikse, F., & la Heij, E. C. (2010). Chemokine levels in subretinal fluid obtained during scleral buckling surgery after rhegmatogenous retinal detachment. *Investigative Ophthalmology and Visual Science*, 51(8), 4143–4150. <https://doi.org/10.1167/iovs.09-5057>
- Ricker, L. J. A. G., Kijlstra, A., Kessels, A. G. H., de Jager, W., Liem, A. T. A., Hendrikse, F., & la Heij, E. C. (2011). Interleukin and growth factor levels in subretinal fluid in rhegmatogenous retinal detachment: A case-control study. *PLoS ONE*, 6(4). <https://doi.org/10.1371/journal.pone.0019141>
- Ryan, S. J. (1993). Traction retinal detachment XLIX Edward Jackson Memorial Lecture. *American Journal of Ophthalmology*, 115(1), 1–20. [https://doi.org/10.1016/S0002-9394\(14\)73518-4](https://doi.org/10.1016/S0002-9394(14)73518-4)
- Santos Lacomba, M., Carmen, ;, Martin, M., Rafael, ;, Chamond, R., Maria, J., Galera, G., Omar, M., & Collantes Estevez, ; Eduardo. (2000). Aqueous and Serum Interferon , Interleukin (IL) 2, IL-4, and IL-10 in Patients With Uveitis. In *Arch Ophthalmol* (Vol. 118).
- Savion, N., Alhalel, A., Treister, G., & Bartov, E. (1996). Role of blood components in ocular silicone oil emulsification: Studies on an in vitro model. *Investigative Ophthalmology and Visual Science*, 37(13), 2694–2699.
- Schwartz, S., & Flynn, H. W. (2008). Pars plana vitrectomy for primary rhegmatogenous retinal detachment. In *Clinical Ophthalmology* (p. 57). <https://doi.org/10.2147/opth.s1511>
- Schwartz, S. G., & Flynn, H. W. (2006). Primary retinal detachment: Scleral buckle or pars plana vitrectomy? *Current Opinion in Ophthalmology*, 17(3), 245–250. <https://doi.org/10.1097/01.icu.0000193097.28798.fc>
- Scott, I. U., Flynn, H. W., Murray, T. G., Smiddy, W. E., Davis, J. L., & Feuer, W. J. (2005). Outcomes of complex retinal detachment repair using 1000- vs 5000-centistoke silicone oil. *Archives of Ophthalmology*, 123(4), 473–478. <https://doi.org/10.1001/archophth.123.4.473>
- Semeraro, F., Russo, A., Morescalchi, F., Gambicorti, E., Vezzoli, S., Parmeggiani, F., Romano, M. R., & Costagliola, C. (2019). Comparative assessment of intraocular inflammation following standard or heavy silicone oil tamponade: a prospective study. In *Acta Ophthalmologica* (Vol. 97, Issue 1, pp. e97–e102). <https://doi.org/10.1111/aos.13830>
- Shah, S. P., & Bauman, C. R. (2010). Prognostic factors for laser photocoagulation of retinal detachments. *Expert Review of Ophthalmology*, 5(March). <https://doi.org/10.1586/eop.10.25>

- Shimizu, H., Kaneko, H., Suzumura, A., Takayama, K., Namba, R., Funahashi, Y., Kataoka, K., Iwase, T., Hwang, S. J., Ito, S., Yamada, K., Ueno, S., Ito, Y., & Terasaki, H. (2019). Biological characteristics of subsilicone oil fluid and differences with other ocular humors. *Translational Vision Science and Technology*, 8(1). <https://doi.org/10.1167/tvst.8.1.28>
- Silicone Oils – Sanoptech*. (n.d.). Retrieved September 22, 2021, from <https://sanoptech.com/silicone-oils/>
- Spandau, U., Tomic, Z., & Ruiz-casas, D. (Eds.). (2018a). *Retinal Detachment Surgery and Proliferative Vitreoretinopathy*. Springer Nature. <https://doi.org/https://doi.org/10.1007/978-3-319-78446-5>
- Spandau, U., Tomic, Z., & Ruiz-casas, D. (2018b). *Retinal Detachment Surgery and Proliferative Vitreoretinopathy*. Springer Nature.
- Stappler, T., Morphis, G., Irigoyen, C., & Heimann, H. (2011). Is there a role for long-term silicone oil tamponade for more than twelve months in vitreoretinal surgery? *Ophthalmologica*, 226(SUPPL. 1), 36–41. <https://doi.org/10.1159/000328208>
- Strieter, R. M., Gomperts, B. N., & Keane, M. P. (2007). The role of CXC chemokines in pulmonary fibrosis. *Journal of Clinical Investigation*, 117(3), 549–556. <https://doi.org/10.1172/JCI30562>
- Struyf, S., Proost, P., & Van Damme, J. (2003). Regulation of the Immune Response by the Interaction of Chemokines and Proteases. *Advances in Immunology*, 81, 1–44. [https://doi.org/10.1016/S0065-2776\(03\)81001-5](https://doi.org/10.1016/S0065-2776(03)81001-5)
- Su, X., Tan, M. J., Li, Z., Wong, M., Rajamani, L., Lingam, G., & Loh, X. J. (2015). Recent Progress in Using Biomaterials as Vitreous Substitutes. *Biomacromolecules*, 16(10), 3093–3102. <https://doi.org/10.1021/acs.biomac.5b01091>
- Takahashi, S., Adachi, K., Suzuki, Y., Maeno, A., & Nakazawa, M. (2016). Profiles of inflammatory cytokines in the vitreous fluid from patients with rhegmatogenous retinal detachment and their correlations with clinical features. *BioMed Research International*, 2016. <https://doi.org/10.1155/2016/4256183>
- Thacker, M., Tseng, C. L., & Lin, F. H. (2021). Substitutes and colloidal system for vitreous replacement and drug delivery: Recent progress and future prospective. *Polymers*, 13(1), 1–15. <https://doi.org/10.3390/polym13010121>
- Theelen, T., Tilanus, M. A. D., & Klevering, B. J. (2004). Intraocular inflammation following endotamponade with high-density silicone oil. *Graefes's Archive for Clinical and Experimental Ophthalmology*, 242(7), 617–620. <https://doi.org/10.1007/s00417-004-0898-7>
- Tyring, B. Y. A., Saraf, S. S., & Koo, L. C. O. D. E. (2018). *Top five pointers for working with silicone oil* (Issue August, pp. 20–22).
- Van Leeuwen, R., Haarman, A. E. G., Van De Put, M. A. J., Klaver, C. C. W., & Los, L. I. (2021). Association of Rhegmatogenous Retinal Detachment Incidence with Myopia Prevalence in the Netherlands. *JAMA Ophthalmology*, 139(1), 85–92. <https://doi.org/10.1001/jamaophthmol.2020.5114>
- Vaziri, K., Schwartz, S. G., Kishor, K. S., & Flynn, H. W. (2016). Tamponade in the surgical management of retinal detachment. *Clinical Ophthalmology*, 10, 471–476. <https://doi.org/10.2147/OPTH.S98529>

