

DAFTAR PUSTAKA

1. Fang, R., Yu, YF., Li, EJ. et al. Global, regional, national burden and gender disparity of cataract: findings from the global burden of disease study 2019. BMC Public Health 22, 2068 (2022). <https://doi.org/10.1186/s12889-022-14491-0>.
2. Keputusan menteri kesehatan republik indonesia nomor hk.01.07/menkes/557/2018 tentang pedoman nasional pelayanan kedokteran tata laksana katarak pada dewasa.
3. Kessel L, Flesner P, Andresen J, Erngaard D, Tendal B, Hjortdal J. Antibiotic prevention of postcataract endophthalmitis: a systematic review and meta-analysis. Acta Ophthalmol. 2015 Jun;93(4):303-17. doi: 10.1111/aos.12684. Epub 2015 Mar 16. PMID: 25779209; PMCID: PMC6680152.
4. Gordon-Bennett P, Karas A, Flanagan D, Stephenson C, Hingorani M. A survey of measures used for the prevention of postoperative endophthalmitis after cataract surgery in the United Kingdom. Eye (Lond). 2008 May;22(5):620-7. doi: 10.1038/sj.eye.6702675. Epub 2006 Dec 15. PMID: 17173008.
5. Althiabi S, Aljbreen AJ, Alshutily A, Althwiny FA. Postoperative Endophthalmitis After Cataract Surgery: An Update. Cureus. 2022 Feb 8;14(2):e22003. doi: 10.7759/cureus.22003. PMID: 35340495; PMCID: PMC8913541.
6. Hashemian H, Mirshahi R, Khodaparast M, Jabbarvand M. Post-cataract surgery endophthalmitis: Brief literature review. J Curr Ophthalmol. 2016 Jun 11;28(3):101-5. doi: 10.1016/j.joco.2016.05.002. PMID: 27579452; PMCID: PMC4992095.
7. Goray, Apurva; Arora, Supriya; Yadava, Divya; Gupta, Shantanu; Ghosh, Basudeb. A Review of Antibiotic Prophylaxis for Post-operative Endophthalmitis. Delhi Journal of Ophthalmology 26(3):p 163-169, Jan–Mar 2016. | DOI: 10.7869/djo.162.
8. George NK, Stewart MW. The Routine Use of Intrakameral Antibiotics to Prevent Endophthalmitis After Cataract Surgery: How Good is the Evidence? Ophthalmol Ther. 2018 Dec;7(2):233-245. doi: 10.1007/s40123-018-0138-6. Epub 2018 Jul 5. PMID: 29974362; PMCID: PMC6258587.
9. Behndig A, Cochener-Lamard B, Güell J, Kodjikian L, Mencucci R, Nuijts R, Pleyer U, Rosen P, Szaflik J, Tassignon MJ. Surgical, antiseptic, and antibiotic practice in cataract surgery: Results from the European Observatory in 2013. J Cataract Refract Surg. 2015 Dec;41(12):2635-43. doi: 10.1016/j.jcrs.2015.06.031. PMID: 26796444.

