COMPARISON BETWEEN MDRD AND CKD-EPI FORMULAS ON GFR ESTIMATION AND PPI, H2RA DOSE ADJUSTMENT TOWARDS INPATIENT AT RSUD BANTUL

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Abstract:

H2-Receptor Antagonist (H2RA) and Proton Pump Inhibitor (PPI) induce renal injury so dose adjustment based on quality of kidney function is necessary. Patients with impaired renal function may change the pharmacokinetics of drugs. Inaccurate medicine dose in patients with impaired renal function result in increased risk of drug side effects. Estimated Glomerular Filtration Rate (eGFR) can be used for predict the kidney function. The Modification of Diet in Renal Disease (MDRD) and the Chronic Kidney Disease-Epidemiology Collaboration (CKD-EPI) equations are both commonly used to calculate eGFR. The design of this study was observational analytic which aim to compare the performance of MDRD and CKD-EPI equations in calculating eGFR (n=379) and determine the proportion of H2RA correctly adjusted dose based on patient's renal function (n=304). There is no significant difference between eGFR based on MDRD and CKD-EPI equations (p=0,128). There is no significant difference regarding the dose adjustment of H2RA based on eGFR calculated using MDRD and CKD-EPI equations (p=1,000).

Keywords*: CKD-EPI, Dose adjustment, eGFR, H2RA, MDRD*

PERBEDAAN ESTIMASI LFG SERTA KESESUAIAN DOSIS PPI DAN H2RA PASIEN RSUD BANTUL BERDASARKAN FORMULA MDRD DAN CKD-EPI

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Abstrak:

H2-Receptor Antagonist (H2RA) dan *Proton Pump Inhibitor* (PPI) merupakan obat yang bersifat nefrotoksik sehingga memerlukan penyesuaian dosis berdasarkan profil fungsi ginjal. Pasien yang mengalami gangguan fungsi ginjal mengalami perubahan farmakokinetik obat. Ketidaktepatan dosis pengobatan pada pasien dengan gangguan fungsi ginjal meningkatkan risiko efek obat yang tidak diinginkan. Fungsi ginjal diketahui dengan menghitung nilai estimasi Laju Filtrasi Glomerulus (eLFG) menggunakan formula *The Modified of Diet in Renal Disease* (MDRD) dan *Chronic Kidney Disease-Epidemiology Collaboration* (CKD-EPI). Penelitian ini merupakan rancangan observasional analitik yang membandingkan nilai eLFG (n=379) berdasarkan formula MDRD dengan CKD-EPI serta mengetahui proporsi kesesuaian obat (n=304) *H2-Receptor Antagonist* (H2RA) berdasarkan nilai eLFG. Perbedaan tidak bermakna ditemukan antara nilai eLFG berdasarkan formula MDRD dan CKD-EPI (p=0,128). Perbedaan tidak bermakna mengenai kesesuaian dosis obat H2RA berdasarkan nilai eLFG menurut formula MDRD dan CKD-EPI (p=1,000).

Kata Kunci : *CKD-EPI, eLFG, H2RA, Kesesuaian Dosis, MDRD*