- Versura, P., Cellini, M., Torreggiani, A., Bernabini, B., Rossi, A., Moretti, M., & Caramazza, R. (2001). The biocompatibility of silicone, fluorosilicone and perfluorocarbon liquids as vitreous tamponades. An ultrastructural and immunohistochemical study. *Ophthalmologica*, 215(4), 276–283. <https://doi.org/10.1159/000050874>
- Vilček, J., & Feldmann, M. (2004). Historical review: Cytokines as therapeutics and targets of therapeutics. *Trends in Pharmacological Sciences*, 25(4), 201–209. <https://doi.org/10.1016/j.tips.2004.02.011>
- Wickham, L., Asaria, R. H., Alexander, R., Luthert, P., & Charteris, D. G. (2007). Immunopathology of intraocular silicone oil: Enucleated eyes. *British Journal of Ophthalmology*, 91(2), 253–257. <https://doi.org/10.1136/bjo.2006.103564>
- Wilkinson, C. P., Hinton, D. R., Sadda, S. R., & Wiedemann, P. (2018). *Ryan 's RETINA* (A. P. Schachar, Ed.; Sixth Edit). Elsevier.
- Winter, M., Eberhardt, W., Scholz, C., & Reichenbach, A. (2000). Failure of potassium siphoning by Muller cells: A new hypothesis of perfluorocarbon liquid-induced retinopathy. In *Investigative Ophthalmology and Visual Science* (Vol. 41, Issue 1, pp. 256–261).
- Wladis, E. J., Falk, N. S., Iglesias, B. V., Beer, P. M., & Gosselin, E. J. (2013). *ANALYSIS OF THE MOLECULAR BIOLOGIC MILIEU OF THE VITREOUS IN PROLIFERATIVE VITREORETINOPATHY*.
- Wong, C. W., Cheung, N., Ho, C., Barathi, V., Storm, G., & Wong, T. T. (2019). Characterisation of the inflammatory cytokine and growth factor profile in a rabbit model of proliferative vitreoretinopathy. In *Scientific Reports* (Vol. 9, Issue 1). <https://doi.org/10.1038/s41598-019-51633-8>
- Yadav, I., Purohit, S. D., Singh, H., Bhushan, S., Yadav, M. K., Velpandian, T., Chawla, R., Hazra, S., & Mishra, N. C. (2021). Vitreous substitutes: An overview of the properties, importance, and development. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, 109(8), 1156–1176. <https://doi.org/10.1002/jbm.b.34778>
- Yoshida, A., Elner, S. G., Bian, Z.-M., Kunkel, S. L., Lukacs, N. W., & Elner, V. M. (2001). Differential Chemokine Regulation by Th2 Cytokines during Human RPE-Monocyte Coculture. In *Investigative Ophthalmology & Visual Science* (Vol. 42, Issue 7).
- Yoshimura, T., Koh-Hei, S., Sugahara, M., Mochizuki, Y., Enaida, H., Oshima, Y., Ueno, A., Hata, Y., Yoshida, H., & Ishibashi, T. (2009). Comprehensive Analysis of Inflammatory Immune Mediators in Vitreoretinal Diseases.pdf. *PLoS ONE*, 4(2).
- Zandi, S., Pfister, I. B., Trainor, P. G., Tappeiner, C., Despont, A., Rieben, R., Skowronska, M., & Garweg, J. G. (2019). Biomarkers for PVR in rhegmatogenous retinal detachment. *PLoS ONE*, 14(4). <https://doi.org/10.1371/journal.pone.0214674>
- Zhou, T., Yang, Z., Ni, B., Zhou, H., Xu, H., Lin, X., Li, Y., Liu, C., Ju, R., Ge, J., He, C., & Liu, X. (2022). IL-4 induces reparative phenotype of RPE cells and protects against retinal neurodegeneration via Nrf2 activation. *Cell Death and Disease*, 13(12). <https://doi.org/10.1038/s41419-022-05433-0>
- Zilis, J. D., McCuen, B. W., De Juan, E., Stefansson, E., & Machemer, R. (1989). Results of silicone oil removal in advanced proliferative vitreoretinopathy. *American Journal of Ophthalmology*, 108(1), 15–21. [https://doi.org/10.1016/S0002-9394\(14\)73254-4](https://doi.org/10.1016/S0002-9394(14)73254-4)

Zivojnovic, R. (1987). *SILICONE OIL IN VITREORETINAL SURGERY*. Martinus Nijhoff / Dr W. Junk Publishers. <https://doi.org/10.1007/978-94-009-3321-7> e-ISBN-13:

DAFTAR LAMPIRAN

Lampiran 1. Rekomendasi Persetujuan Etik



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN UNIVERSITAS HASANUDDIN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL. PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.



