

BAB 5

KESIMPULAN DAN SARAN

5.1 Kesimpulan

1. Karbamazepin tidak mempengaruhi kadar serum magnesium pada pasien epilepsi di RSUD dr. Soetomo Surabaya.
2. Karbamazepin menurunkan jumlah kejang pada pasien epilepsi di RSUD dr. Soetomo Surabaya.

5.2 Saran

Diperlukan penelitian lebih lanjut dengan metode prospektif serta melihat dari riwayat pengobatan pada masa sebelumnya sehingga dapat membandingkan pengobatan pada masa lampau dan masa sekarang.

DAFTAR PUSTAKA

- Alshafei , M. M., Kassem, S. S. dan Abdel, K.M.M. 2013. Effect of Long Term Treatment with Antiepileptic Drugs on Oxidant Status, Zinc and Magnesium in Epileptic Patients, *World Applied Sciences Journal*. **28 (3)**: 316-323.
- Altura, B.T. dan Altura, B.M. 1991. Measurement of ionized magnesium in whole blood, Plasma and serum with a new ion-selective electrode in healthy and diseased human subjects, *Magnes Trace Elem*. **40**: 90-8.
- Ariana, D. 2017. Pola penggunaan omeprazole pada pasien HIV & AIDS diUPIPI RSUD Dr. Soetomo Surabaya. *Skripsi*. Fakultas Farmasi. Universitas Katolik Widya Mandala Surabaya, Surabaya.
- Barr, W.B. dan Marrison, C. (eds). 2015. *Handbook on The Neuropsychology of Epilepsy*. Pharmaceutical Press. New York, USA.
- Baxter, K. (eds). 2010. *Stockley's Drug Interactions Eighth Edition*. Pharmaceutical Press. London. Chicago.
- Bender, H. A., García, A.M. dan Barr, W.B. 2010. An interdisciplinary approach to neuropsychological test construction: Perspectives from translation studies, *Journal of the International Neuropsychological Society*. **16**:227–232.
- Belcastro, V. Dan Striano, P. 2012. Antiepileptic drugs, hyperhomocysteinemia and B-vitamins supplementation in patients with epilepsy, *Epilepsy Research*. **102**:1-7.
- Billota. K.A.J. 2009. *Kapita selekta penyakit dengan implikasi keperawatan*. Penerbit Buku EGC. Jakarta.

- Browne, T.R., Szabo, G.K. dan Evans, J.E., dkk. 1998. Carbamazepine increases phenytoin serum concentration and reduces phenytoin clearance, *J Neurology*. **38(7)**: 1146- 1150.
- Chernow, B., Bamberger, S., Stoiko, M., dkk. 1989. Hypomagnesemia in patients in postoperative intensive care, *Chest*. **95(2)**:391-397.
- Cipolle, R. J., Strand, L. M. Dan Marley, P. C. 1998. *Pharmaceutical Care, The Clinician's Guide, Edisi 2*. McGraw-Hill, New York.
- Departemen Kesehatan RI. 1998. *Pelatihan Penggunaan Obat Rasional Untuk Dokter Puskesmas*, Departemen Kesehatan Republik Indonesia, Jakarta.
- Dhande, P.P., Ranade, R.S. dan Ghongane, B.B. 2009. Effect of Magnesium Oxide on The Activity of Standart Anti-Epileptic Drug Against Experimentals Seizures in Rats, *Indian Journal of Pharmacology*. **41(6)**: 286-272.
- Escuela, M.P., Guerra, M., Anon, J.M, dkk. 2005. Total and ionized serum magnesium in critically ill patients, *Intensive Care Med*. **31(1)**:151-156.
- Fawcett, W.J., Haxby, E.J. dan Male, D.A. 1999. Magnesium: physiology and pharmacology, *J Anaesth*. **83**:302-320.
- Fisher, R.S., Acevedo, C., Arzimanoglou, A., Bogacz, A., Cross, J.H., Elger, C.E. dkk. 2014. A practical clinical definition of epilepsy, *Journal of epilepsy*, **55(4)**:475-82.
- Fradgley, S., Aslam, M., Tan., C. K. dan Prayitno, A. 2003. *Interaksi Obat dalam Farmasi Klinis*. PT. Elex Media Komputindo Kelompok Gramedia. Jakarta.
- Gandaiah, P.V.N., Ramakrishna, S, dkk. 2014. Role of Magnesium in Convulsive Disorders, *Indian Journal of Public Health Research & Development*. **5(1)**:60-63.

