Prevalens dan Luaran Pasien Kanker Anak dengan COVID-19 Terkonfirmasi yang Dirawat di Rumah Sakit Rujukan COVID-19 - RSCM = Prevalence and Outcome of Childhood Cancer Patients with Confirmed COVID-19 Treated at COVID-19 Referral Hospital RSCM

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Abstrak

Latar belakang: Penyakit kanker pada anak masih memiliki angka kematian yang tinggi. Pandemi Coronavirus disease 2019 (COVID-19) dapat memperlebar kesenjangan luaran pasien kanker anak di negara berkembang dengan negara maju. Data mengenai pasien kanker anak dengan COVID-19 terkonfirmasi di negara berkembang masih terbatas.

Tujuan: Mengetahui prevalens dan luaran pasien kanker anak dengan COVID-19 terkonfirmasi serta faktor yang memengaruhinya agar luaran kanker dapat optimal.

Metode: Penelitian ini merupakan studi prognostik dengan desain penelitian kohort retrospektif di rumah sakit rujukan nasional menggunakan data rekam medis. Subyek penelitian adalah pasien kanker anak usia 0-18 tahun dengan COVID-19 terkonfirmasi yang dirawat di pusat COVID-19 - RSCM pada Maret 2020 – Juni 2023. Data deskriptif mengenai prevalens, karakteristik, dan luaran dikumpulkan, dilakukan juga analisis untuk mengetahui pengaruh antara jenis kanker, fase pengobatan, penundaan pengobatan, dan derajat keparahan COVID-19 terhadap luaran.

Hasil: Dari 585 pasien kanker anak yang dirawat, 110 (18,8%) di antaranya terkonfirmasi COVID-19 berdasarkan swab PCR SARS-COV-2. Pasien mayoritas berusia 0-5 tahun (39,1%), menderita kanker darah (50,9%), dalam fase pengobatan (88,1%), dan pengobatan tersebut tertunda sebanyak 56,4%. Gejala tersering adalah demam (78,2%), nilai CT PCR terbanyak terdeteksi di bawah 30 (54,6%), dan mayoritas mengalami COVID-19 derajat ringan (55,5%). Tata laksana yang diberikan adalah terapi oksigen (29,1%) dengan penggunaan ventilator sebanyak 8,2% dan dirawat di PICU sebanyak 12,7%, pemberian antivirus (69,1%), antibiotik (80,9%), antiinflamasi (14,5%), dan antikoagulan (22,7%). Sebanyak 19,1% kasus meninggal dan mayoritas terjadi pada 14 hari pertama perawatan. Kesintasan kumulatif adalah 66,1% dan rerata kesintasan selama 40 hari (IK 95% 33,743-46,064). Jenis kanker, fase pengobatan, dan penundaan pengobatan tidak berpengaruh bermakna terhadap luaran kematian. Sementara, derajat keparahan COVID-19 berpengaruh bermakna terhadap luaran kematian dengan HR 4,38 (IK 95% 1,34-14,26; p=0,000) pada derajat sedang/berat dan HR 16,29 (IK 95% 4,83-54,8; p=0,014) pada derajat kritis.

Simpulan: Prevalens dan angka kematian pasien kanker anak dengan COVID-19 terkonfirmasi lebih tinggi dibanding COVID-19 pada anak secara keseluruhan, terutama di negara berkembang. Penundaan kemoterapi dapat dipertimbangkan, terutama dalam 14 hari pertama perawatan di rumah sakit.
.....Background: Pediatric cancer still has a high mortality rate. The Coronavirus disease 2019 (COVID-19) pandemic has further widened the disparity in pediatric cancer outcomes between developing and developed

countries. Limited data exist on the prevalence and consequences of pediatric cancer with confirmed COVID-19 in developing countries.

Objectives: To determine the prevalence and outcomes of these patients and identify influencing factors to optimize cancer outcomes.

Method: This prognostic study employed a retrospective cohort design at a tertiary referral hospital in Indonesia using medical record data. Subjects included pediatric cancer patients aged 0-18 years with confirmed COVID-19 treated at the Kiara COVID-19 Center – dr. Cipto Mangunkusumo Hospital from March 2020 to June 2023. Descriptive data on prevalence, characteristics, and outcomes were collected, along with analysis of the relationship between cancer type, treatment phase, delayed treatment, and COVID-19 severity.

Result: Among 585 pediatric cancer patients treated, 110 (18.8%) were confirmed COVID-19 based on SARS-COV-2 PCR. The majority were aged 0-5 years (39,1%), diagnosed with blood cancer (50,9%), undergoing radio-chemotherapy (88,1%), and delayed treatment 56,4%. Fever was the most prevalent symptom (78.2%), the most CT PCR values were below 30 (54,6%), with 55,5% experiencing mild COVID-19. Management included oxygen therapy (29,1%) with ventilator use (8.2%) and intensive care (12.7%), antiviral (69.1%), antibiotic (80.9%), anti-inflammatory (14.5%), and anticoagulant (22.7%). The mortality rate was 19,1% and the highest number of deaths occurred within 14 days of hospitalization. Cumulative survival was 66.1% and a mean survival was 40 days (95% CI 33.743-46.064). Cancer type, treatment phase, and delayed treatment were not association with mortality outcomes. Meanwhile, COVID-19 severity was associated with mortality outcomes with HR 4.38 (95% CI 1.34-14.26; p=0.000) in moderate/severe COVID-19 and 16.29 (95% CI 4.83-54.8; p=0.014) in critical case.

Conclusion: The prevalence and mortality rates of pediatric cancer with confirmed COVID-19 are notably higher than the general pediatric COVID-19, especially in developing countries. Chemotherapy may be considered postponed, particularly within the first 14 days of hospitalization.