Contact Person: dr. Agussalim Bukhari., MMed, PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

REKOMENDASI PERSETUJUAN ETIK

Nomor : 519/UN4.6.4.5.31/ PP36/ 2023

Tanggal: 31 Juli 2023

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH23060430	No Sponsor	
Peneliti Utama	dr. Ahdini Zulfiana Abidin	Sponsor	
Judul Peneliti	FAKTOR-FAKTOR PRO DAN ANTI INFLAMASI PADA PASIEN RHEGMATOGENOUS RETINAL DETACHMENT DENGAN TAMPONADE SILICONE OIL		
No Versi Protokol	2	Tanggal Versi	28 Juli 2023
No Versi PSP	2	Tanggal Versi	28 Juli 2023
Tempat Penelitian	RS Universitas Hasanuddin Makassar		
Jenis Review	☐ Exempted ☐ Expedited ☒ Fullboard Tanggal 26 Juli 2023	Masa Berlaku 31 Juli 2023 sampai 31 Juli 2024	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan	
Sekretaris KEP Universitas Hasanuddin	Nama dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)	Tanda tangan	

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Laporan SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari protokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN UNIVERSITAS HASANUDDIN
RSPTN UNIVERSITAS HASANUDDIN

RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR

Sekretariat : Lantai 2 Gedung Laboratorium Terpadu

JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.

Contact Person: dr. Agussalim Bukhari, MMed, PhD, SpCK TELP. 081241850858, 0411 5780103, Fax : 0411-581431



LAMPIRAN 1

FORMULIR PERSETUJUAN SETELAH PENJELASAN (PSP) (INFORMED CONSENT)

Selamat pagi Bapak / Ibu /Saudara(i), saya dr. Ahdini Zulfiana Abidin, bermaksud untuk melakukan penelitian Faktor-Faktor Pro dan Anti Inflamasi pada Pasien *Rhegmatogenous Retinal Detachment* dengan Tamponade *Silicone Oil*.

Kami bermaksud melakukan penelitian ini untuk mengetahui gambaran faktor-faktor pro inflamasi yang ada pada pasien *rhegmatogenous retinal detachment* sebelum dan setelah dilakukan vitrektomi pars plana dengan tamponade *silicone oil*. Penelitian ini kami ajukan untuk meneliti penyebab apa saja yang berperan penting terhadap munculnya faktor pro dan anti inflamasi tersebut.

Semua pemeriksaan awal yang dilakukan merupakan bagian dari pemeriksaan rutin pasien mata pada umumnya dengan tambahan pemeriksaan lain yaitu funduskopi dan atau ultrasonography B-Scan. Setelah didiagnosa dengan *rhegmatogenous retinal detachment*, maka pasien yang direncanakan untuk dilakukan operasi vitrektomi pars plana dengan tamponade *silicone oil*, akan mengisi lembar persetujuan informed consent sebagai sampel penelitian. Pada saat pasien berada di kamar operasi dan sudah dalam keadaan steril di meja operasi, setelah dipasang spekulum mata akan dilakukan pengambilan sampel humor akuos dengan spuit dan gauge 30G sebanyak maksimal 0.1cc lalu dimasukkan ke dalam tabung ependorf steril yang akan disimpan di dalam freezer -80°C di laboratorium. Setelah itu, pasien melanjutkan operasi vitrektomi pars plana.

Untuk pengambilan sampel selanjutnya, dilakukan pada saat pasien yang sama menjalani operasi intraokular lain ataupun vitrektomi pars plana untuk evakuasi *silicone oil*. Metode pengambilan sampel yang akan dilakukan sama dengan metode pengambilan sampel awal. Biaya penelitian sebanyak Rp 22.200.000,- ditanggung mandiri oleh peneliti.

Setelah tindakan pengambilan sampel dilakukan dan diikuti kontrol pada hari-hari yang ditentukan sehingga dapat dinilai apakah perjalanan penyakit dan kesembuhan berpengaruh terhadap gambaran faktor pro dan anti inflamasi yang muncul. Pemeriksaan lain akan

dilakukan termasuk pemeriksaan rutin dan tambahan pemeriksaan lain yaitu funduskopi dan atau ultrasonography B-Scan. Berdasarkan hasil tersebut, data akan dimasukkan ke dalam data penelitian dan dapat diketahui faktor-faktor apa yang berpengaruh terhadap gambaran pro dan anti inflamasi tersebut.

Prosedur tindakan pengambilan sampel dan vitrektomi pars plana dilakukan oleh dokter mata ahli vitreoretinal di Rumah Sakit Universitas Hasanuddin yang berkompetensi untuk melakukan prosedur tersebut. Efek samping tindakan vitrektomi pars plana tidak ada, namun keadaan yang mungkin dapat timbul setelah tindakan vitrektomi pars plana yakni hipotoni atau menurunnya tekanan bola mata akibat adanya kebocoran pada luka sklerotomi yang biasanya terjadi dalam 1-2 minggu post operasi.

Kami sangat mengharapkan kesediaan Bapak/Tbu untuk dapat mengikuti penelitian ini, mengingat prosedur tindakan dalam penelitian ini merupakan prosedur standar dan peneliti tidak melakukan intervensi maupun perubahan prosedur. Penelitian ini bersifat sukarela tanpa ada kompensasi maupun paksaan, sehingga bapak/ibu sekalian dapat menolak untuk ikutserta. Bapak/Tbu juga dapat menolak atau mengundurkan diri dari penelitian ini kapan saja jika terdapat hal-hal yang tidak berkenaan terhadap bapak/ibu dan tidak akan dikenakan sanksi apapun. Pengunduran diri tersebut tidak akan mengurangi perubahan mutu pelayanan dari dokter.

Bila masih ada hal-hal yang Bapak/Tbu ingin ketahui, maka Bapak/Tbu dapat bertanya atau meminta penjelasan pada kami di Departemen Ilmu Kesehatan Mata RS Unhas, atau secara langsung melalui nomor telepon saya : dr. Ahdini Zulfiana Abidin, 082290556266.

Pada penelitian ini identitas Bapak/Tbu disamarkan. Hanya dokter peneliti dan anggota komisi etik yang bisa melihat data Bapak/Tbu. Kerahasiaan data Bapak/Tbu sepenuhnya akan dijamin. Bila data akan dipublikasikan kerahasiaan akan tetap dijaga.