- Ghamari, Z.T., Zare, M., Habibabadi, J.M. dan Najari, M.R. 2013. A Quick Review of Carbamazepine Pharmacokinetics in Epilepsy from 1953 to 2012, *Journal of Research in Medical Sciences*. **18**:81-85.
- Gidal, B.E., dkk. 2005. *Pharmacotherapy: A Pathophysiologic Approach 6th*. McGraw-Hill, New York.
- Gitawati, R. 2008. *Interaksi Obat dan Beberapa Implikasinya*. Media Litbang Volume XVII Nomor IV. Semarang.
- Gunawan, S.G., Setiabudi, R., Nafrialdi. dan Elysabeth. (eds). 2012. *Farmakologi dan Terapi edisi 5*. Departemen Farmakologi dan Terapeutik Fakultas Kedokteran-Universitas Indonesia Jakarta, Jakarta.
- Hardman, J.H. dan Limbird, L.E. 2014. *Godmaan & Gilman Dasar Farmakologi Terapi vol.1 edisi 10*. EGC. Jakarta.
- Harsono. 2005. *Buku Ajar Neurologi Klinis*. Gadjah Mada University Press. Yogyakarta.
- Huang, H. L., Zhou, H., Wang, N., dan Yu, C. Y. 2016. Effect of antiepileptic drug on the serum folate and vitamin B12 in various epileptic patients, *J. Biomedical Reports*. **5**:413-416.
- Ikawati, Z. 2011. *Farmakoterapi Penyakit Sistem Saraf Pusat*. Bursa Ilmu. Yogyakarta.
- Jann, M.W., Ereshefsky, L., Saklad, S.R., dkk. 1985. Effects of carbamazepin on plasma haloperidol Levels, *J Clin Pshychopharmacol*. **5(2)**:106-109.
- Joffres, M.R., Reed, D.M. dan Yano, K. 2010. Relationship of magnesium intake and other dietary factors to blood pressure: The Honolulu Heart Study, *J Clin Nurt*. **45**:469-75.
- Katzung, B.G. 2007. *Basic and Clinical Pharmacology – 10 th Edition*. McGraw-Hill Medical, UK.

- Katzung, B.G., Masters, S.B. dan Trevor, A.J. 2014. *Farmakologi Dasar dan Klinik volume.1 edisi 12*. EGC. Jakarta.
- Khasanah, R., Mahama, C. N. dan Runtuwene, T. 2015. Profil Penyandang Epilepsi di Poliklinik Saraf RSUP Prof. dr. R. D. Kandou Manado Periode Juni 2013 – Mei 2014, *Jurnal e-Clinic*. **3(1)**:472-475.
- King, D.E., Mainous, A.G., Geesey, M.E., dkk. 2005. Dietary magnesium and C-reactive protein levels, *J Am Coll Nutr*. **24(3)**:166-171.
- Koester, J. dan Siegelbaum, S.A. 2000. *Membrane potensial dalam Kandel*. Mc Graw Hill. USA.
- Kusumastuti, K. dan Basuki, M. 2014. *Definisi, Klasifikasi dan Etiologi Epilepsi dalam Kelompok Studi Epilepsi PERDOSSI, (Eds.), Pedoman Tatalaksana Epilepsi, Edisi 5*, Airlangga University Press. Surabaya.
- Laing, R., Hogerzeil, H.V. dan Ross-Degnan, D. 2001. Ten Recommendations to Improve the Use of Medicines in Developing Countries, *Health Policy and Planning*. **16(1)**:13–20.
- Lanken, P., Hanson, C.W. dan Manaker, S. (eds). *The intensive care unit manual*. WB Saunders Co. Philadelphia.
- Lowenstein, F.W. dan Stanton, M.F. 1986. Serum Magnesium Level in the United States, 1971-1974. *J Am Coll Nurt*. **5(4)**:399-414.
- Luce, P.Y., Dismand, H. dan Fabrice, Q. 2011, Understanding the differences in prevalence of epilepsy in tropical regions, *Epilepsia*, **52**:1376- 1381.
- Malingkas, C.V., Paruntu, M.V. dan Assa, Y.A. 2015. Gambaran Kadar Magnesium Serum pada Orang Usia Lanjut dengan Umur 60-70 Tahun, *Jurnal e-Biomedik (eBm)*, **3(1)**.
- McEvoy, G.K. (eds). 2011. *AHFS Drug Information*, American Society of Health-System Pharmacists, Bethesda, Maryland.

