

BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Berdasarkan hasil penelitian yang berjudul Profil Penggunaan Furosemid pada Pasien Gagal Ginjal Kronik yang dilakukan di Instalasi Rawat Inap (IRNA) RSUD Kabupaten Sidoarjo periode Juli 2014 – Desember 2014 diperoleh kesimpulan sebagai berikut :

- a. Penggunaan diuretik yang paling banyak adalah furosemid tunggal sebanyak 12 pasien (39%) (3x40mg) PO.
- b. Penggunaan furosemid lebih banyak dikombinasi dengan antihipertensi yaitu amlodipin sebanyak 7 pasien (22%) furosemid (1x40mg) PO + Amlodipin (1x10mg) PO.
- c. Penggunaan furosemid yang diberikan pada pasien penyakit ginjal kronik terkait dengan rute, dosis, dan frekuensi sudah sesuai dengan dengan *guideline* Aminoff, 2010 yang telah ada sebelumnya.
- d. Pasien dengan kondisi pulang perbaikan yang sudah sesuai dengan guideline Pagana and pagana, 2013 sebanyak 5 pasien (16%). Sedangkan kondisi pasien pulang perbaikan yang tidak sesuai dengan guideline 26 pasien (84%).

5.2 Saran

- a. Diperlukan penulisan RMK yang lebih lengkap, sehingga didapatkan data yang lebih baik untuk penelitian selanjutnya.
- b. Diperlukan peningkatan peran farmasis dalam asuhan kefarmasian sebagai tim pelayanan kesehatan terhadap pasien.

- c. Diperlukan penelitian lebih lanjut dengan menggunakan metode prospektif agar peneliti dapat mengamati secara langsung kondisi pasien dan terapi obat yang diberikan kepada pasien, serta dapat berinteraksi dengan pasien, dokter dan para klinisi lain sehingga dihasilkan profil penggunaan obat yang representatif.

DAFTAR PUSTAKA

- Abboud H., and HenricWL., 2010, Stage IV Chronic Kidney Disease , Eng. J. Med., 1, p. 362.
- Agarwal, R., and Vasavada, N., 2003. Role of Excess Volume in The Pathophysiology of Hypertension. *Kidney International*, p. 1528-1535.
- Aisyah J. 2011. Karakteristik Penderita Gagal Ginjal Kronik (GGK) Yang Dirawat Inap di RS Haji Medan Tahun 2009, *Skripsi* Mahasiswa FKM USU, Medan.
- Aminoff, Michael J., Barbour, David M., Baron, Robert B., Kevin., Bashore, Thomas M., Berger., Timothy G., Hnery F., Cheng, Hugo Q., et al. 2010. Systemic Hypertension In : McPhee, Papadakis., (Eds), Current Medical Diagnosis & Treatment Forty-Ninth Edition, New York : The McGraw-Hill Companies, Inc, p. 398-406.
- Anonim, 2009.*Farmakologi dan Terapi*, Ed. 5. Jakarta: Balai Penerbit FKUI, pp. 389-393.
- Aronson, J.K., 2009. *Meyler's Side Effects of Cardiovascular Drugs*, New York; Elsevier, pp. 197.
- Baradero, M., Wilfrid M. dan Siswadi Y. 2005, *Klien Gangguan Ginjal*, Jakarta :Buku Kedokteran EGC , pp. 124-129.
- Depkes, 2000.*Informatorium Obat Nasional Indonesia* 2000. Jakarta: CV SagungSeto, pp. 72.

Dipiro, J.T., Talbert, R.L., Yee, G.C., Matzke, G.R., Wells, B.G., Posey, L.M. 2008. *Pharmacotherapy: A Pathophysiologic Approach*. New York: McGraw Hill Companies, Inc.

Dowling, T.C., 2008. Quantification of Renal Function. In: DiPiro, T.J., Talbert, R.L., Yee, G.C., Matzke, G.R., Wells, B.G. and Posey, L.M., *Pharmacotherapy: A Pathophysiologic Approach*, 7th edition, New York: McGraw-Hill Companies, Inc., pp. 706.

Ganong, W.F., 2005. A Lange Medical Book : Review of Medical Physiology, 22th edition, New York: Prentice-Hall International, Inc.

