

DAFTAR PUSTAKA

1. Ghebreyesus TA, Ksaeva T. Global Tuberculosis Report. World Health Organization. 2022;1.
2. Palange P, Rohde G. European Respiratory Society Handbook. In: Pulmonary tuberculosis. 3rd ed. United Kingdom: Latimer Trend & Co. Ltd; 2019. p. 449.
3. Lee N, Nguyen H. Ethambutol. StatPearls-National Library of Medicine. 2024 Jan;
4. Chan RYC, Kwok AKH. Ocular toxicity of ethambutol. Hong Kong Med J. 2006 Feb;12(1):56–60.
5. Papadakis MA, McPhee SJ, Rabow MW, McQuaid KR. CURRENT Medical Diagnosis & Treatment 2024. In: Pulmonary Disorders. 63rd ed. San Fransisco: McGraw Hill; 2024. p. 283–4.
6. Gardenhire DS. Rau's Respiratory Care Pharmacology. In: Drugs Used to Treat the Respiratory System. 11th ed. St. Louis: Elsevier; 2024. p. 238–9.
7. Sheng WY, Wu SQ, Su LY, Zhu LW. Ethambutol-induced optic neuropathy with rare bilateral asymmetry onset: A case report. World J Clin Cases. 2022 Jan 14;10(2):663–70.
8. Srithawatpong S, Chaitanu Wong P, Yospaiboon Y. Factors Affecting Visual Recovery in Patients with Ethambutol-Induced Optic Neuropathy. Clinical Ophthalmology. 2023 Feb;Volume 17:545–54.
9. Irfana L. Neuropati Optik Toksik Akibat Etambutol. Jurnal Online Universitas Muhammadiyah Surabaya. 2015 May 4;
10. Grzybowski A, Zülzdorff M, Wilhelm H, Tonagel F. Toxic optic neuropathies: an updated review. Acta Ophthalmol. 2015 Aug 27;93(5):402–10.
11. Chamberlain PD, Sadaka A, Berry S, Lee AG. Ethambutol optic neuropathy. Curr Opin Ophthalmol. 2017 Nov;28(6):545–51.
12. Kementrian Kesehatan Republik Indonesia. Pedoman Nasional Pelayanan Kesehatan Penanganan Tuberkulosis. In: TB Paru. Jakarta: Kemenkes; 2020.
13. Makunyane P, Mathebula S. Update on ocular toxicity of ethambutol. African Vision and Eye Health. 2016 Mar 24;75(1).
14. Lee JY, Choi JH, Park KA, Oh SY. Ganglion Cell Layer and Inner Plexiform Layer as Predictors of Vision Recovery in Ethambutol-Induced Optic

Neuropathy: A Longitudinal OCT Analysis. *Investigative Ophthalmology & Visual Science*. 2018 Apr 19;59(5):2104.

15. Jo KW, Kim M, Kim YJ, Lee HK, Kim HK, Jeon D, et al. Early Discontinuation of Ethambutol in Pulmonary Tuberculosis Treatment Based on Results of the GenoType MTBDRplus Assay: a Prospective, Multicenter, Noninferiority Randomized Trial in South Korea. *Antimicrob Agents Chemother*. 2019 Dec;63(12).
16. Cirilli I, Damiani E, Dlundla PV, Hargreaves I, Marcheggiani F, Millichap LE, et al. Role of coenzyme q10 in health and disease: An update on the last 10 years (2010–2020). Vol. 10, *Antioxidants*. MDPI; 2021.
17. Irma J, Kartika A, Rini M, Setiohadji B, Salim J. A Protective Role of Coenzyme Q10 in Ethambutol-Induced Retinal Ganglion Cell Toxicity: A Randomised Controlled Trial in Mice. *Neuro-Ophthalmology*. 2022;46(5):298–303.
18. Casagrande D, Waib PH, Jordão Júnior AA. Mechanisms of action and effects of the administration of Coenzyme Q10 on metabolic syndrome. Vol. 13, *Journal of Nutrition and Intermediary Metabolism*. Elsevier Inc; 2018. p. 26–32.
19. Song A, Johnson N, Ayala A, Thompson AC. Optical Coherence Tomography in Patients with Alzheimer’s Disease: What Can It Tell Us? *Eye Brain*. 2021 Jan;Volume 13:1–20.
20. Ong J, Zarnegar A, Corradetti G, Singh SR, Chhablani J. Advances in Optical Coherence Tomography Imaging Technology and Techniques for Choroidal and Retinal Disorders. *J Clin Med*. 2022 Aug 31;11(17):5139.
21. National Center for Biotechnology Information. PubChem Compound Summary for CID 14052, Ethambutol. PubChem. 2024.
22. Tapiero J. Ethambutol. In: *xPharm: The Comprehensive Pharmacology Reference*. Elsevier; 2008. p. 1–8.
23. Kunz Coyne AJ, Casapao AM, Egelund EF. The Pharmacokinetic and Pharmacodynamic Properties of Antitubercular Medications. In 2023. p. 257–75.
24. Si M, Li H, Chen Y, Peng H. Ethambutol and isoniazid induced severe neurotoxicity in a patient undergoing continuous ambulatory peritoneal dialysis. *BMJ Case Rep*. 2018 May 18;bcr-2017-223187.
25. Huang SP, Chien JY, Tsai RK. Ethambutol induces impaired autophagic flux and apoptosis in the retina. *Dis Model Mech*. 2015 Jan 1;
26. Chung H, Yoon YH, Hwang JJ, Cho KS, Koh JY, Kim JG. Ethambutol-induced toxicity is mediated by zinc and lysosomal membrane