- McHugh, J.C. dan Delanty, N. 2008. Epidemiology and classification of epilepsy: gender comparisons, *J Neurology*. **83**: 11-26.
- Mosquera, C., Trigueros, A.M. dan Vazquez, A.V. 2012. *EEG Signal Processing of Epilepsy*. Histological, Electroencephalographic and Phsyiological Aspect, Rijeka, Croatia.
- Embrey. M. (eds). 2012. *MDS-3: Managing Access to Medicines and Health Technologies*. Management Scinences for Health, Inc. Airlington, VA: USA.
- Mula, M. (eds). 2016, *Neuropsychiatric Symphoms of Epilepsy*, Springer International Publishing, London.
- Mustarsid., Nur, F.T., Setiawati, S.R. dan Salimo, H. 2011. Pengaruh Obat Antiepilepsi Terhadap Gangguan Daya Ingat pada Epilepsi Anak, *Sari Pediatri*, **12**:05.
- Naha, K., Dasari, J., Vivek, G. Dan Prabu, M. 2012. Vitamin B12 deficiency: an unusual cause for recurrent generalised seizures with pancytopenia, *BMJ Case Reports*. 1-3.
- Neal, M.J. 2016. *Medical of Pharmacology at a Galance Eighth Edition*. Wiley Blackwell, Singapore.
- Ngugi, A.K., Bottomley, C., Kleinschmidt, I., dkk. 2010, Estimation of the burden of active and life time epilepsy: A meta analytic approach. *Epilepsia*, **51(5)**:883-90.
- Noronha, A.L dkk. 2007. Prevalence and pattern of epilepsy treatment in differen socioeconomic classes in Brazil. *Epilepsia*. **48(5)**:880-885.
- Nursalam. 2003. Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan Pedoman. *Skripsi Tesis dan Instrumen Penelitian Keperawatan*. Jakarta.

- O'Donoghue, M.F., Duncan, J.S. dan Sander, J.W.A.S. 1996. The Hospital Seizure Severity Scale: A Further Development of the Chalfont Seizure Severity Scale, *Epilepsia*, **37(6)**: 563-571.
- Pandey, R., Garg, R., Darlong, V., Punj, J. dan Khanna, P. 2011. Recurrent Seizure in Pregnancy-Epilepsy or Eclampsia : A Diagnostic Dilemma? A Case Report, *AANA Journal*, **79(5)**.
- Poter, R.J. dan Meldrum, B.S. (eds). 2007. *Basic & clinical Pharmacology 10th*. Mc Graw Hill, California.
- Rodenberger, C.H. dan Ziyadeh. F. 2001. *Electrolyte disorders*. WB Saunders Co. Philadelphia. USA.
- Safar, M.M., Abdallah, D.M., Arafa, N.M. dan Abdel-Aziz, M.T. 2010. Magnesium supplementation enhances the anticonvulsant potential of valproate in pentylenetetrazol treated rats, *Braint research elsevier*, 56-58.
- Saris, N.E., Mervaala, E. dan Karppanen. 2000. Magnesium: an update on physiological, clinical and analytical aspects, *Clinica Acta*. **294(1-2)**:1-26.
- Sastramihardja, H.S. 1997. *Penggunaan Obat yang Rasional di Tempat Pelayanan Kesehatan*. Yayasan Penerbitan Ikatan Dokter Indonesia, Majalah Kedokteran Indonesia. Jakarta Indonesia.
- Schachter, S.C. 2016. *Antiseizure Drug: Mechanism of Action, Pharmacology, and Adverse Effect*. Wolters Kluwer, USA.
- Sener, U., Zorlu, Y., Karaguzel, O., Ozdamar, O., Coker, I. dan Topbas, M. 2006. Effects of common anti-epileptic drug monotherapy on serum levels of homocysteine, Vitamin B12, folic acid and Vitamin B6, *Seizure*. **15**:79—85.