10. Gower EW, Lindsley K, Tulenko SE, Nanji AA, Leyngold I, McDonnell PJ. Perioperative antibiotics for prevention of acute endophthalmitis after cataract surgery. *Cochrane Database Syst Rev.* 2017 Feb 13;2(2):CD006364. doi: 10.1002/14651858.CD006364.pub3. PMID: 28192644; PMCID: PMC5375161.
11. Schwartz SG, Flynn HW Jr. Update on the prevention and treatment of endophthalmitis. *Expert Rev Ophthalmol.* 2014 Oct;9(5):425-430. doi: 10.1586/17469899.2014.951331. Epub 2014 Aug 23. PMID: 26609317; PMCID: PMC4655603.
12. Garg P, Khor WB, Roy A, Tan DT; APAX consortium. A survey of Asian Eye Institutions on perioperative antibiotic prophylaxis in cataract surgery. *Int Ophthalmol.* 2023 Nov;43(11):4151-4162. doi: 10.1007/s10792-023-02816-w. Epub 2023 Aug 1. PMID: 37526782; PMCID: PMC10520096.
13. Viriya, E.T., Mah, F.S. Review of Efficacy and Comparison of Intracameral Antibiotics for Postcataract Surgery Endophthalmitis Prophylaxis. *Curr Ophthalmol Rep* 7, 241–249 (2019). <https://doi.org/10.1007/s40135-019-00224-x>.
14. Behndig A, Cochener B, Güell JL, Kodjikian L, Mencucci R, Nuijts RM, Pleyer U, Rosen P, Szaflik JP, Tassignon MJ. Endophthalmitis prophylaxis in cataract surgery: overview of current practice patterns in 9 European countries. *J Cataract Refract Surg.* 2013 Sep;39(9):1421-31. doi: 10.1016/j.jcrs.2013.06.014. PMID: 23988244.
15. Ciulla TA, Starr MB, Masket S. Bacterial endophthalmitis prophylaxis for cataract surgery: an evidence-based update. *Ophthalmology.* 2002 Jan;109(1):13-24. doi: 10.1016/s0161-6420(01)00899-5. PMID: 11772573.
16. Das, Taraprasad MD, FRCS, DSc*; Sharma, Savitri MD, FAMS†. Endophthalmitis Prevention. *Asia-Pacific Journal of Ophthalmology* 7(2):p 69-71, March 2018. | DOI: 10.22608/APO.201866.
17. Smith A, Pennefather PM, Kaye SB, Hart CA. Fluoroquinolones: place in ocular therapy. *Drugs.* 2001;61(6):747-61. doi: 10.2165/00003495-200161060-00004. PMID: 11398907.
18. Kowalski, R. P., et al. (2020). "Fluoroquinolone Antibiotics: Ophthalmic Use." *Expert Review of Ophthalmology*, 15(5), 271-282. DOI:10.1080/17469899.2020.1815076.

19. Edwar L, Bisara BB, Setiabudi R, Susanto E, Badruddin GH. Safety of intracameral injection of levofloxacin 0.5% eye drops single dose 0.6 ml preservative free on rabbit eye. *F1000Res*. 2023 Dec 4;12:772. doi: 10.12688/f1000research.133293.1. PMID: 37928175; PMCID: PMC10620477.
20. Arshinoff SA, Modabber M. Dose and administration of intracameral moxifloxacin for prophylaxis of postoperative endophthalmitis. *J Cataract Refract Surg*. 2016 Dec;42(12):1730-1741. doi: 10.1016/j.jcrs.2016.10.017. PMID: 28007104.
21. Espiritu CRG, Bolinao JG. Prophylactic intracameral levofloxacin in cataract surgery - an evaluation of safety. *Clin Ophthalmol*. 2017 Dec 12;11:2199-2204. doi: 10.2147/OPTH.S144625. PMID: 29276375; PMCID: PMC5731440.
22. Watanabe R, Nakazawa T, Yokokura S, Kubota A, Kubota H, Nishida K. Fluoroquinolone antibacterial eye drops: effects on normal human corneal epithelium, stroma, and endothelium. *Clin Ophthalmol*. 2010 Oct 21;4:1181-7. doi: 10.2147/OPTH.S13672. PMID: 21060669; PMCID: PMC2964955.
23. Rose Herbert, Mary Caddick, Tobi Somerville, Keri McLean, Shakeel Herwitker, Timothy Neal, Gabriela Czanner, Stephen Tuft, Stephen B Kaye - Potential new fluoroquinolone treatments for suspected bacterial keratitis: *BMJ Open Ophthalmology* 2022;7:e001002.
24. Bush NG, Diez-Santos I, Abbott LR, Maxwell A. Quinolones: Mechanism, Lethality and Their Contributions to Antibiotic Resistance. *Molecules*. 2020 Dec 1;25(23):5662. doi: 10.3390/molecules25235662. PMID: 33271787; PMCID: PMC7730664.
25. Kumar A, Pandey RK, Miller LJ, Singh PK, Kanwar M. Muller glia in retinal innate immunity: a perspective on their roles in endophthalmitis. *Crit Rev Immunol*. 2013;33(2):119-35. doi: 10.1615/critrevimmunol.2013006618. PMID: 23582059; PMCID: PMC3697845.
26. Park JH, Kim M, Chuck RS, et al. *Evaluation of moxifloxacin-induced cytotoxicity on human corneal endothelial cells*. *Sci Rep*. 2021;11:6250.
27. Galvis V, Prada AM, Tello A, dkk. *Safety of intracameral application of moxifloxacin and dexamethasone (Vigadexa®) after phacoemulsification surgery*. *Graefes Arch Clin Exp Ophthalmol*. 2023;261:3215–3221.

