

BAB 5

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Berdasarkan dari *literature review* pada 11 artikel ilmiah terkait efektivitas dan keamanan penggunaan semaglutide injeksi pada pasien DM tipe 2 dengan obesitas yang dilaksanakan mulai dari bulan Maret 2022 - September 2022 dapat disimpulkan bahwa:

1. Semaglutide efektif digunakan sebagai terapi untuk pasien diabetes melitus tipe 2 dengan obesitas dalam menurunkan gula darah puasa, HbA1C, berat badan, BMI, dan HOMA-IR.
2. Efek samping hipoglikemia pada penggunaan semaglutide terjadi dalam frekuensi yang sedikit dibandingkan dengan kejadian gangguan gastrointestinal.

5.2 Saran

Berdasarkan hasil kajian pustaka dan kesimpulan yang telah diuraikan maka dapat dikemukakan beberapa saran sebagai berikut:

1. Perlu dilakukan penelitian lebih lanjut mengenai efek samping lainnya (seperti gangguan pada ginjal) pada pasien dengan DM tipe 2 dengan obesitas.
2. Perlu dilaksanakan penelitian lebih lanjut untuk mengetahui faktor resiko yang dapat memicu kejadian hipoglikemia dan gangguan gastrointestinal.

DAFTAR PUSTAKA

- Ahmann, A. J., Capehorn, M., Charpentier, G., Dotta, F., Henkel, E., Lingvay, I., Holst, A. G., Annett, M. P., and Aroda, V. R. 2018, Efficacy and safety of once-Weekly semaglutide versus exenatide ER in subjects with type 2 diabetes (SUSTAIN 3): A 56-Week, open-label, randomized clinical trial, *Diabetes Care*, **41**(2): 258–266.
- American Diabetes Association. 2020, *Standards of medical care in diabetes-2020*. *Diabetes Care*, **43**(1): S1-S121.
- Aroda, V. R., Bain, S. C., Cariou, B., Piletič, M., Rose, L., Axelsen, M., Rowe, E., and DeVries, J. H. 2017, Efficacy and safety of once-weekly semaglutide versus once-daily insulin glargine as add-on to metformin (with or without sulfonylureas) in insulin-naïve patients with type 2 diabetes (SUSTAIN 4): a randomised, open-label, parallel-group, multicentre, mul, *The Lancet Diabetes and Endocrinology*, **5**(5): 355–366.
- Capehorn, M. S., Catarig, A. M., Furberg, J. K., Janez, A., Price, H. C., Tadayon, S., Vergès, B., and Marre, M. 2020, Efficacy and safety of once-weekly semaglutide 1.0 mg vs once-daily liraglutide 1.2 mg as add-on to 1–3 oral antidiabetic drugs in subjects with type 2 diabetes (SUSTAIN 10), *Diabetes and Metabolism*, **46**(2):100–109.
- Davies, M., Færch, L., Jeppesen, O. K., Pakseresht, A., Pedersen, S. D., Perreault, L., Rosenstock, J., Shimomura, I., Viljoen, A., Wadden, T. A., and Lingvay, I. 2021, Semaglutide 2.4 mg once a week in adults with overweight or obesity, and type 2 diabetes (STEP 2): a randomised, double-blind, double-dummy, placebo-controlled, phase 3 trial, *The Lancet*, **397**(10278): 971–984.
- Decroli, E. 2019, *Dieabetes Melitus Tipe 2*, Pusat Penerbitan Bagian Ilmu Penyakit Dalam Fakultas Kedokteran Universitas Andalas, Padang.
- Efron, S., and David, R., 2019, *Writing the Literature Review: A Practical Guide*, In The Guilford Press, New York.
- Eldawlatly, A., Alshehri, H., Alqahtani, A., Ahmad, A., Al-Dammas, F., and Marzouk, A. 2018, Appearance of Population, Intervention, Comparison, and Outcome as research question in the title of articles of three different anesthesia journals: A pilot study, *Saudi Journal of Anaesthesia*, **12**(2): 283–286.

