Janus kinase (JAK)-inhibitor dan mortalitas coronavirus disease 2019 (COVID-19): telaah sistematis dan meta-analisis = Janus kinase (JAK)-inhibitors and coronavirus disease 2019 (COVID-19) mortality: a systematic review and meta-analysis

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Abstrak

Latar Belakang: Janus Kinase (JAK)-inhibitors telah digunakan untuk terapi beberapa penyakit inflamasi dan autoimun karena kemampuannya untuk mengendalikan respon imun dan cytokine release syndrome. Saat ini penggunaan baru dari Janus Kinase (JAK)-inhibitors diperuntukan untuk terapi coronavirus disease 2019 (Covid-19), namun bukti mengenai kegunaannya masih belum jelas. Penelitian ini dilakukan untuk menganalisa efikasi dari Janus Kinase (JAK)-inhibitors untuk mengurangi mortalitas pasien Covid-19.
Tujuan: Mengetahui efek pemberian terapi Janus Kinase (JAK)-inhibitors terhadap mortalitas pasien Covid-19.
Metode: Dengan menggunakan kata kunci spesifik, dilakukan pencarian artikel potensial secara komprehensif pada PubMed, Europe PMC, and ClinicalTrials.gov database dengan pembatasan waktu sampai 2 Juni 2021. Semua penelitian tentang Covid-19 dan JAK-inhibitors dimasukan. Analisa statistik dilakukan denganReview Manager 5.4 software.
Hasil: 13 penelitian dengan 4339 pasien Covid-19 dimasukan dalam meta-analisis. Data kami menyimpulkan bahwa terapi JAK-inhibitors berhubungan dengan menurunnya mortalitas pasien Covid-19 (RR 0.52; 95%CI: 0.36-0.76, p=0.0006, I2 = 33%, random-effect modelling).
Kesimpulan: Penelitian ini menyimpulkan terapi JAK-inhibitors berhubungan dengan menurunnya mortalitas pasien Covid-19. Namun dibutuhkan randomized clinical trials yang lebih banyak untuk mengkonfirmasi hasil penelitian ini.
.....Background: : Janus Kinase (JAK)-inhibitors have been used for treating several inflammatory and autoimmune disease because of its ability to restrains immune systems and cytokine release syndrome. Currently, JAK-inhibitors are repurposed for the treatment of coronavirus disease 2019 (Covid-19), however the evidence regarding their benefit are still unclear. This study sought to analyze the efficacy of JAK-inhibitors in improving the mortality outcomes of Covid-19 patients.
Objective: To determine the effect of JAK-inhibitors as therapy in Covid-19 patients related to mortality.
Methods: Using specific keywords, we comprehensively searched the potential articles on PubMed, Europe PMC, and ClinicalTrials.gov database until June 2nd, 2021. All published studies on Covid-19 and JAK-inhibitors were retrieved. Statistical analysis was conducted using Review Manager 5.4 software.
Results: A total of 13 studies with 4,339 Covid-19 patients were included in the meta-analysis. Our data suggested that JAK-inhibitors was associated with reduction of mortality from Covid-19 (RR 0.52; 95%CI: 0.36 – 0.76, p=0.0006, I2 = 33%, random-effect modelling).
Conclusion: Our study suggests that JAK-inhibitors may offer beneficial effects on Covid-19 mortality. However, more randomized clinical trials warrant to confirm the findings of our study.