Grenier, R.J., Harris, N.D. and Goodyer, L.I., 2000. *Pathology and Therapeutics for Pharmacists*, 2nd edition, London: Pharmaceutical Press, pp. 183-191.

Guyton A. C., and Hall J. E., 2006. *Buku Ajar Fisiologi Kedokteran Edisi 11*. Penterjemah: Irawati, Ramadani D, Indriyani F. Jakarta: Penerbit Buku Kedokteran EGC, p. 279.

Hudson, J.Q., 2008. Chronic Kidney Disease: Management of Complication. In: DiPiro, T.J., Talbert, R.L., Yee, G.C., Matzke, G.R., Wells, B.G. and Posey, L.M., *Pharmacotherapy: A Pathophysiologic Approach*, 7th edition, New York: McGraw-Hill Companies, Inc., pp. 765-772 and 787.

Ives, H.E., 2007. Diuretic Agents. In: Katzung, B.G., *Basic and Clinical Pharmacology*, 10th edition, New York: McGraw-Hill Companies, Inc, pp. 236-252.

Ix, J.H., 2006. Renal Disease. In: McPhee, S.J., *Pathophysiology of Disease: An Introduction to Clinical Medicine*, 5th edition, New York: McGraw-Hill Companies, Inc, pp. 756-762.

- Jackson, E.K., 2007. DiuretikIn: Hardman, J.G. and Limbird, L.E., *Goodman and Gilman Dasar Farmakologi Terapi*, Edisi 10, Vol 1, Jakarta: EGC, pp.741, 747-759.
- Joy, M.S., Kshirsagar, A., and Franceschini, N., 2008. Chronic Kidney Disease : Progression-Modifying Therapies. In: DiPiro, T.J., Talbert, R.L., Yee, G.C., Matzke, G.R., Welss, B.G. and Posey, L.M., *Pharmacotherapy: A Pathophysiologic Approach*, 7th edition, New York: McGraw-Hill Companies, Inc., pp.745.
- Katzung, B.G., 2001, Basic & Clinical Pharmacology, 9th ed., The McGraw-Hill Companies Inc., New York, 269-312.
- Kossi, M.E., Bello, A.K., Hamer, R., and Nahas, A.M., 2007. *Chronic Kidney Disease – Prevention of Progression and Cardiovascular Complications*. In: Goldsmith, D., Jayawardene, S., and Ackland, P., ABC of Kidney Disease, London: Balckwell Publishing Ltd., pp. 11-14.
- Krauss, A.G., and Hak, L.J., 2000. Chronic Renal Disease. In: Herfindal, E.T., and Gourley, D.R. (Eds.), *Textbook of Therapeutics Drug and Renal Disease Management*, 7th edition, Philadelphia: Lippincott Williams & Wilkins, pp. 462-463.
- Lankrst CE., and Wish JB., 2010, *Anemia in Renal Disease: Diagnosis and Management*, Blood Reviews., 24, 39-47.
- McNally, K., 1999. Renal Medicine. In: Huges, J., Donnelly, R., and James-Chatgilaou, G., *Clinical Pharmacy : A Practical Approach*, Sydney: The Society of Hospital Pharmacist of Australia, pp. 110-115.
- McPhee, S.J., Papadakis, M.A., and Tierney, L.M., 2008. Current Medical Diagnosis and Treatment, 47th edition, New York: McGraw-Hill Companies, Inc., pp. 793-798.

Meguid El Nahas and Aminu K Bello. 2005. Chronic Kidney Disease : The Global Challenge Vol. 365. Sheffield Kidney Institute, Sheffield Teaching Hospital NHS Foundation Trust, Northren General Hospital Campus University of Sheffield UK.

Mueller. B.A., 2005, Acute Renal Failure dalam Dipiro, J.T, Talbert, RL., Yee, GC., Wells, BG., Posey, ML., Pharmacotherapy A Pathophysiologic Aprroach, 6th Edition, 781-796, Apletion and lange, Philadelphia.

Neal, M.J., 2005. At a Glance Farmakologi Medis, 5th edition, Jakarta: Erlangga, pp. 35-35.

Novoa JML., Salgado CM., Pena ABR., Hernandez FJL., 2010, *Common Pathophysiological Mechanisms of Chronic Kidney Disease: Therapeutic Pehospitalpectives, Pharmacology & Therapeutics.*, 128, 61–81.