- Everard, A., and Cani, P. D. 2014, Gut microbiota and GLP-1. *Reviews in Endocrine and Metabolic Disorders*, **15(3)**: 189–196.
- Febrinasari, R. P., Sholikah Agusti, T., Pakha Nasirochim, D., dan Putra Erdana, S. 2020, *Buku Saku Diabetes Melitus*, Universitas Sebelas Maret Press.
- Fonseca, V. A., Capehorn, M. S., Garg, S. K., Gimeno, E. J., Hansen, O. H., Holst, A. G., Nayak, G., and Seufert, J. 2019, Reduction in Insulin Resistance are Mediated Primarily via Weight Loss in Subject with Type 2 Diabetes on Semaglutide, *Journal of Clinical Endocrinology and Metabolism*, **104(9)**: 4078-4086.
- Hariton, E., and Locascio, J. J. 2018, Randomised controlled trials—the gold standard for effectiveness. *BJOG: An International Journal of Obstetrics & Gynaecology*, **125(13)**: 1-4.
- Hall, S., Isaacs, D., and Clements, N.J. 2018, Pharmacokinetics and Clinical Implications of Semaglutide: A New Glucagon-Like Peptide (GLP)-1 Receptor Agonist, *Clin Pharmacokinet*, **57(12)**: 1529-1538.
- International Diabetes Federation. 2019, *IDF Diabetes Atlas*, 9th ed, International Diabetes Federation.
- Ji, L., Dong, X., Li, Y., Li, Y., Lim, S., Liu, M., Ning, Z., Rasmussen, S., Skjoth, T. V., Yuan, G., and Eliaschewitz, F. G. 2021, Efficacy and safety of once-weekly semaglutide versus once-daily sitagliptin as add-on to metformin in patients with type 2 diabetes in SUSTAIN China: A 30-week, double-blind, phase 3a, randomized trial, *Diabetes, Obesity and Metabolism*, **23(2)**: 404-414.
- Johansen, P., Chubb, B., Hunt, B., Malkin, S. J. P., Sandberg, A., and Capehorn, M. 2020, Evaluating the Long-Term Cost-Effectiveness of Once-Weekly Semaglutide Versus Once-Daily Liraglutide for the Treatment of Type 2 Diabetes in the UK, *Advances in Therapy*, **37(5)**: 2427–2441.
- Kaku, K., Yamada, Y., Watada, H., Abiko, A., Nishida, T., Zacho, J., and Kiyosue, A. 2018, Safety and efficacy of once-weekly semaglutide vs additional oral antidiabetic drugs in Japanese people with inadequately controlled type 2 diabetes: A randomized trial, *Diabetes, Obesity and Metabolism*, **20(5)**: 1202–1212.
- Kementrian Kesehatan RI. 2017, *Profil Kesehatan Indonesia*, Jakarta: Kementrian Kesehatan RI.

Kementerian Kesehatan Republik Indonesia. 2018, *Hasil Utama Hasil RISKEDAS 2018*, Jakarta: Kementerian Kesehatan RI.

Lin, C.H., Shao, L., Zhang, Y.M., Tu, Y.J., Zang, Y., Tomlinson, B., Chan, P. and Liu, Z. 2019, An Evaluation of Liraglutide Including Its Efficacy and Safety for the Treatment of Obesity, *Expert Opinion on Pharmacotherapy*, **21(3)**: 275-285.

Lingvay, I., Catarig, A. M., Frias, J. P., Kumar, H., Lausvig, N. L., le Roux, C. W., Thielke, D., Viljoen, A., and McCrimmon, R. J. 2019, Efficacy and safety of once-weekly semaglutide versus daily canagliflozin as add-on to metformin in patients with type 2 diabetes (SUSTAIN 8): a double-blind, phase 3b, randomised controlled trial, *The Lancet Diabetes and Endocrinology*, **7(11)**: 834-844.

Lukito, J.I. 2020, Tinjauan atas Glucagon-like peptide-1 receptor agonist, *Cermin Dunia Kedokteran*, **47(8)**: 448-454.

Nugroho, R.H., dan Samingan., 2019, Determinan Tingkat Keparahan Pada pasien penderita Diabetes Mellitus, *Jurnal Kesehatan Masyarakat*, **3(2)**: 193-204.

Paleva, R. 2019, Mekanisme Resistensi Insulin Terkait Obesitas, *Jurnal Ilmiah Kesehatan Sandi Husada*, **10(2)**: 354–358.