Data pada penelitian ini akan dikumpulkan dan disimpan dalam *file* manual dan elektronik, diaudit, diproses dan dipresentasikan pada:

- Forum ilmiah Departemen Ilmu Kesehatan Mata, Fakultas Kedokteran Unhas
- Forum ilmiah kegiatan PERDAMI
- Publikasi pada jurnal ilmiah dalam maupun luar negeri

Jika Bapak/Tbu setuju untuk berpartisipasi, diharapkan menandatangani surat persetujuan mengikuti penelitian. Atas kesediaan dan kerjasamanya kami ucapkan terima kasih.

Identitas peneliti

Nama : dr. Ahdini Zulfiana Abidin
Alamat : Jl. Bakti 2 No.14, Kec. Panakkukang, Kel. Tamamaung
Telp. : 082290556266



FORMULIR PERSETUJUAN SETELAH PENJELASAN

Saya yang bertandatangan di bawah ini :

Nama :
Umur :
Masa Kerja :
Satuan :
Alamat :

setelah mendengar/membaca dan mengerti penjelasan yang diberikan mengenai tujuan, manfaat, dan apa yang akan dilakukan pada penelitian ini, menyatakan setuju untuk ikut dalam penelitian ini secara sukarela tanpa paksaan.

Saya tahu bahwa keikutsertaan saya ini bersifat sukarela tanpa paksaan, sehingga saya bisa menolak ikut atau mengundurkan diri dari penelitian ini. Saya berhak bertanya atau meminta penjelasan pada peneliti bila masih ada hal yang belum jelas atau masih ada hal yang ingin saya ketahui tentang penelitian ini.

Saya juga mengerti bahwa semua biaya yang dikeluarkan sehubungan dengan penelitian ini, akan ditanggung oleh peneliti. Saya percaya bahwa keamanan dan kerahasiaan data penelitian akan terjamin dan saya dengan ini menyetujui semua data saya yang dihasilkan pada penelitian ini untuk disajikan dalam bentuk lisan maupun tulisan.

Dengan membubuhkan tandatangan saya di bawah ini, saya menegaskan keikutsertaan saya secara sukarela dalam studi penelitian ini.

	Nama	Tanda tangan	Tgl/Bln/Thn
Responden			
/Wali			
Saksi			

(Tanda Tangan Saksi diperlukan hanya jika Partisipan tidak dapat memberikan consent/persetujuan sehingga menggunakan wali yang sah secara hukum, yaitu untuk partisipan berikut:

1. Berusia di bawah 18 tahun
2. Usia lanjut
3. Gangguan mental
4. Pasien tidak sadar
5. Dan lain-lain kondisi yang tidak memungkinkan memberikan persetujuan

Penanggung jawab penelitian :

Nama : dr. Ahdini Zulfiana Abidin
Alamat : Jl. Bakti 2 No.14, Kec. Panakkukang, Kel. Tamamaung
Telp. : 082290556266

Penanggung jawab medik :

Nama : Prof. dr. Budu, Ph.D, Sp.M(K), M.Med.Ed
Alamat : Jl. Bunaken No. 16 Komp. Bukit Baruga Antang.
Telp : 0411 580678