- permeabilization in cultured retinal cells. *Toxicol Appl Pharmacol*. 2009 Mar;235(2):163–70.
27. Kho RC, Al-Obailan M, Arnold AC. Bitemporal Visual Field Defects in Ethambutol-Induced Optic Neuropathy. *Journal of Neuro-Ophthalmology*. 2011 Jun;31(2):121–6.
 28. Oliveira C. Toxic-Metabolic and Hereditary Optic Neuropathies. *CONTINUUM: Lifelong Learning in Neurology*. 2019 Oct;25(5):1265–88.
 29. Wang MY, Sadun AA. Drug-Related Mitochondrial Optic Neuropathies. *Journal of Neuro-Ophthalmology*. 2013 Jun;33(2):172–8.
 30. Papucci L, Schiavone N, Witort E, Donnini M, Lapucci A, Tempestini A, et al. Coenzyme Q10 Prevents Apoptosis by Inhibiting Mitochondrial Depolarization Independently of Its Free Radical Scavenging Property. *Journal of Biological Chemistry*. 2003 Jul;278(30):28220–8.
 31. Rapuano CJ, Stout JT, McCannel CA. BCSC Vitreous and Retina. In: *Other Retinal Vascular Diseases*. San Fransisco: American Academy of Ophthalmology; 2022. p. 190–2.
 32. Costello F. Optical Coherence Tomography in Neuro-ophthalmology. *Neurol Clin*. 2017 Feb;35(1):153–63.
 33. Al-Hawasi A, Lagali N. Retinal ganglion cell layer thickness and volume measured by OCT changes with age, sex, and axial length in a healthy population. *BMC Ophthalmol*. 2022 Dec 24;22(1):278.
 34. Schaal S, ElTanboly A, Ismail M, Switala A, Shalaby A, Hadayer A, et al. A novel automated method for the objective quantification of Retinal layers reveals sequential changes that occur in the Normal retina with age. *Frontiers in Nanoscience and Nanotechnology*. 2016;2(5).
 35. Kim KE, Jeoung JW, Park KH, Kim DM, Kim SH. Diagnostic Classification of Macular Ganglion Cell and Retinal Nerve Fiber Layer Analysis. *Ophthalmology*. 2015 Mar;122(3):502–10.
 36. Saxena R, Services NO, Prasad R, Mandal S, Dhiman R, Mohan A, et al. Prospective study to evaluate incidence and indicators for early detection of ethambutol toxicity. Available from: <http://bjo.bmj.com/>
 37. Han J, Byun MK, Lee J, Han SY, Lee JB, Han SH. Longitudinal analysis of retinal nerve fiber layer and ganglion cell–inner plexiform layer thickness in ethambutol-induced optic neuropathy. *Graefe’s Archive for Clinical and Experimental Ophthalmology*. 2015 Dec 1;253(12):2293–9.
 38. Hidalgo-Gutiérrez A, González-García P, Díaz-Casado ME, Barriocanal-Casado E, López-Herrador S, Quinzii CM, et al. Metabolic targets of coenzyme q10 in mitochondria. Vol. 10, *Antioxidants*. MDPI; 2021.