Pathni, P.M.S.D. 2018, Tren Terapi Diabetes dengan GLP-1 Receptor Agonist, *Cermin Dunia Kedokteran*, **45(4)**: 291-296.

Perkumpulan Endokrinologi Indonesia. 2019, *Konsensus Pengolahan Dan Pencegahan Diabetes Melitus Tipe 2 Di Indonesia 2019*, PERKENI, Indonesia.

Perkumpulan Endokrinologi Indonesia. 2021, *Konsensus Pengolahan Dan Pencegahan Diabetes Melitus Tipe 2 Di Indonesia 2021*, PERKENI, Indonesia.

Ridwan, M., Suhar, A.M., Ulum, B. dan Muhammad, F. 2021, Pentingnya Penerapan Literature Review pada Penelitian Ilmiah, *Jurnal Masohi*, **2(1)**: 42-51.

Roever, L. 2018, PICO: Model for Clinical Questions, *Evidence-Based Medicine*, **3(2)**: 1-2.

Seino, Y., Terauchi, Y., Osonoi, T., Yabe, D., Abe, N., Nishida, T., Zacho, J., and Kaneko, S. 2018, Safety and efficacy of semaglutide once weekly vs sitagliptin once daily, both as monotherapy in Japanese people with type 2 diabetes, *Diabetes, Obesity and Metabolism*,

20(2): 378–388.

Simbolon, Demsa. 2021, *Literature Review untuk Penelitian Kesehatan*, Bintang Pustaka Madani, Yogyakarta.

Sorli, C., Harashima, S. ichi, Tsoukas, G. M., Unger, J., Karsbøl, J. D., Hansen, T., and Bain, S. C. 2017, Efficacy and safety of once-weekly semaglutide monotherapy versus placebo in patients with type 2 diabetes (SUSTAIN 1): a double-blind, randomised, placebo-controlled, parallel-group, multinational, multicentre phase 3a trial, *The Lancet Diabetes and Endocrinology*, **5(4)**: 251-260.

Sposito, A.C., Berwanger, O., de Carvalho, L.S.F. and Saraiva, F.K. 2018, GLP-1RAs in Type 2 Diabetes: Mechanisms That Underlie Cardiovascular Effects and Overview of Cardiovascular Outcome Data, *Cardiovascular Diabetology*, **17(157)**: 1-19.

Straus, S.E., Glasziou, P., Richardson, W.S., and Haynes, R.B. 2019, *Evidence-Based Medicine How to Practice and Teach EBM 5th ed*, Churchill Livingstone, London.

Sukirno, S. 2018, Kolaborasi Pustakawan Dalam Pengambilan Keputusan Klinis Berbasis Bukti Terkini (Evidence Based Medicine): Studi Kasus Di Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan Universitas Gadjah Mada, *Jurnal IPI (Ikatan Pustakawan Indonesia)*, **23(1)**: 107-115.

Suryati, Ida. 2021, *Buku Keperawatan Latihan Efektif untuk Pasien Diabetes Mellitus Berbasis Hasil Penelitian*, Deepublish, Yogyakarta.

Tenny, S., and Varacallo, M. 2018, *Evidence Based Medicine (EBM)*, StatPearls Publishing, Treasure Island.

Wondmkun, Y. T. 2020, Obesity, insulin resistance, and type 2 diabetes: Associations and therapeutic implications, *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, **13(10)**: 3611–3616.

World Health Organization (WHO). 2020, *Diagnosis and Management of Type 2 Diabetes*.

Zhao, L., Chen, Y., Xia, F., Abudukerimu, B., Zhang, W., Guo, Y., Wang, N., and Lu, Y. 2018, A glucagon-like peptide-1 receptor agonist lowers weight by modulating the structure of gut microbiota, *Frontiers in Endocrinology*, **9(5)**: 1–13.

Zinman, B., Bhosekar, V., Busch, R., Holst, I., Ludvik, B., Thielke, D., Thrasher, J., Woo, V., and Philis-Tsimikas, A. 2019, Semaglutide

once weekly as add-on to SGLT-2 inhibitor therapy in type 2 diabetes (SUSTAIN 9): a randomised, placebo-controlled trial, *The Lancet Diabetes and Endocrinology*, 7(5): 356–367.