Lampiran 3. Master Data Penelitian

No	Kode Sampel	Waktu Pengambilan Sampel	Jenis Kelamin	Usia	Mata Kanan /Kiri	Visus Pre-op	Logmar Visus Pre-op	TIO	Visual Acuity Post Op			TIO Post Op			Waktu Diagnosis ke Operasi	Lokasi Ablasio	Lokasi Robekan	Makula On/Off	Jumlah Robekan	Clock hours	PVR	Riwayat Trauma	Status Myopia	Status Lensa
									H1	H7	1 bulan	H1	H7	1 bulan										
1	A-1	15-08-2023	Laki-laki	56	Kiri	1 P	2.7	5	2.4R	1.7R		4	5.1	-	11 hari	al Inferior	al Inferior	Off	1	6	Grade C	Tidak	Tidak	Pseudofakia
2	B-1	16-08-2023	Laki-laki	79	Kiri	20/200	1	10	2.4R	2.4R	1.7R	9	14	13 3 minou	Temporal	Temporal	Off	1	2	Grade R	Tidak	Tidak	Phakia	
3	C-1	22-08-2023	Laki-laki	64	Kiri	1/300	2.4R	13	2.7	2.4R		9	18	-	1 tahun	al. Inferior	al. Inferior	Off	1	6	Grade A	Tidak	Tidak	Pseudofakia
4	D-1	29-08-2023	Perempuan	23	Kiri	LP	2.7	12	2.4R	2.7	2.4R	5	58	15 2 tahun	al	al	On	1	1	Grade A	Tidak	Tidak	Phakia	
5	F-1	29-08-2023	Laki-laki	62	Kanan	1/300	2.4R	9	2.4R	2.4R	2.4R	3	10	18 4 minou	Temporal	Temporal	On	2	4	No PVR	Tidak	Tidak	Phakia	
6	F-1	29-08-2023	Perempuan	71	Kiri	1/300	2.4R	11	2.4R	2.4R	2.4R	20	31	16 4 hari	Temporal	Inferotemporal	Off	1	2	Grade C	Tidak	Tidak	APHakia	
7	L-1	30-08-2023	Perempuan	63	Kanan	1/300	2.4R	16	2.4R	1.7R	1.7R	31	13	18 1 bulan	Inferotemporal	Superonasal	Off	1	5	Grade C	Tidak	Tidak	Phakia	
8	K-1	08-09-2023	Perempuan	51	Kanan	1/300	2.4R	15	2.4R	1.7R	1.1R	9	11	9 7 hari	superior	Superonasal	Off	1	3	Grade R	Tidak	Tidak	Pseudofakia	
9	L-1	12-09-2023	Laki-laki	34	Kiri	1/300	2.4R	10	1.7R	1.7R	1.7R	3	35	45 2 minou	Temporal	Temporal	Off	4	5	No PVR	Tidak	Tidak	Phakia	
10	O-1	15-09-2023	Laki-laki	60	Kanan	1/300	2.4R	13	1.4R	1.4R		10	25	3 hari	Inferotemporal	al	Off	1	6	Grade C	Tidak	Tidak	Pseudofakia	
11	P-1	22-09-2023	Laki-laki	67	Kanan	1/300	2.4R	9	2.4R	1.7R	1	7	12	12 2 hari	Superior	Superonasal	Off	1	5	No PVR	Tidak	Tidak	Phakia	
12	O-1	22-09-2023	Laki-laki	60	Kiri	1/300	2.4R	12	2.4R	2.4R	2.4R	9	11	14 1 hari	Temporal	Inferonasal	Off	1	6	Grade A	Tidak	Ya	Pseudofakia	
13	R-1	22-09-2023	Laki-laki	61	Kanan	3/60	1.3	18	2.4R	2.4R		3	12	1 hari	Superior	Inferior	On	2	7	No PVR	Tidak	Tidak	Phakia	
14	S-1	26-09-2023	Laki-laki	61	Kiri	1/300	2.4R	11	2.4R	1.3		29	16	1 minou	kuadran	kuadran	Off	>4	12	Grade C	Tidak	Ya	Pseudofakia	
15	T-1	4-10-2023	Perempuan	45	Kanan	1/300	2.4R	16	2.4R	1.7R	1.7R	16	17	23 2 minou	Temporal	Inferior	Off	1	6	No PVR	Tidak	Tidak	Phakia	
16	U-1	10-10-2023	Perempuan	54	Kiri	1/300	2.4R	17	2.4R	2.4R	1.7R	20	20	18 3 minou	Temporal	Superior	Off	1	6	No PVR	Tidak	Tidak	Phakia	
17	V-1	11-10-2023	Perempuan	33	Kanan	1/60	1.7R	15	2.4R	2.4R		5	42	3 tahun	Inferotemporal	Inferior	Off	1	3	Grade A	Tidak	Ya	Phakia	
18	W-1	24-10-2023	Perempuan	50	Kiri	1/300	2.4R	10	2.4R	1.4R		22	18	1 bulan	Inferior	Superior	On	1	3	No PVR	Tidak	Tidak	Phakia	
19	X-1	24-10-2023	Perempuan	60	Kanan	1/300	2.4R	10	2.4R	1.7R	1.4R	23	38	18 2 bulan	Inferior	Inferior	On	1	4	No PVR	Tidak	Tidak	Pseudofakia	
20	Y-1	01-11-2023	Perempuan	33	Kiri	20/200	1	17	2.4R	1.7R	1.7R	11	15	15 3 minou	Temporal	Superotemporal	Off	4	3	No PVR	Tidak	Ya	Phakia	
21	Z-1	26-10-2023	Laki-laki	69	Kanan	1/300	2.4R	15	2.4R	1.4R	1.4R	20	20	16 4 bulan	Inferior	Temporal	On	1	3	No PVR	Tidak	Tidak	Pseudofakia	
22	AA-1	07-11-2023	Perempuan	56	Kanan	1/300	2.4R	18	2.4R	1.7R	1.4R	10	12	14 2 bulan	superior	Superior	Off	1	5	No PVR	Tidak	Tidak	Phakia	
23	BB-1	15-11-2023	Perempuan	23	Kiri	1/300	2.4R	14	2.4R	2.4R	1.4R	5	10	12 3 minou	al ke	al	On	1	5	Grade C	Tidak	Tidak	Phakia	
24	CC-1	15-11-2023	Perempuan	54	Kanan	1/300	2.4R	10	1.7R	2.4R	2.4R	11	62	15 2 minou	Superior	Inferior	Off	2	6	No PVR	Ya	Ya	Phakia	
25	DD-1	15-11-2023	Laki-laki	47	Kiri	1/300	2.4R	6	1.7R	1.7R	1.7R	13	12	12 2 bulan	ke Inferonasal	al	Off	1	6	Grade A	Tidak	Tidak	Phakia	
26	EE-1	21-11-2023	Laki-laki	69	Kiri	1/300	2.4R	16	2.4R	1.7R	1.7R	18	19	15 8 bulan	Temporal	al	On	1	4	Grade C	Tidak	Tidak	Phakia	