NKF, 2002.*Chronic Kidney Disease as a Public Health Problem*.In: NKF, K/DOQI Clinical Practice Guidelines for Chronic Kidney Disease : Evaluation, Classification and Stratification, New York: National Kidney Foundation, Inc., pp.29.

NKF, 2002. *K/DOQI Clinical Practice Guidelines on Hypertension and Antihypertensive Agents in Chronic Kidney Disease* : Use of Diuretics in CKD. In: NKF, K/DOQI Guidelines, New York: National Kidney Foundation, Inc. [Access September, 26 2013]. Available at:
http://www.kidney.org/professionals/kdoqi/guidelines_bp/guide_12.html

O'Callaghan, C.A., and Brenner, B.M., 2000. *The Kidney at a Glance*, London: Blackwell Science Ltd., pp. 94-95.

Pagana, K.D., &Pagana, T.J., 2002. *Manual of Diagnostic and Laboratory Tests*, 2nd edition, New York: Mosby, Inc.

- Saito, F., and Kimura, G. 1996. *Antihypertensive mechanism of diuretics based on pressure-natriuresis relationship*. *Hypertension*, 27 : 914-918.
- Schonder, K.S., 2008. Chronic and end stage renal disease. In : Marie, A.C.C., Barbara, G.W., Terry, L.S., Patrick, M.M., Jill, M.K., John, C.R., Joseph, T.D (Eds.). *Pharmacotherapy Principles and Practice*, New York: The McGraw-Hill Companies, Inc., p. 395.
- Shargel, L., Wu-Pong, S., and Yu, A.B., 2005. *Applied Biopharmaceutics and Pharmacokinetics*, 5th edition, New York: The McGraw-Hill Companies, Inc, p. 417-420
- Shier, D., Butler, J., and Lewis, R., 2000. *Hole's Essentialsof Human Anatomy and Physiology*, 7th edition, New York: McGraw-Hill Companies, Inc., pp. 480-484.
- Supadmi, W. 2011, *Evaluasi penggunaan obat anti hipertensi pada pasien gagal ginjal kronik yang menjalani hemodialisa*, Jurnal Ilmiah kefarmasian, Vol.1, 67-80, Yogyakarta.
- Suwitra, K., 2006. Penyakit Ginjal Kronik. In: Sudoyo, A.W., Setiyohadi, B., Alwi, I., Simadibrata, M., and Setiati, S., *Buku Ajar Ilmu Penyakit Dalam*, Jakarta; Pusat Penerbitan, Departemen Ilmu Penyakit Dalam Fakultas Kedokteran Universitas Indonesia, pp. 570-573.
- Tazeen H. Jafar, MD, MPH., Paul C. Stark, ScD., Christopher H. Schmid, PhD., Marcia Landa, MA., GluseppemMaschio , MD., Paul E. de Jong, MD, PhD., Dick de Zeeuw, MD, PhD., ShahnazShahinfar, MD., Robert Toto, MD., and Andrew S. Levey, MD. 2003. *Progression of Chronic Kidney Disease : The Role of Blood Pressure Control, Proteinuria, and Angiotensin-Converting Enzyme Inhibition*. pp. 296-298.
- Tjokroprawiro, askandar. 2007, Buku Ajar Ilmu Penyakit Dalam, Surabaya, Fakultas Kedokteran Universitas Airlangga Rumah Sakit Pendidikan Dr. Soetomo Surabaya, 222.

Vasavada, N., Agarwal, R., and Saha, C., 2003. *A Double-blind Randomized Crossover Trial of Two Loop Diuretics in Chronic Kidney Disease*. Kidney International, Vol. 64, pp 632-640.

Waspadji, S. 2009. Komplikasi Kronik DM : Mekanisme Terjadinya. Diagnosis dan Strategi Pengelolaan. Dalam : *Buku Ajar Ilmu Penyakit Dalam, Jilid III*. Balai Penerbit FKUI. Jakarta. Halaman 1922-1929.

World Health Organization, 2009. *Chronic Kidney Disease*. WHO. 24 : 10-11.

Wilcox, C.S., 2002. New Insight Into Diuretic Use in Patients with Chronic Renal Disease. *Journal of The American Society of Nephrology: Diuretics and Kidney Disease*.