

## INTISARI

### HUBUNGAN STATUS VAKSIN COVID-19 DENGAN NILAI D-DIMER PASIEN COVID-19 DI RSUP DR. SARDJITO

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**Latar Belakang:** Pandemi COVID-19 adalah wabah baru yang disebabkan oleh Virus SARS-COV-2 dapat menginfeksi manusia dan memakan jutaan korban jiwa. Vaksin sebagai upaya pencegahan menjanjikan dalam mengatasi pandemi COVID-19. Vaksin COVID-19 telah diberikan secara luas kepada masyarakat dan terbukti bermanfaat dalam menurunkan transmisi, kejadian infeksi berat dan kematian akibat COVID-19. Hingga saat ini, masih belum diketahui pengaruh dari vaksin COVID-19 terhadap penurunan nilai D-Dimer pada pasien COVID-19 di Indonesia, khususnya pada pasien yang membutuhkan perawatan di rumah sakit.

**Tujuan:** Penelitian ini untuk mengetahui pengaruh vaksin COVID-19 terhadap nilai D-Dimer pada pasien COVID-19 tanpa komorbid yang dirawat di RSUP Dr. Sardjito.

**Metode:** Penelitian ini menggunakan metode penelitian *cross sectional* dengan mengambil data seluruh pasien COVID-19 yang dirawat di RSUP Dr. Sardjito pada periode 1 Januari 2021 hingga 31 Desember 2022. Analisa statistik multivariat menggunakan uji *Chi-Square* dan *logistic regression* untuk menghitung OR (*Odds Ratio*) untuk mengetahui pengaruh status vaksin terhadap nilai D-Dimer pada pasien COVID-19, hasil dinyatakan bermakna secara statistik bila nilai  $p < 0.05$  dengan *confidence interval* 95%.

**Hasil:** Didapatkan 1727 subyek yang diteliti, 1053 (61%) usia  $< 60$  tahun, 920 (53,3%) pria, dengan median Indeks Massa Tubuh (IMT) 23,4 (22,0 – 26,6), pada kelompok vaksin dan tidak vaksin dibandingkan dengan nilai D-Dimer. Diperoleh hasil pemberian vaksin dapat memberikan perlindungan 20,2% terhadap kenaikan D-Dimer  $> 500$  ( $p < 0,000$ ), vaksin lengkap memberikan perlindungan 39% terhadap kenaikan D-Dimer  $> 500$  ( $p = 0,0001$ ) dan vaksin *Booster* 1 dapat memberikan perlindungan 51,8% terhadap kenaikan D-Dimer  $> 500$  ( $p < 0,045$ ).

**Kesimpulan:** Status vaksin COVID-19 berpengaruh terhadap nilai D-Dimer pada pasien terkonfirmasi COVID-19 yang dirawat di RSUP Dr. Sardjito.

**Kata Kunci:** *Vaksin, COVID-19, D-Dimer*

## ABSTRACT

### RELATIONSHIP BETWEEN COVID-19 VACCINE STATUS AND D-DIMER VALUE OF COVID-19 PATIENTS AT RSUP DR. SARDJITO

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**Background:** The COVID-19 pandemic is a new outbreak caused by the SARS-CoV-2 virus that can infect humans and impact millions of lives. Vaccines as a preventive measure are promising in overcoming the COVID-19 pandemic. COVID-19 vaccines have been widely administered to the public and proven to be beneficial in reducing transmission, incidence of severe infection and death from COVID-19. Until now, it is still unknown the effect of the COVID-19 vaccine on reducing D-Dimer values in COVID-19 patients in Indonesia, especially in patients who require hospitalization.

**Objective:** This study is to determine the effect of the COVID-19 vaccine on D-Dimer values in COVID-19 patients without comorbidity treated at Dr. Sardjito Hospital.

**Methods:** This study used a cross-sectional research method by taking data on all COVID-19 patients admitted to Dr. Sardjito Hospital in the period January 1, 2021 to December 31, 2022. Multivariate statistical analysis using the Chi-Square test and logistic regression to calculate OR (Odds Ratio) to determine the effect of vaccine status on D-Dimer values in COVID-19 patients, the results are declared statistically significant if the p value is  $<0.05$  with a 95% confidence interval.

**Results:** There were 1727 subjects studied, 1053 (61%) aged  $<60$  years, 920 (53.3%) male, with a median Body Mass Index (BMI) of 23.4 (22.0 - 26.6), in the vaccine and non-vaccine groups compared with D-Dimer values. The results showed that vaccine can provide 20,2% protection against increasing D-Dimer level more than  $>500$  ( $p<0.000$ ), complete vaccine can provide 39% protection against increasing D-Dimer level more than  $>500$  ( $p=0.0001$ ) and Booster 1 vaccine can provide 51,8% protection against increasing D-Dimer level more than  $>500$  ( $p<0.045$ ).

**Conclusion:** COVID-19 vaccine status affects D-Dimer values in confirmed COVID-19 patients treated at Dr. Sardjito Hospital.

**Keywords:** *Vaccine, COVID-19, D-Dimer.*