No	Kode Sampel	Status Myopia	Status Lensa	Jenis SO	Durasi SO	Jahitan Sklerotomi	Tanggal Operasi				Visus dengan SO	TIO dengan SO	Durasi Operasi (Menit)	Laser	Komplikasi	IL-6 (pg/mL)		Follo w Up	Kode Sample	Waktu Pengambilan Sampel	Redetached		
							Pre PPV	Other Intracocular	Phaco	SO Removal						Pre	Post						
1	A-1	Tidak	Pseudofakia	5000		Tidak	15-08-2023						145	Yes	SOAG	37.01840	360.72	No			Tidak		
2	B-1	Tidak	Phakia	1500	3 bulan	Tidak	16-08-2023	21/11/2023			1.7R	10	53	Yes		36.85412	40.2343	10.864	33.536	Yes	R-2	21/11/2023	Tidak
3	C-1	Tidak	Pseudofakia	5000		Tidak	22-08-2023						66	Yes		47.65813	179.04		No			Tidak	
4	D-1	Ya	Pseudofakia	1500		Tidak	29-08-2023						36	Yes	SOAG	33.16126	51.709					Tidak	
5	F-1	Tidak	Phakia	5000		Tidak	29-08-2023	19/9/2023					148	Yes	Redetached	34.01632	369.72					Ya	
6	F-1	Tidak	APhakia	1500		Tidak	29-08-2023						48	Yes	SOAG	27.80718	360.72					Tidak	
7	L-1	Tidak	Phakia	1500		Tidak	30-08-2023		15/12/2023				60	Yes		30.48540	21.211					Tidak	
8	K-1	Tidak	Pseudofakia	1500	4 bulan	Tidak	08-09-2023			12/1/2024	1.1R	1R	60	Yes		30.95362	36.0903	6.8755	20.747	Yes	K-4	12-1-2024	Tidak
9	L-1	Tidak	Phakia	1500	2 bulan	Tidak	12-09-2023	4/9/2023	23/11/2023		2.4R	34	63	Yes	SOAG	38.0779	41.8209	10.194	243.54	Yes	L-3	23/11/2023	Ya
10	O-1	Tidak	Pseudofakia	1500		Tidak	15-09-2023						66	Yes		37.23105	360.72					Tidak	
11	P-1	Tidak	Phakia	1300	2 bulan	Tidak	22-08-2023		30/11/2023		0.7R	11	63	Yes		33.25635	43.865	139.19	11.454	Yes	P-3	30/11/2023	Tidak
12	O-1	Ya	Pseudofakia	1500		Tidak	22-08-2023						177	Yes		40.04718	360.72					Tidak	
13	R-1	Tidak	Phakia	5000	2 bulan	Tidak	22-09-2023		30/11/2023		2.4R	14	93	Yes		39.6728	32.3988	108.78	122.31	Yes	R-3	30/11/2023	Tidak
14	S-1	Ya	Pseudofakia	5000		Tidak	26-09-2023						85	Yes		47.1007	25.008					Tidak	
15	T-1	Tidak	Phakia	1500		Ya	4-10-2023						131	Yes		37.60764	38.407					Tidak	
16	U-1	Tidak	Phakia	1500	3 bulan	Tidak	10-10-2023		30/11/2023		1.7R	15	34	Yes		30.6814	40.5704	10.17	12.368	Yes	L-3	30/11/2023	Tidak
17	V-1	Ya	Phakia	1500		Tidak	11-10-2023						111	Yes	SACG	30.10708	20.923					Tidak	
18	W-1	Tidak	Phakia	1300		Tidak	24-10-2023						77	Yes		20.72378	21.577					Tidak	
19	X-1	Tidak	Pseudofakia	1500		Tidak	24-10-2023						60	Yes		34.20611	43.014					Tidak	
20	Y-1	Ya	Phakia	1500		Tidak	01-11-2023						64	Yes		35.34301	15.816					Tidak	
21	Z-1	Tidak	Pseudofakia	1500		Tidak	26-10-2023						107	Yes		30.48540	360.72					Tidak	
22	AA-1	Tidak	Phakia	1500	4 minou	Ya	07-11-2023		30/11/2023		1.4R	14	116	Yes		41.72769	28.4757	17.667	21.416	Yes	AA-3	30/11/2023	Tidak
23	BB-1	Tidak	Phakia	1500	5 minou	Tidak	15-11-2023		30/11/2023		1.4R	16	65	Yes		41.63451	33.1613	15.253	23.96	Yes	BB-3	30/11/2023	Tidak
24	CC-1	Ya	Phakia	1500		Tidak	15-11-2023						72	Yes		30.39433	369.72					Tidak	
25	DD-1	Tidak	Phakia	1500	8 minou	Tidak	15-11-2023		30/11/2023		2.4R	1R	63	Yes	SO	31.54143	46.4517	55.727	294.43	Yes	DD-3	30/11/2023	Tidak
26	EE-1	Tidak	Phakia	1500	4 minou	Tidak	21-11-2023		30/11/2023		1.4R	29	40	Yes		31.92312	36.4769	69.74	98.501	Yes	EE-3	30/11/2023	Tidak

Lampiran 4 Statistik Penelitian

a. Uji Deskriptif

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Usia	26	23.00	71.00	50.0000	13.40149
Visus Pre Operasi	26	1.00	2.70	2.3108	.47394
Tekanan Intraokular	26	5.00	18.00	12.6154	3.56737
IL-4 (Pre-Op)	26	27.80	42.66	35.7966	4.47448
IL-6 (Pre-Op)	26	6.88	369.72	130.7768	151.94863
Valid N (listwise)	26				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Visus Pre Operasi	26	1.00	2.70	2.3108	.47394
Visus H+1 Post Op	26	1.48	2.70	2.3692	.29661
Visus H+7 Post Op	26	1.30	2.70	2.0315	.42903
Visus H+30 Post Op	18	1.00	2.48	1.7922	.43963
Valid N (listwise)	18				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Tekanan Intraokular	26	5.00	18.00	12.6154	3.56737
TIO H+1 Post Op	26	3.00	31.00	12.5000	8.08579
TIO H+7 Post Op	26	10.00	62.00	23.1538	15.29887
TIO H+30 Post Op	19	9.00	45.00	16.7368	7.50438
Valid N (listwise)	19				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Interleukin 4 10 sample (pre)	10	30.68	41.72	36.5280	4.32190
Interleukin 4 10 sample (Post)	10	28.47	49.57	38.8510	6.69691
Interleukin 6 10 sample (pre)	10	6.87	139.19	44.4426	47.53956
Interleukin 6 10 sample (Post)	10	11.45	294.43	88.2232	103.11839
Valid N (listwise)	10				

Asymp. Sig. .000

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Visus Pre Operasi	26	1.00	2.70	2.3108	.47394
Visus H+1 Post Op	26	1.48	2.70	2.3692	.29661
Visus H+7 Post Op	26	1.30	2.70	2.0315	.42903
Visus H+30 Post Op	18	1.00	2.48	1.7922	.43963
Valid N (listwise)	18				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Tekanan Intraokular	26	5.00	18.00	12.6154	3.56737
TIO H+1 Post Op	26	3.00	31.00	12.5000	8.08579
TIO H+7 Post Op	26	10.00	62.00	23.1538	15.29887
TIO H+30 Post Op	19	9.00	45.00	16.7368	7.50438

Valid N (listwise)	19				
--------------------	----	--	--	--	--

b. Frekuensi

Statistics

		Jenis Kelamin	Mata Kanan/Kiri	Status PVR	Grading PVR	Makula On/Off
N	Valid	26	26	26	26	26
	Missing	0	0	0	0	0

Statistics

		Jumlah Robekan	Lattice Degeneration	Lokasi Robekan	Jenis SO	Durasi SO
N	Valid	26	4	0	26	8
	Missing	0	22	26	0	18

