MANIFESTASI INFEKSI CYTOMEGALOVIRUS (CMV) TERHADAP GANGGUAN PERKEMBANGAN ANAK DI RSUP DR. SARDJITO

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ABSTRAK

Latar Belakang: Cytomegalovirus (CMV) umum ditemui di dunia, sebagai penyebab utama Sensorineural Hearing Loss (SNHL) dan gangguan perkembangan lain terutama pada infeksi kongenital. Pada infeksi CMV kongenital, sebanyak 10-15% neonatus akan lahir dengan gejala, dengan resiko memiliki sekuele sebesar 50-90%. Sebanyak 85-90% neonatus akan lahir tanpa gejala, namun 10-15% diantaranya tetap beresiko memiliki sekuele. CMV dapat bereplikasi di sel ependymal, matrix germinal dan sel endothel kapiler, sehingga salah satu gejala dan sekuele yang seringkali dijumpai adalah manifestasi pada sistem syaraf. Gangguan perkembangan didefinisikan sebagai keterbatasan dalam fungsi otak akibat terganggunya perkembangan sistem syaraf. Pada infeksi CMV, gangguan perkembangan yang umum dijumpai sebagai sekuele antara lain developmental delay, disabilitas intelektual, defisit motorik, SNHL, dan gangguan penglihatan. Dari Korndewal *et al*, prevalensi gangguan perkembangan pada infeksi CMV simptomatik adalah sebanyak 53,8%, lebih tinggi daripada infeksi CMV asimptomatik, yaitu sebanyak 17,8%. Developmental delay merupakan gangguan perkembangan yang dapat dideteksi sejak dini, salah satunya menggunakan tes Denver II. Deteksi dini dan intervensi dini yang diberikan dapat mengubah prognosis pasien.
Tujuan: Mengetahui karakteristik gangguan perkembangan pada anak dengan infeksi CMV kongenital di RSUP Dr. Sardjito
Metode: Penelitian ini menggunakan metode deskriptif retrospektif untuk melihat gambaran kelainan perkembangan pada anak dengan infeksi CMV di RSUP Dr. Sardjito. Penelitian dilakukan dengan menggunakan data sekunder berupa rekam medis dari tahun 2013-2018 dari subyek yang memenuhi kriteria inklusi.
Hasil: Dari total 85 subyek penelitian dengan infeksi CMV, terdapat 75 subyek dengan keterlambatan perkembangan yang dideteksi di awal dengan tes Denver II., dengan insidensi sebanyak 88,2% di awal pemeriksaan, dan 92,8% pada *follow-up* hingga 12 bulan setelahnya Selain keterlambatan perkembangan, variabel lain yang juga diamati adalah abnormalitas pencitraan kranial menggunakan USG dan CT scan, sebanyak 58 subyek (68,2)%, defisit motorik sebanyak 8 subyek (9,4%) gangguan penglihatan sebanyak 15 subyek (15,3%), dan gangguan pendengaran sebanyak 50 subyek (73,5%).
Kesimpulan: Temuan gangguan perkembangan yang paling banyak dijumpai di RSUP Dr. Sardjito adalah keterlambatan perkembangan, terutama pada domain motorik kasar, dengan insidensi sebanyak 88,2% di awal pemeriksaan, dan 92,8% pada follow-up 12 bulan setelahnya. Mayoritas gangguan perkembangan memiliki derajat keparahan yang berat, seperti keterlambatan perkembangan yang mayoritas ada di 4 domain, dan SNHL yang mayoritas ada di kedua telinga, dengan derajat keparahan sangat berat.
Kata Kunci: cytomegalovirus, cmv, gangguan perkembangan, developmental delay, keterlambatan perkembangan, tes Denver II, Denver Developmental Screening Test

CYTOMEGALOVIRUS (CMV) INFECTION MANIFESTATION TO CHILDREN'S DEVELOPMENT DISORDERS IN RSUP DR. SARDJITO

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ABSTRACT

Background: Cytomegalovirus (CMV) is commonly found in the world, as the main cause of Sensorineural Hearing Loss (SNHL) and other developmental disorders especially in congenital infections. In congenital CMV infection, 10-15% of neonates will be born with symptoms, with a risk of having sequelae of 50-90%. As many as 85-90% of neonates will be born without symptoms, but 10-15% of them remain at risk of having sequelae. CMV can replicate in ependymal cells, germinal matrix and capillary endothelial cells, so that one of the symptoms and sequels that are often encountered is a manifestation of the nervous system. Developmental disorders are defined as limitations in brain function due to disruption of the development of the nervous system. In CMV infection, developmental disorders that are commonly found as sequelae include developmental delay, intellectual disability, motor deficits, SNHL, and visual impairment. From Korndewal *et al*, the prevalence of developmental disorders in symptomatic CMV infection was 53.8%, higher than asymptomatic CMV infection, which was 17.8%. Developmental delay is a developmental disorder that can be detected early, one of which uses the Denver II test. Early detection and early intervention might change the patient's prognosis.
Objective: To determine the characteristics of developmental disorders in children with congenital CMV infection in RSUP Dr. Sardjito
Method: This study used a retrospective descriptive method to look at the characteristics of developmental abnormalities in children with CMV infection at RSUP Dr. Sardjito. The study was conducted using secondary data in the form of medical records from 2013-2018 from subjects who met the inclusion criteria.
Results: Of a total of 85 study subjects with CMV infection, there were 75 subjects with developmental delays that were detected early with the Denver II test, with an incidence of 88.2% at the beginning of the examination, and 92,8% at follow-up up to 12 months thereafter. Aside from developmental delay, another variable that was also observed was cranial imaging abnormalities using ultrasound and CT scan, as many as 58 subjects (68.2)%, motor deficits as many as 8 subjects (9.4%) visual impairment as many as 15 subjects (15.3%) , and hearing loss by 50 subjects (73.5%).
Conclusion: The most common developmental disorder finding at RSUP Dr. Sardjito was a developmental delay, especially in the gross motor domain, with an incidence of 88.2% at the beginning of the examination, and 92.8% at the 12-month follow-up thereafter.
Keywords: cytomegalovirus, cmv, developmental disorders, developmental delay, Denver II test, Denver Developmental Screening Test