

Intisari

PERUBAHAN KADAR ANTIBODI ANTI SARS-CoV-2 ENAM BULAN PASCA VAKSINASI PRIMER PADA PASIEN PENYAKIT GINJAL TAHAP AKHIR DENGAN *CONTINUOUS AMBULATORY PERITONEAL DIALYSIS* (CAPD)

Latar belakang : Pasien PGTA memiliki risiko tinggi terinfeksi COVID-19 akibat perubahan sistem imun pada tubuh yang melemah. Vaksinasi merupakan salah satu upaya mencegah dan membatasi penyebaran infeksi. Namun kadar antibodi (Ab) yang dihasilkan melalui vaksin mulai menurun sejak 12 minggu pasca vaksinasi. Kebijakan pemerintah dalam Surat Edaran Kemenkes RI no.HK.02.02/II/252/2022 menyebutkan: syarat penerima vaksin lanjutan/*booster* harus telah mendapatkan vaksinasi primer dosis lengkap minimal 6 bulan sebelumnya. Hal ini menjadi kekhawatiran kadar Ab yang tersisa tidak mencukupi untuk memberikan proteksi terhadap risiko terinfeksi COVID-19. Tujuan penelitian : untuk mengetahui kadar Ab enam bulan pasca vaksinasi primer *inactivated* pada pasien PGTA-CAPD.

Metode : Penelitian ini merupakan *observasional study*, dengan subjek penelitian pasien PGTA-CAPD poli rawat jalan RSUP Dr. Sardjito yang sebelumnya diberikan vaksin primer *inactivated* dan telah diperiksa Ab 2 minggu pasca vaksinasi. Setelah 6 bulan pasca vaksinasi, kami lakukan anamnesis, pemeriksaan fisik, pemeriksaan darah dan pemeriksaan antibodi. Untuk mengetahui perbedaan kadar Ab dua minggu dan 6 bulan pasca vaksinasi primer menggunakan *Paired t-test*. Sedangkan untuk perbedaan antibodi dua minggu pasca vaksinasi dibandingkan dengan enam bulan pasca vaksinasi primer berdasarkan signal inhibisi (SI) dengan *Wilcoxon test*

Hasil penelitian: Dari 19 subjek penelitian, terdapat perbedaan signifikan proporsi perubahan Ab setelah enam bulan pasca vaksinasi; didominasi 11(57,9%) subjek mengalami penurunan kadar Ab, sedangkan 7 subjek mengalami peningkatan antibodi (3 subjek terinfeksi COVID-19 pasca vaksinasi primer, 4 subyek bergejala COVID-19) dengan nilai $p=0,018$. Pasca vaksinasi 100% subyek mengalami kenaikan Ab dengan kadar seroprotektif *signal inhibisi* (SI) $\geq 30\%$, setelah 6 bulan pasca vaksinasi terjadi penurunan kadar antibodi dibawah seroprotektif SI $< 30\%$ sebanyak 26,3% dengan nilai $p=0,025$

Kesimpulan : Setelah enam bulan pasca pemberian *inactivated* vaksin primer, terjadi penurunan kadar antibodi secara signifikan bahkan di bawah kadar seroprotektif dengan *signal inhibisi* $< 30\%$.

Kata kunci : PGTA, CAPD, pasca *inactivated* vaksin, perubahan kadar Ab

Abstract

**ALTERATION ANTIBODY ANTI SARS-CoV-2 LEVELS SIX MONTHS
AFTER PRIMARY VACCINATION IN PATIENTS
END STAGE RENAL DISEASE WITH CONTINUOUS AMBULATORY
PERITONEAL DIALYSIS (CAPD)**

Background: End stage renal disease (ESDR) patients have a high risk being infected COVID-19. Vaccination is an effort to prevent and restrict deployment of infection. However, antibody levels (Ab) began to decrease 12 weeks after vaccination. Government policy in the form letter Ministry of Health Republic Indonesia no.HK.02.02/II/252/2022 states: Requirements for recipients booster vaccines must get the full dose of primary vaccination at least 6 months in advance. This is became dilemma because remaining Ab levels will not be sufficient to provide protection against the risk of being infected COVID-19. Research purposes; to determine Ab levels six months after inactivated primary vaccination in PGTA-CAPD patients.

Methods: This study was an observational study, with study subjects ESDR-CAPD outpatient at Dr. Sardjito General Hospital who were previously given inactivated primary vaccines and had their Ab checked 2 weeks after vaccination. After 6 months after vaccination, we carried out anamnesis, physical examination, blood tests and antibody tests. To determine the difference in Ab levels two weeks and 6 months after primary vaccination using the Paired t-test. Meanwhile, the differences antibodies two weeks compared six months after primary vaccination based on signal inhibition (SI) with the Wilcoxon test

Results: Nineteen subjects in this study, there was a significant difference in the proportion of alteration in antibody after six months post-vaccination, with predominantly 11 subjects experiencing a decrease Ab levels, while 7 subjects increase Ab (3 subjects were infected with COVID-19 after primary vaccination, 4 subjects had symptoms of COVID-19 with $p = 0.018$. After vaccination 100% of subjects had antibody increase with seroprotective signal inhibition (SI) $\geq 30\%$, 6 months after vaccination there was a decrease antibody levels below seroprotective SI $< 30\%$ by 26.3% with a value of $p = 0.025$.

Conclusion: After six months after administration of inactivated primary vaccine, there was a significant decrease in antibody levels even below seroprotective levels with signal inhibition $< 30\%$.

Keywords: ESDR, CAPD, post-inactivated vaccine, Ab levels