

Perbandingan efektivitas insulin sulfonilurea kombinasi sulfonilurea biguanid terhadap nilai hba1c dan elfg pasien diabetes melitus tipe 2 di rsk dr sitanala tangerang = Effectiveness comparison between insulin sulfonilurea biguanide combination and sulfonilurea on hba1c and egfr level of type 2 diabetes patient in rsk dr sitanala tangerang

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Abstrak

[<b>ABSTRAK</b><br> Penelitian mengenai efektivitas pengobatan diabetes melitus dan kaitannya dengan pencegahan komplikasi masih menunjukkan hasil yang beragam. Penelitian ini bertujuan untuk membandingkan efektivitas hipoglikemik dan fungsi ginjal dari sulfonilurea, kombinasi sulfonilurea dan biguanid serta injeksi insulin. Disain penelitian adalah kohort retrospektif pada pasien diabetes melitus tipe 2 rawat jalan yang mengkonsumsi obat yang sama selama empat bulan terakhir di RSK Dr. Sitanala Tangerang. Penelitian ini dilaksanakan pada kurun waktu April-Juni 2015, dan sudah mendapatkan lulus kaji etik dari Komite Etik rumah sakit ini. Subyek penelitian dibagi kedalam tiga kelompok yaitu yang menggunakan injeksi insulin (n = 30), yang menggunakan obat sulfonilurea tunggal (n = 30), dan kombinasi sulfonilurea dan biguanid (n = 45). Efektivitas hipoglikemik dilihat dari nilai HbA1C pasien dan komplikasi nefropati diabetik dilihat dari nilai eLFG yang dihitung dari angka serum kreatinin. Rerata usia keseluruhan pasien adalah  $54,98 \pm 7,47$ , sebagian besar adalah wanita (72%) dan cenderung overweight (rerata IMT  $25,47 \pm 4,77$ ). Ada perbedaan yang bermakna ( $p = 0,042$ ) pada nilai HbA1C pasien kelompok kombinasi sulfonilurea-biguanid (rerata HbA1C  $7,28 \pm 0,09$ ) dibandingkan dengan kelompok insulin (rerata HbA1C  $8,10 \pm 0,09$ ), sementara dengan kelompok sulfonilurea tunggal tidak ada perbedaan yang bermakna. Sedangkan nilai eLFG untuk setiap kelompok obat tidak ditemukan perbedaan yang bermakna. Subyek yang memiliki riwayat diabetes melitus dalam keluarga mempunyai peluang 4,512 kali (interval kepercayaan 95%,  $p = 0,010$ ) lebih besar dibandingkan dengan yang tidak memiliki riwayat diabetes dalam keluarga untuk memiliki nilai HbA1C lebih dari 7%. Pasien dengan IMT  $>30$  kg/m<sup>2</sup> mempunyai peluang sebesar 21,631 ( $p = 0,012$ ) dibandingkan pasien dengan IMT  $<18,5$  kg/m<sup>2</sup> untuk memiliki nilai HbA1C yang tidak terkontrol atau diatas 7%. Pengobatan dengan kombinasi antidiabetik oral sulfonilurea dan biguanid lebih efektif dalam menurunkan nilai HbA1C pasien DM tipe 2 dibandingkan dengan insulin atau sulfonilurea tunggal, dan tidak ada perubahan bermakna dalam penurunan fungsi ginjal <b>ABSTRACT</b><br> Research on effectiveness of therapy on diabetes mellitus associated with prevention of its complication still remain varied in results. The hypoglycemic effectiveness and the kidney function were compared between sulfonilurea,

sulfonylurea and biguanide combination and insulin, with the retrospective cohort study design, on patients that use those agents in last four months and came to out-patient clinic of RSK Dr. Sitanala Tangerang. This research had the Ethical Clearance from the Ethical Committee of this hospital. Subjects were classify into three groups, i.e insulin group (n = 30), sulfonylurea group (n = 30) and sulfonylurea and biguanide combination group (n = 45). Hypoglycemic effectiveness is measured with the HbA1C level and diabetic nephropathy with the eGFR which calculated from the measured serum creatinin. Mean age of all subjects was  $54,98 \pm 7,47$  ( $p=0,157$ ), most were women (72%,  $p=0,235$ ), and tend to overweight (mean BMI is  $25,49 \pm 4,84$ ;  $p = 0,59$ ). Mean HbA1C level from the sulfonylurea-biguanide ( $7,28 \pm 0,09$ ) group were significantly different ( $p = 0,042$ ) with those from the insulin group ( $8,10 \pm 0,09$ ), and there was no significant difference with the sulfonylurea group. There was no significant difference in diabetic nephropathy between groups. Subject with diabetic family history has 4,512 times chance to have the HbA1C level > 7% compare to those without diabetic family history. Subjects with BMI >30 kg/m<sup>2</sup> have 21,631 times chance to get the HbA1C >7% compare to subjects with BMI <18,5 kg/m<sup>2</sup>. Sulfonylurea and biguanide combination was more effective compare to insulin or sulfonylurea monotherapy on decreasing HbA1C level of type 2 DM patients, without significant difference in effect of lowering kidney function.

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