Permeabilitas Usus pada Subyek Prediabetes dan Diabetes Melitus Tipe 2: Ditinjau dari Konsentrasi Intestinal-Fatty Acid Binding Proteins (FABP2) dan Chitinase- 3-Like Protein 1 (YKL-40) = The Intestinal Permeability on Prediabetes and Diabetes Mellitus Type 2 Subjects: Focus on Intestinal-Fatty Acid Binding Proteins (FABP2) and Chitinase-3-Like Protein 1 (YKL-40)

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Abstrak

Studi terbaru mendasari pentingnya permeabilitas usus dan inflamasi kronis dalam patogenesis DMT2. Studi kami membandingkan konsentrasi FABP2 dan YKL40 sebagai penanda permeabilitas usus dan peradangan di antara normoglikemia, pradiabetes, dan DMT2. Kami merekrut 122 peserta (45 normoglikemik, 26 pradiabetes, dan 51 DMT2) di antaranya kami mengukur kadar FABP2 dan YKL-40 serum puasa menggunakan metode ELISA. Tingkat FABP2 secara signifikan lebih tinggi pada kelompok DMT2 [2,890(1,880 – 4,070)] dibandingkan dengan kedua pradiabetes [2,025 (1,145 – 2,343), p=0,0085] dan kelompok normoglikemia [1,72 (1,250 – 2,645), p=0,011]. Tingkat YKL-40 juga secara signifikan lebih tinggi pada kelompok DMT2 [68,70 (44,61 – 166,6)] dibandingkan dengan kedua pradiabetes [28,85 (20,64 – 41,53), p<0,0001] dan kelompok normoglikemia [28,64 (19,25 – 43,87), p<0,001]. Studi kami mengamati bahwa kadar FABP2 dan YKL-40 tertinggi pada kelompok T2DM yang mendukung bukti yang tersedia tentang peran gangguan permeabilitas usus dan peradangan kronis tingkat rendah dalam patogenesis T2DM. .....Recent studies underlie the importance of intestinal permeability and chronic inflamamation in the pathogenesis of T2DM. Our study compared the concentrations of FABP2 and YKL40 as markers of intestinal permeability and inflammation among normoglycemia, prediabetes and T2DM. We recruited 122 participants (45 normoglycemic, 26 prediabetes, and 51 T2DM) of whom we measured the fasting serum levels of FABP2 and YKL-40 using ELISA method. The levels of FABP2 were significantly higher in the T2DM group [2.890(1.880 – 4.070)] in comparison to both prediabetes [2.025 (1.145 – 2.343), p=0.0085] and normoglycemia group [1.72 (1.250 – 2.645), p=0.011]. The levels of YKL-40 were also significantly higher in the T2DM group [68.70 (44.61 – 166.6)] in comparison to both prediabetes [28.85 (20.64 – 41.53), p<0.0001] and normoglycemia group [28.64 (19.25 – 43.87), p<0.001]. Our study observed that the levels of FABP2 and YKL-40 were highest in the T2DM group supporting the available evidences on the role of intestinal permeability disruption and chronic low-grade inflammation in the pathogenesis of T2DM.