INTISARI

Latar belakang: COVID 19 menjadi pandemi global sejak pertama kali muncul di Cina tahun 2019. Tingginya angka kesakitan dan kematian akibat pandemi ini, menyebabkan pentingnya pengembangan vaksin. Kekebalan yang terbentuk dari infeksi alamiah, membutuhkan waktu, memiliki risiko kematian dan kesakitan yang besar. Langkah yang dapat ditempuh adalah program vaksinasi yang diharapkan memunculkan kekebalan. Kekebalan terhadap virus tersebut dapat dideteksi dengan pengukuran antibodi.

Tujuan: Penelitian ini bertujuan mengevaluasi perbedaan kadar antibodi S-RBD SARS CoV-2 antara penyintas COVID 19 dibandingkan penerima vaksin SARS CoV 2 *inactivated* pada bulan ke 1 dan bulan ke 3.

Metode: Penelitian ini berdesain *cross sectional* dengan subjek kelompok penyintas COVID 19 dan penerima vaksin, dengan usia ≥18 tahun, tidak memiliki gangguan imunokompetensi, tidak hamil, subjek penyintas yaitu subjek teridentifikasi terinfeksi COVID 19 berdasarkan swab PCR dan telah selesai menjalani terapi dan atau isolasi mandiri. Pemeriksaan antibodi S-RBD SARS CoV-2 menggunakan Cobas-e601. Analisis statistik menggunakan *software* medcalc. Analisis univariat terkait demografik subjek, analisis bivariat diuji menggunakan Chi-squared. Analisis perbedaan kadar antibodi S-RBD SARS CoV-2 antara penyintas dan pascavaksin pada bulan ke 1 dan ke 3 menggunakan uji Mann Whitney. Nilai $p<0,05$ dikatakan signifikan.

Hasil: Subjek penelitian berjumlah 59 subjek penyintas dan 73 subjek pascavaksin. Nilai median antibodi S-RBD SARS CoV-2 bulan ke 1 penyintas adalah 253,5 U/mL, pada pascavaksin 44,9 U/mL. Nilai median antibodi S-RBD SARS CoV-2 bulan ke 3 pada penyintas adalah 476,4 U/mL pada pascavaksin 24,7 U/mL. Pemerikasaan antibodi SARS CoV-2 pada bulan ke 1 dan bulan ke 3 antara penyintas dan pascavaksin memiliki perbedaan signifikan, dengan masing-masing nilai $p<0,0001$.

Simpulan: Kadar antibodi S-RBD SARS CoV-2 pada populasi penyintas COVID 19 lebih tinggi dibandingkan penerima vaksin SARS CoV-2 *inactivated* baik pada bulan ke 1 maupun bulan ke 3.

Kata kunci: COVID 19, penyintas COVID 19, penerima vaksin SARS CoV-2 *inactivated,* antibodi S-RBD SARS CoV-2

ABSTRACT

Background: COVID 19 had become a global pandemic since it first appeared in China in 2019. The high morbidity and mortality rates due to this pandemic have made it important to develop vaccines. Immunity that is formed from natural infection, takes time, carries a great risk of death and injury. Steps that can be taken is a detonation program that is expected to raise immunity. Immunity to the virus can be detected by measuring antibodies.

Objective: This study aims to determine the difference of antibody levels in the COVID 19 survivors and vaccine recipients within a period of first and third months.

Methods: This study was a cross-sectional design with a group of survivors of COVID 19 and vaccine recipients, ≥18 years old, not having impaired immunocompetence, not pregnant, survivors, namely subjects identified as infected with COVID 19 based on PCR swabs and having completed therapy and/or self-isolation. Testing for SARS CoV-2 S-RBD antibodies using Cobas-e601. Statistical analysis using medcalc software. Univariate analysis related to subject demographics, bivariate analysis was tested using Chi-squared. Analysis of differences in SARS CoV S-RBD antibody levels between survivors and post-vaccination at first and third months using the Mann Whitney test. The value of $p < 0.05$ is said to be significant.

Results: The study subjects consisted of 59 survivors and 73 post-vaccination subjects. The median S-RBD antibody value for SARS CoV2 in the first month of survivors was 253,5 U/mL, while post-vaccination was 44,9 U/mL. The median S-RBD antibody for SARS CoV-2 at month 3 in survivors was 476,4 U/mL after the vaccine was 24,7 U/mL. Testing for SARS CoV 2 antibodies at month 1 and month 3 between survivors and postvaccination had significant differences, with a $p<0,0001$ value for each.

Conclusion: SARS CoV-2 S-RBD antibody levels in the COVID 19 survivor population were higher than inactivated SARS CoV-2 vaccine recipients both at first and third month.

Keywords: COVID 19, COVID 19 survivors, recipients of inactivated SARS CoV-2, SARS CoV-2 S-RBD antibody