Kadar hypoxia inducible Factor-1α (HIF-1α) dan Intercellular Adhesive Molecule-1 (ICAM-1) pasca bevacizumab intravitreal pada retinopati diabetik proliferatif = Levels of hypoxia inducible factor-1α (HIF-1α) and Intercellular Adhesive Molecule-1 (ICAM-1)after intravitreal bevacizumab injection in proliferative diabetic retinopathy

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Abstrak

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Tujuan: menilai kadar Hypoxia-inducible Factor-1? HIF-1? dan Intercellular Adhesion Molecule-1 ICAM-1 vitreus pada retinopati diabetik proliferatif yang diberikan bevacizumab intravitreal, serta hubungan keduanya terhadap ketebalan makula sentral previtrektomi.Metode: tiga puluh dua mata dirandomisasi menjadi 2 kelompok, yaitu yang mendapatkan suntikan bevacizumab intravitreal 1-2 minggu previtrektomi dan kelompok kontrol langsung dilakukan vitrektomi . Penghitungan kadar HIF-1? dan ICAM-1 dilakukan dengan metode enzyme-linked immunosorbent assay ELISA . Ketebalan makula sentral diukur saat awal, previtrektomi, serta 2, 4, dan 12 minggu pascavitrektomi dengan menggunakan Stratus OCT.Hasil: rerata kadar HIF-1? vitreus dalam ng/mg protein pada kelompok kontrol dan bevacizumab intravitreal masing-masing 0,020 0,006;0,077 dan 0,029 0,016;0,21 . Kadar ICAM-1 vitreus dalam ng/mL adalah 20,10 3,41;40,16 dan 23,33 0,63;68,5 . Rerata kadar HIF-1? dan ICAM-1 vitreus didapatkan tidak berbeda bermakna antara kedua kelompok.Simpulan: bevacizumab intravitreal 1-2 minggu previtrektomi belum dapat membuat kadar HIF-1? lebih rendah daripada kelompok kontrol. Kadar ICAM-1 kelompok bevacizumab didapatkan lebih tinggi pada kelompok kontrol. Tidak didapatkan hubungan yang bermakna antara ketebalan makula sentral previtrektomi terhadap kadar HIF-1? dan ICAM-1.Kata kunci: retinopati diabetic proliferatif, HIF-1?, ICAM-1, bevacizumab
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"Purpose to assess the levels of Hypoxia inducible factor 1 HIF 1 and intercellular adhesion molecule 1 ICAM 1 in vitreous of proliferative diabetic retinopathy patients which were given intravitreal bevacizumab IVB , as well as its relation to the central macular thickness CMT measured prior to vitrectomy.Method this was post test only randomized clinical trial open label, in which thirty two eyes were randomized into two groups, one that received an IVB injection at 1 2 weeks previtrectomy and the control group. Measurement of HIF 1 and ICAM 1 was conducted using enzyme linked immunosorbent assay ELISA . The CMT were measured at the initial visit, prior to vitrectomy, and at follow up time 2, 4, and 12 weeks postoperative using Stratus OCT.Result The mean levels of HIF 1 vitreous ng mg protein in the control group and IVB respectively 0.020 0.006 0.077 and 0.029 0.016 0.21 . Vitreous levels of ICAM 1 ng mL in control group and IVB group were 20.10 3.41 40.16 and 23.33 0.63 68.5 . The mean levels of HIF 1 and ICAM 1 vitreous obtained did not differ significantly between the two groups.Conclusion Intravitreal bevacizumab 1 2 weeks prior to vitrectomy was not enough to make the levels of HIF 1 lower in IVB group. Median of ICAM 1 level in IVB group was higher than control group. There were no correlation between CMT with HIF 1 and

ICAM 1 levels.