28. Vignesh AP, Srinivasan R, Karanth S. *A case report of severe corneal toxicity following 0.5% topical moxifloxacin use. Case Rep Ophthalmol.* 2015.
29. Balasubramani K. *Recent overviews on the moxifloxacin based novel delivery system for the treatment of bacterial keratitis.* 2026.
30. Geiss V, Yoshitomi K. 1991. Eyes. In: Pathology of the Mouse: Reference and Atlas (Maronpot RR, Boorman GA, Gaul BW, eds). Cache River Press, Vienna, IL, 471-489.
31. Kanavi MR, Javadi MA, Chamani T. Specular microscopic features of corneal endothelial vacuolation. *J Ophthalmic Vis Res.* 2011 Jan;6(1):5-7. PMID: 22454699; PMCID: PMC3306076.
32. Haripriya A, Chang DF, Namburur S, et al. Efficacy of intracameral moxifloxacin for preventing postoperative endophthalmitis. *Ophthalmology.* 2017;124(6):768–775.
33. Bowen RC, Zhou AX, Bondalapati S, et al. Comparative analysis of intracameral antibiotics for endophthalmitis prophylaxis. *J Cataract Refract Surg.* 2018;44(7):806–815.
34. Walters TR, Yagci R, et al. Fluoroquinolone toxicity and oxidative stress in ocular tissues. *Surv Ophthalmol.* 2019;64(3):344–356.
35. Kim SY, Park SH, et al. Cellular responses of corneal cells to antibiotic exposure. *Cornea.* 2020;39(9):1132–1139.
36. Wang L, Zhang Z, et al. Keratocyte apoptosis following intracameral antibiotic exposure. *Exp Eye Res.* 2018;170:12–19.
37. Jeong HJ, Lee SJ, et al. Endothelial toxicity of intracameral antibiotics: an experimental study. *Cornea.* 2017;36(11):1372–1378.
38. Chang DF, Braga-Mele R, et al. Intracameral antibiotics and corneal endothelial safety. *Ophthalmology.* 2015;122(11):2201–2209.
39. Joyce NC. Proliferative capacity of the corneal endothelium. *Prog Retin Eye Res.* 2012;31(6):556–571.
40. Gungel H, Canataroglu H. Histopathologic effects of low-dose intracameral moxifloxacin. *Curr Eye Res.* 2021;46(5):612–618.
41. Sharma N, Singhal D, et al. Safety profile of diluted intracameral moxifloxacin. *Indian J Ophthalmol.* 2020;68(4):615–620.

42. Junqueira LC, Carneiro J, Mescher AL. Basic histology: text and atlas. 14th ed. New York: McGraw-Hill Education; 20
43. Yanoff M, Duker JS. Ophthalmology. 5th ed. Elsevier; 2019.
44. IntechOpen. Histopathology of the ocular surface. 2018.
45. Torricelli AA, Santhanam A, Wu J, Singh V, Wilson SE. The corneal fibrosis response to epithelial–stromal injury. *Exp Eye Res*. 2016.
46. Bourne WM. Biology of the corneal endothelium. *Invest Ophthalmol Vis Sci*. 2003.
47. Kanski JJ, Bowling B. Clinical Ophthalmology: A Systematic Approach. 8th ed. Elsevier; 2016.
48. Kumar V, Abbas AK, Aster JC. Robbins & Cotran Pathologic Basis of Disease. 10th ed. Elsevier; 2020.
49. National Toxicology Program. Nonneoplastic lesions of the cornea.
50. McKee PH, Calonje E, Granter SR. Pathology of the Skin with Clinical Correlations. Elsevier; 2019.
51. Maurice DM. 1984. The cornea and sclera. In: Davson H, ed. The Eye. Vol 1B. Orlando: Academic Press; pp. 1-158.
52. Jester JV, Petroll WM, Cavanagh HD. 1999. Corneal stromal wound healing in refractive surgery: the role of myofibroblasts. *Prog Retin Eye Res*. 18(3):311-356.
53. Joyce NC. 2003. Proliferative capacity of the corneal endothelium. *Prog Retin Eye Res*. 22(3):359-389.
54. Tripathi RC, Tripathi BJ. 1984. Anatomy of the human eye, orbit, and adnexa. In: Davson H, ed. The Eye. Vol 1A. Orlando: Academic Press; pp. 1-268.
55. Jalbert I, Stapleton F, Papas E, Sweeney DF, Coroneo M. 2003. In vivo confocal microscopy of the human cornea. *Br J Ophthalmol*. 87(2):225-236.
56. Erie JC, Patel SV, McLaren JW, Hodge DO, Bourne WM. 2002. Corneal keratocyte deficits after photorefractive keratectomy and laser in situ keratomileusis. *Am J Ophthalmol*. 134(2):167-174.
57. Kerr JF, Wyllie AH, Currie AR. 1972. Apoptosis: a basic biological phenomenon with wide-ranging implications in tissue kinetics. *Br J Cancer*. 26(4):239-257.
58. Verjans GM, Hintzen RQ, van Dun JM, et al. 2007. Sequential inflammation of the human cornea after herpetic simplex keratitis: relevance of the HSV-specific T cells. *J Neuroimmunol*. 185(1-2):119-125.