Statistics

		Status Miopia	Status Lensa	Riwayat Trauma	Waktu Diagnosis ke Operasi
N	Valid	26	26	26	26
	Missing	0	0	0	0

Jenis Kelamin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Laki-laki	13	50.0	50.0	50.0
	Perempuan	13	50.0	50.0	100.0
	Total	26	100.0	100.0	

Mata Kanan/Kiri

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kanan	12	46.2	46.2	46.2
	Kiri	14	53.8	53.8	100.0
	Total	26	100.0	100.0	

Status PVR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PVR	14	53.8	53.8	53.8
	Non-PVR	12	46.2	46.2	100.0
	Total	26	100.0	100.0	

Grading PVR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	12	46.2	46.2	46.2
	Grade A	5	19.2	19.2	65.4
	Grade B	2	7.7	7.7	73.1
	Grade C	7	26.9	26.9	100.0
	Total	26	100.0	100.0	

Makula On/Off

		Frequency	Percent	Valid Percent	Cumulative Percent
--	--	-----------	---------	---------------	--------------------

Valid	On	8	30.8	30.8	30.8
	Off	18	69.2	69.2	100.0
	Total	26	100.0	100.0	

Jumlah Robekan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	76.9	76.9	76.9
	2	3	11.5	11.5	88.5
	4	2	7.7	7.7	96.2
	>4	1	3.8	3.8	100.0
	Total	26	100.0	100.0	

Lattice Degeneration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lattice degeneration	4	15.4	100.0	100.0
Missing	System	22	84.6		
Total		26	100.0		

Jenis SO

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1300	2	7.7	7.7	7.7
	1500	19	73.1	73.1	80.8
	5000	5	19.2	19.2	100.0

Total	26	100.0	100.0
-------	----	-------	-------

Durasi SO

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3 Bulan	8	30.8	100.0	100.0
Missing	System	18	69.2		
Total		26	100.0		

Status Miopia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Miopia	6	23.1	23.1	23.1
	Tidak Miopia	20	76.9	76.9	100.0
	Total	26	100.0	100.0	

Status Lensa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Phakia	16	61.5	61.5	61.5
	Pseudophakia	9	34.6	34.6	96.2
	Aphakia	1	3.8	3.8	100.0
	Total	26	100.0	100.0	

Riwayat Trauma

	Frequency	Percent	Valid Percent	Cumulative Percent
--	-----------	---------	---------------	--------------------

Valid	Ya	1	3.8	3.8	3.8
	Tidak	25	96.2	96.2	100.0
	Total	26	100.0	100.0	

Waktu Diagnosis ke Operasi

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<1 Minggu	6	23.1	23.1	23.1
	<1 Bulan	9	34.6	34.6	57.7
	1-3 Bulan	6	23.1	23.1	80.8
	4-6 bulan	1	3.8	3.8	84.6
	6-12 bulan	2	7.7	7.7	92.3
	>12 bulan	2	7.7	7.7	100.0
	Total	26	100.0	100.0	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Usia	26	100.0%	0	0.0%	26	100.0%
Visus Pre Operasi	26	100.0%	0	0.0%	26	100.0%
Tekanan Intraokular	26	100.0%	0	0.0%	26	100.0%
IL-4 (Pre-Op)	26	100.0%	0	0.0%	26	100.0%
IL-6 (Pre-Op)	26	100.0%	0	0.0%	26	100.0%

c. Uji Normalitas

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Usia	.192	26	.014	.920	26	.045
Visus Pre Operasi	.486	26	.000	.525	26	.000
Tekanan Intraokular	.133	26	.200*	.953	26	.266
IL-4 (Pre-Op)	.141	26	.195	.942	26	.150
IL-6 (Pre-Op)	.271	26	.000	.701	26	.000

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Group Statistics

	Status PVR	N	Mean	Std. Deviation	Std. Error Mean
IL-4 (Pre-Op)	PVR	14	36.1799	4.97367	1.32927
	Non-PVR	12	35.3494	3.98271	1.14971
IL-6 (Pre-Op)	PVR	14	134.7301	157.35733	42.05551
	Non-PVR	12	126.1645	152.20749	43.93852

d. Uji T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	
IL-4 (Pre-Op)	Equal variances assumed	1.752	.198	.464	24	

	Equal variances not assumed			.473	23.911	
IL-6 (Pre-Op)	Equal variances assumed	.118	.734	.140	24	
	Equal variances not assumed			.141	23.616	

Independent Samples Test

t-test for Equality of Means

		Sig. (2-tailed)	Mean Difference	Std. Error Difference	
IL-4 (Pre-Op)	Equal variances assumed	.647	.83046	1.78853	
	Equal variances not assumed	.641	.83046	1.75750	
IL-6 (Pre-Op)	Equal variances assumed	.889	8.56565	60.98384	
	Equal variances not assumed	.889	8.56565	60.82154	

Independent Samples Test

t-test for Equality of Means

95% Confidence Interval of the Difference

		Lower	Upper
IL-4 (Pre-Op)	Equal variances assumed	-2.86089	4.52181
	Equal variances not assumed	-2.79755	4.45847
IL-6 (Pre-Op)	Equal variances assumed	-117.29881	134.43011
	Equal variances not assumed	-117.07200	134.20330

Ranks

	Status PVR	N	Mean Rank	Sum of Ranks
IL-6 (Pre-Op)	PVR	14	13.79	193.00
	Non-PVR	12	13.17	158.00
	Total	26		

Test Statistics^a

IL-6 (Pre-Op)

Mann-Whitney U	80.000
Wilcoxon W	158.000
Z	-.208
Asymp. Sig. (2-tailed)	.835
Exact Sig. [2*(1-tailed Sig.)]	.860 ^b

a. Grouping Variable: Status PVR

b. Not corrected for ties.