- Shakirullah., Ali, N., Khan, A., dan Nabi, M. 2014. The Prevalence, Incidence and Etiology of Epilepsy, *International Journal of Clinical and Experimental Neurology*. **2(2)**:29-39.
- Shils, M.E., Shike, M., Ross, A.C., Caballero, B dan Cousins, R.J. (eds). 2006. *Modern nutrition in health and disease 10th Edition*. Lippincott Williams and Wilkins, Philadelphia. Shorvon, S.D. (eds). 2010, *Handbook of Epilepsy Treatment, third edition*. Willwy-Blackwell, London.
- Shorvon, S., Guerrini, K., Cook, M. dan Lhatoo, S.D. 2013. *Oxford Textbook of Epilepsy and Epileptic Seizures*. Oxford University Press, UK.
- Sinert, R.S. D.S, dkk. 2007. Serum ionized magnesium and calcium levels in adult patient with seizures, *Scand J Clin Lab Invest*. **67**:317-326.
- Suresh, S.H., Chakraborty, A., Virupakshaia , A. dan Kumar, N. 2015. Research Article : Efficacy and Safety of Levetiracetam and Carbamazepine as Monotherapy in Partial Seizures, *Hindawi Publishing Corporation Epilepsy Research and Treatment*, **6**: 1-5.
- Tan, M. 2014, Epilepsy in Adult, *Australia Family Physician*; **43(03)**.
- Tatro, D.S. (eds). 2009. *Drug Interaction Facts 6th edition*. Wolters Kluwers Company, San Carlos, California.
- Tjay, T.H. dan Rahardja, K. 2010. *Obat-obat Penting Khasiat, Penggunaan, dan Efek Samping Edisi 6 Cetakan 3*, PT.Elex Media Komputindo Kelompok Kompas-Gramedia, Jakarta.
- Tong, Yisha. 2014. Seizures caused by pyridoxine (vitamin B6) deficiency in adults: A case report and literature review, *Intractable & Rare Diseases Research*. **3(2)**:52-56.

- Topf, J.M. dan Murray, P.T. 2003. Hypomagnesemia and hypermagnesemia, *Rev Endoc Metab Disord.* **4**:195-206.
- Vance A.M. dan Millington W.R. 1986. Principle of Irrational Drug Therapy, *International Journal of Health Sciences.* **16(3)**:355-361.
- Visser, N.A., Braun, K.P.J., Leitjen, F.S.S., Nieuwenhuizen, O.V., Woke, J.H.J. dan Bergh, W.M.V.D. 2011. Magnesium treatment for patients with refractory status epilepticus due to POLG1-mutations, *J Neurol.* **258**:218–222.
- Wells, B.G., DiPiro, J.T., Schwinghammer, T.L. dan DiPiro, C.V. 2015. *Pharmacotherapy handbook ninth edition.* Mc Graaw – Hill. New York.
- World Health Organization, 2016. Diakses Tanggal 17 Juli 2016 Pukul 06:42 WIB dari: <http://www.who.int/mediacentre/factsheets/fs999/en/>.
- Worthington, V. 2001. Nutritional quality of organic versus conventional fruits, vegetables and grains, *J Altern Complement Med.* **7(2)**:161-173.
- Wyllie, E. 2011. *Wyllie's Treatment of Epilepsy Principles and Practice.* Lippincott Williams dan Wilkins. China.
- Yardimoglu, M., Ilbay, G., Dalcik, C., Dalcik, H. dan Koktruk, S. 2015. *Cellular and Molecular Mechanisms Underlying Epilepsy : An Overview With Our Findings.* Departement of Histology and Embryology, Faculty of Medicine, and Kocaeli University, Turkey.
- Yasuui-Furukori, N. dan Tateishi, T. 2001. Carbamazepine decreases antihypertensive effect of nilvadipine, *J Clin Pharmacol.* **42(1)**: 100-3.
- Yuen, A.W.C. dan Sander, J.W. 2012. Can Magnesium Supplementation Reduce Seizures in People with Epilepsy? A Hypothesis, *Epilepsy Research.* **100**:152-156.