INTISARI

Latar Belakang: Di Indonesia penyedia ruang ICU dengan pemanfaatannya tidak seimbang, hal tersebut karena terbatasnya ruang ICU atau karena lamanya perawatan pasien. Pelayanan ICU tidak terbatas menangani pasien dengan disfungsi organ tetapi juga meliputi pasien paska menjalani pembiusan atau pembedahan dewasa maupun pediatrik. Periode 1 maret 2020 Indonesia dilanda pandemi COVID-19. Kebutuhan ruang ICU meningkat pesat dikarenakan sebagian besar pasien terinfeksi jatuh pada kondisi gagal napas baik pasien dewasa maupun pediatrik. Sehingga terdapat masalah yang saling berhubungan yaitu pasien pediatrik yang membutuhkan perawatan ICU sebagai perawatan paska operasi, terbatasnya ruang ICU termasuk alat oksigenasi/ventilator serta masalah pandemi yang sebagian besar pasiennya memerlukan ICU. Penelitian pediatrik yang menjalani pembiusan dan perawatan ICU di masa pandemi terkait lamanya perawatan belum banyak dilakukan, untuk itu menjadi dasar bagi peneliti sehingga dapat menganalisa efek jangka panjang dari pandemi terutama pada pembiusan pediatrik, ketersediaan ICU dan status kesehatan di Indonesia.

Tujuan: Mengetahui Determinan *Prolonged Length of Stay* (PLOS) ICU pada Pasien Pediatrik yang Menjalani Pembiusan di Masa Pandemi COVID-19.

Metode Penelitian: Penelitian ini merupakan studi observasional kohort retrospektif. Sampel penelitian sebanyak 173 pasien pediatrik yang menjalani pembiusan dan perawatan paska operasi di RSUP Dr Sardjito dalam kurun waktu April 2020 - Maret 2021. Pada penelitian retrospektif ini, variabel yang mempunyai hubungan dengan PLOS diuji dengan uji univariat menggunakan *Student's t-test* untuk data numerik, *Chi square test* untuk data kategorikal/dikotomus. Hasil $p<0,25$ dilanjutkan uji regresi logistik. Hasil $p<0,05$ dimasukan pada analisis multivariat dan dianggap bermakna.

Hasil: Faktor-faktor yang teridentifikasi sebagai determinan PLOS di ICU RSUP Dr.Sardjito adalah operasi mayor dengan nilai $p=0,048$ (OR 8,87), transfusi darah dengan nilai $p=0,019$ (OR 2,34) dan penggunaan ventilasi mekanik dengan nilai $p=0,010$ (OR 3,44) merupakan variabel yang memiliki pengaruh paling signifikan secara simultan terhadap PLOS di ICU dengan nilai $p<0,05$. Koefisien determinasi (R^2) sebesar 0,325 artinya faktor operasi mayor, transfusi darah dan ventilator memberikan kontribusi pengaruh terhadap PLOS ICU sebesar 32,5%, sisanya dipengaruhi oleh faktor lain.

Kesimpulan: Operasi mayor, transfusi darah dan penggunaan ventilasi mekanik/ventilator merupakan determinan PLOS di ICU RSUP Dr.Sardjito pasien pediatrik yang menjalani pembiusan di masa pandemi COVID-19.

Kata Kunci: Determinan *Prolonged Length of Stay* (PLOS) ICU, Pembiusan Pediatrik, Pandemi COVID-19

ABSTRACT

Background: *In Indonesia, the ICU room provider with its utilization is not balanced, this is because of the limited ICU space or because of the length of patient care. ICU services are not limited to treating patients with organ dysfunction but also include patients undergoing adult or pediatric anesthesia or surgery. Period 1 March 2020 Indonesia was hit by the COVID-19 pandemic. The need for ICU space is increasing rapidly because most infected patients fall into respiratory failure conditions, both adult and pediatric patients. So there are interrelated problems, namely pediatric patients who need ICU care as postoperative care, limited ICU space including oxygenation/ventilator devices and pandemic problems where most of the patients require ICU. There has not been much research done on pediatrics undergoing anesthesia and ICU treatment during the pandemic regarding the length of treatment, so that it becomes the basis for researchers to analyze the long-term effects of the pandemic, especially on pediatric anesthesia, ICU availability and health status in Indonesia.*

Objective: *To determine the ICU Prolonged Length of Stay (PLOS) Determinants in Pediatric Patients Under Anesthesia during the COVID-19 Pandemic.*

Methods: *This study was a retrospective cohort observational study. The study sample consisted of 173 pediatric patients who underwent anesthesia and postoperative care at Dr Sardjito Hospital in the period April 2020 - March 2021. In this retrospective study, variables that had a relationship with PLOS were tested with a univariate test using the Student's t-test for numerical data, Chi square test for categorical/dichotomous data. The result of $p<0.25$ was followed by logistic regression test. The results of $p<0.05$ were included in the multivariate analysis and were considered significant.*

Results: *The factors identified as determinants of PLOS in the ICU Dr. Sardjito Hospital were major surgery with a P value of 0.048 (OR 8.87), blood transfusion with a P value of 0.019 (OR 2.34) and the use of mechanical ventilation with a P value of 0.010. (OR 3,44) is the variable that has the most significant effect simultaneously on PLOS in the ICU with $p <0.05$. The coefficient of determination (R2) of 0.325 means that major surgery factors, blood transfusions and ventilators contribute to the influence of PLOS ICU by 32.5%, the rest is influenced by other factors.*

Conclusion: *Major surgery, blood transfusion and the use of mechanical ventilation/ventilator are the determinants of PLOS in the ICU Dr. Sardjito Hospital for pediatric patients undergoing anesthesia during the COVID-19 pandemic.*

Keywords: *ICU Prolonged Length of Stay (PLOS) Determinants, Pediatric Anesthesia, COVID-19 Pandemic*