Group Statistics

	Status Miopia	N	Mean	Std. Deviation	Std. Error Mean
IL-4 (Pre-Op)	Miopia	6	35.1922	4.98632	2.03566
	Tidak Miopia	20	35.9779	4.43288	.99122

Independent Samples Test

t-test for Equality of Means

Sig. (2-tailed)	Mean Difference	Std. Error Difference
-----------------	-----------------	-----------------------

IL-4 (Pre-Op)	Equal variances assumed	.714	-.78571	2.11965
	Equal variances not assumed	.738	-.78571	2.26416

Group Statistics

	Makula On/Off	N	Mean	Std. Deviation	Std. Error Mean
IL-4 (Pre-Op)	On	8	35.4779	4.24985	1.50255
	Off	18	35.9382	4.68365	1.10395

Independent Samples Test

t-test for Equality of Means

		Sig. (2-tailed)	Mean Difference	Std. Error Difference
IL-4 (Pre-Op)	Equal variances assumed	.814	-.46027	1.93822
	Equal variances not assumed	.808	-.46027	1.86450

Independent Samples Test

t-test for Equality of Means

		Sig. (2-tailed)	Mean Difference	Std. Error Difference
IL-4 (Pre-Op)	Equal variances assumed	.814	-.46027	1.93822
	Equal variances not assumed	.808	-.46027	1.86450

e. Uji Korelasi

Correlations

IL-4 (Pre-Op)	Visus Pre Operasi
---------------	-------------------

IL-4 (Pre-Op)	Pearson Correlation	1	-.055
	Sig. (2-tailed)		.791
	N	26	26
Visus Pre Operasi	Pearson Correlation	-.055	1
	Sig. (2-tailed)	.791	
	N	26	26

Correlations

		IL-4 (Pre-Op)	Tekanan Intraokular
IL-4 (Pre-Op)	Pearson Correlation	1	.376
	Sig. (2-tailed)		.058
	N	26	26
Tekanan Intraokular	Pearson Correlation	.376	1
	Sig. (2-tailed)	.058	
	N	26	26

Correlations

		IL-6 (Pre-Op)	Visus Pre Operasi
IL-6 (Pre-Op)	Pearson Correlation	1	.270
	Sig. (2-tailed)		.183
	N	26	26
Visus Pre Operasi	Pearson Correlation	.270	1
	Sig. (2-tailed)	.183	
	N	26	26

Correlations

		Tekanan Intraokular	IL-6 (Pre-Op)
Tekanan Intraokular	Pearson Correlation	1	-.348
	Sig. (2-tailed)		.081
	N	26	26
IL-6 (Pre-Op)	Pearson Correlation	-.348	1
	Sig. (2-tailed)	.081	
	N	26	26

Correlations

		Luas Robekan	IL-4 (Pre-Op)	IL-6 (Pre-Op)
Luas Robekan	Pearson Correlation	1	.393*	.024
	Sig. (2-tailed)		.047	.908
	N	26	26	26
IL-4 (Pre-Op)	Pearson Correlation	.393*	1	-.179
	Sig. (2-tailed)	.047		.382
	N	26	26	26
IL-6 (Pre-Op)	Pearson Correlation	.024	-.179	1
	Sig. (2-tailed)	.908	.382	
	N	26	26	26

*. Correlation is significant at the 0.05 level (2-tailed).

f. Uji ANOVA

ANOVA

IL-4 (Pre-Op)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	46.214	3	15.405	.746	.536
Within Groups	454.310	22	20.650		
Total	500.524	25			

ANOVA

IL-4 (Pre-Op)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	109.887	2	54.944	3.235	.058
Within Groups	390.637	23	16.984		
Total	500.524	25			

ANOVA

IL-4 (Pre-Op)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	57.904	5	11.581	.523	.756
Within Groups	442.620	20	22.131		
Total	500.524	25			

g. Uji Friedman

Ranks

	Mean Rank
Visus Pre Operasi	3.08
Visus H+1 Post Op	2.94
Visus H+7 Post Op	2.31
Visus H+30 Post Op	1.67

Test Statistics^a

N	18
Chi-Square	19.911
df	3

Interleukin 6 10 sample (Post) * Durasi Operasi

Interleukin 6 10 sample (Post)

Durasi Operasi	Mean	N	Std. Deviation
<60 menit	110.4062	2	16.83593
60-120 menit	82.6775	8	115.99689
Total	88.2232	10	103.11839

Interleukin 6 10 sample (Post) * Durasi SO

Interleukin 6 10 sample (Post)

Durasi SO	Mean	N	Std. Deviation
1-3 Bulan	88.2232	10	103.11839
Total	88.2232	10	103.11839

Interleukin 6 10 sample (Post) * Jenis SO

Interleukin 6 10 sample (Post)

Jenis SO	Mean	N	Std. Deviation
1500	84.4357	9	108.63329
5000	122.3110	1	.
Total	88.2232	10	103.11839

Interleukin 6 10 sample (Post) * Jahitan Skelorotomi

Interleukin 6 10 sample (Post)

Jahitan Skelorotomi	Mean	N	Std. Deviation
Ya	21.4100	1	.
Tidak	95.6469	9	106.50153
Total	88.2232	10	103.11839

Interleukin 4 10 sample (Post) * Durasi Operasi

Interleukin 4 10 sample (Post)

Durasi Operasi	Mean	N	Std. Deviation
<60 menit	34.4300	2	2.88500
60-120 menit	39.9563	8	7.03513
Total	38.8510	10	6.69691

Interleukin 4 10 sample (Post) * Durasi SO

Interleukin 4 10 sample (Post)

Durasi SO	Mean	N	Std. Deviation
1-3 Bulan	38.8510	10	6.69691

Total	38.8510	10	6.69691
-------	---------	----	---------

Interleukin 4 10 sample (Post) * Jenis SO

Interleukin 4 10 sample (Post)

Jenis SO	Mean	N	Std. Deviation
1500	39.5689	9	6.68258
5000	32.3900	1	.
Total	38.8510	10	6.69691

Interleukin 4 10 sample (Post) * Jahitan Skelorotomi

Interleukin 4 10 sample (Post)

Jahitan Skelorotomi	Mean	N	Std. Deviation
Ya	28.4700	1	.
Tidak	40.0044	9	5.95713
Total	38.8510	10	6.69691

Lampiran 5. Dokumentasi Penelitian