39. Sangsefidi ZS, Yaghoubi F, Hajiahmadi S, Hosseinzadeh M. The effect of coenzyme Q10 supplementation on oxidative stress: A systematic review and meta-analysis of randomized controlled clinical trials. *Food Sci Nutr*. 2020 Apr 19;8(4):1766–76.
40. Fernández-Vega B, Nicieza J, Álvarez-Barrios A, Álvarez L, García M, Fernández-Vega C, et al. The Use of Vitamins and Coenzyme Q10 for the Treatment of Vascular Occlusion Diseases Affecting the Retina. *Nutrients*. 2020 Mar 9;12(3):723.
41. Arenas-Jal M, Suñé-Negre JM, García-Montoya E. Coenzyme Q10 supplementation: Efficacy, safety, and formulation challenges. *Compr Rev Food Sci Food Saf*. 2020 Mar 19;19(2):574–94.
42. Sen P, Shah C, Sen A, Jain E, Mohan A. Primary versus secondary intraocular lens implantation in traumatic cataract after open-globe injury in pediatric patients. *J Cataract Refract Surg*. 2018 Dec;44(12):1446–53.
43. Global Tuberculosis Report 2024. World Health Organization; 2024.
44. Mwanza JC, Durbin MK, Budenz DL, Girkin CA, Leung CK, Liebmann JM, et al. Profile and Predictors of Normal Ganglion Cell–Inner Plexiform Layer Thickness Measured with Frequency-Domain Optical Coherence Tomography. *Investigative Ophthalmology & Visual Science*. 2011 Oct 4;52(11):7872.
45. Sheng WY, Su LY, Ge W, Wu SQ, Zhu LW. Analysis of structural injury patterns in peripapillary retinal nerve fibre layer and retinal ganglion cell layer in ethambutol-induced optic neuropathy. *BMC Ophthalmol*. 2021 Dec 10;21(1):132.
46. Lee JY, Han J, Seo JG, Park KA, Oh SY. Diagnostic value of ganglion cell-inner plexiform layer for early detection of ethambutol-induced optic neuropathy. *British Journal of Ophthalmology*. 2019 Mar;103(3):379–84.
47. Yang HK, Park MJ, Lee JH, Lee CT, Park JS, Hwang JM. Incidence of toxic optic neuropathy with low-dose ethambutol. *The International Journal of Tuberculosis and Lung Disease*. 2016 Feb 1;20(2):261–4.
48. Elias A, Neena R, Giridhar A. Ethambutol-induced optic neuropathy: A case series. *Kerala Journal of Ophthalmology*. 2022;34(1):55.
49. Vieira LMC, Silva NFA, Dias dos Santos AM, Anjos RS dos, Abegão Pinto LAP, Vicente AR, et al. Retinal Ganglion Cell Layer Analysis by Optical Coherence Tomography in Toxic and Nutritional Optic Neuropathy. *Journal of Neuro-Ophthalmology*. 2015 Sep;35(3):242–5.
50. Lushchak VI. Time-course and intensity-based classifications of oxidative stresses and their potential application in biomedical, comparative and environmental research. *Redox Report*. 2016 Nov 5;21(6):262–70.

51. Koul P. Ocular toxicity with ethambutol therapy: Timely recaution. *Lung India*. 2015;32(1):1.
52. Žitňanová I, Šiarnik P, Kollár B, Chomová M, Pazderová P, Andrežálová L, et al. Oxidative Stress Markers and Their Dynamic Changes in Patients after Acute Ischemic Stroke. *Oxid Med Cell Longev*. 2016 Jan 28;2016(1).
53. Martucci A, Nucci C. Evidence on neuroprotective properties of coenzyme Q10 in the treatment of glaucoma. *Neural Regen Res*. 2019 Feb;14(2):197–200.
54. Dai S, Tian Z, Zhao D, Liang Y, Liu M, Liu Z, et al. Effects of Coenzyme Q10 Supplementation on Biomarkers of Oxidative Stress in Adults: A GRADE-Assessed Systematic Review and Updated Meta-Analysis of Randomized Controlled Trials. *Antioxidants*. 2022 Jul 13;11(7):1360.
55. Castaneda OA, Lee SC, Ho CT, Huang TC. Macrophages in oxidative stress and models to evaluate the antioxidant function of dietary natural compounds. *J Food Drug Anal*. 2017 Jan;25(1):111–8.
56. Rahmalia Putri, Hanifa Rahma, Sani Ega Priani. Studi Literatur Pemanfaatan Koenzim Q10 sebagai Antioksidan. *Bandung Conference Series: Pharmacy*. 2025 Jan 31;5(1):170–8.
57. Zhang X, Tohari AM, Marcheggiani F, Zhou X, Reilly J, Tiano L, et al. Therapeutic Potential of Co-enzyme Q10 in Retinal Diseases. *Curr Med Chem*. 2017 Dec 21;24(39).
58. Deppe L, Mueller-Buehl AM, Tsai T, Erb C, Dick HB, Joachim SC. Protection against Oxidative Stress by Coenzyme Q10 in a Porcine Retinal Degeneration Model. *J Pers Med*. 2024 Apr 22;14(4):437.