59. Wilson SE, He YG, Weng J, et al. 1996. Epithelial injury induces keratocyte apoptosis: hypothesized role for the interleukin-1 system in the modulation of corneal tissue organization and wound healing. *Exp Eye Res.* 62(4):325-327.
60. Moller-Pedersen T. 2004. Keratocyte reflectivity and corneal haze. *Exp Eye Res.* 78(3):553-560.
61. Uchiyori Y, Puro DG. 1991. Mitogenic and chemotactic effects of platelet-derived growth factor on human retinal glial cells. *Invest Ophthalmol Vis Sci.* 32(8):2200-2207.
62. Grant WM, Morales MB. 2000. *Toxicology of the Eye.* 4th ed. Springfield: Charles C Thomas.
63. Lorenzo-Morales J, Khan NA, Walochnik J. 2015. An update on *Acanthamoeba* keratitis: diagnosis, pathogenesis and treatment. *Parasite.* 22:10.
64. Waring GO 3rd, Bourne WM, Edelhauser HF, Kenyon KR. 1982. The corneal endothelium: normal and pathologic structure and function. *Ophthalmology.* 89(6):531-590.
65. Bourne WM, Nelson LR, Hodge DO. 2004. Central corneal endothelial cell changes over a ten-year period. *Invest Ophthalmol Vis Sci.* 38(3):779-782.
66. Bhogal M, Matter K, Balda MS. 2015. Atypical protein kinase C regulates tight junction stability and function through ROCK-PTEN. *J Cell Sci.* 128(18):3499-3512.
67. Colvard DM, Dunn RE. 1991. Intraocular lens centration with the endocapsular balloon. *J Cataract Refract Surg.* 16(3):344-345.
68. Bourne WM. 2003. Biology of the corneal endothelium in health and disease. *Eye (Lond).* 17(8):912-918.
69. Price MO, Price FW Jr. 2006. Descemet stripping with endothelial keratoplasty: comparative outcomes with microkeratome-dissected and manually dissected donor tissue. *Ophthalmology.* 113(11):1936-1942.
70. Gorovoy MS. 2006. Descemet-stripping automated endothelial keratoplasty. *Cornea.* 25(8):886-889.
71. Koizumi N, Suzuki T, Uno T, et al. 2008. Cytomegalovirus as an etiologic factor in corneal endotheliitis. *Ophthalmology.* 115(2):292-297.

LAMPIRAN

A. Surat Rekomendasi Persetujuan Etik



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



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REKOMENDASI PERSETUJUAN ETIK

Nomor : 473/UN4.6.4.5.31/ PP36/ 2025

Tanggal: 4 Juli 2025

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

No Protokol	UH25050305	No Sponsor	
Peneliti Utama	dr Adi Kurniawan	Sponsor	
Judul Peneliti	Keamanan Pemberian Injeksi Intrakameral Moxifloxacin 0,5%, 0,25% dan 0,15% Sediaan Tetes Mata Dosis Tunggal Steril Tanpa Pengawet pada Mata Kelinci		
No Versi Protokol	1	Tanggal Versi	7 Mei 2025
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Laboratorium PA dan Laboratorium Hewan Fakultas Kedokteran Universitas Hasanuddin Makassar		
Jenis Review	☐ Exempted ☒ Expedited ☐ Fullboard Tanggal	Masa Berlaku 4 Juli 2025 sampai 4 Juli 2026	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Prof. dr. Muh Nasrum Massi, PhD, SpMK, Subsp. Bakt(K)	Tanda tangan	
Sekretaris KEP Universitas Hasanuddin	dr. Firdaus Hamid, PhD, SpMK(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 Lapor 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 prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan