

## ABSTRAK

### Latar belakang

*Cytomegalovirus* (CMV) merupakan penyebab utama infeksi kongenital di negara berkembang dan dapat menyebabkan spektrum gangguan perkembangan terbesar dari pasien anak, juga dapat mengakibatkan tuli sensorineural dan epilepsi. Banyaknya kasus CMV asimtomatik menyebabkan keterlambatan diagnosa dan mengurangi ketepatan diagnosa dan keterlambatan memberikan pengobatan yang tepat. Diagnosis infeksi CMV ditegakkan berdasarkan gambaran klinis, pemeriksaan serologis, antigenemia, *polymerase chain reaction* (PCR) dan pencitraan. Tatalaksana berupa antivirus gansiklovir, obat epilepsi, dan fisioterapi untuk rehabilitasi.

### Kasus

Pemantauan jangka panjang dan intervensi multidisiplin dilakukan terhadap anak perempuan berusia 2 bulan dengan infeksi CMV aktif yang menyebabkan palsy serebral dan epilepsi. Penelitian ini mengamati luaran klinis serangan kejang, rehospitalisasi akibat status epileptikus, status pertumbuhan, fungsi kognitif dan bahasa, fungsi pendengaran, derajat palsy serebral, pola EEG, dan efek samping intervensi farmakologi dan non-farmakologi. Selama 20 bulan pengamatan, luaran yang tercapai yaitu penurunan frekuensi serangan kejang sebanyak hingga 100%, tidak ada rehospitalisasi akibat status epileptikus, derajat palsy serebral yang membaik, fungsi pendengaran yang normal, pola EEG yang menjadi normal, dan tidak adanya efek samping dari intervensi farmakologi dan non-farmakologi. Luaran yang belum tercapai yaitu perbaikan fungsi kognitif dan bahasa. Adapun masalah yang dialami adalah berkurangnya frekuensi terapi rehabilitatif pada pasien akibat dari pandemi Covid-19.

### Kesimpulan

Infeksi CMV dapat menyebabkan gangguan perkembangan global, gangguan pendengaran, palsy serebral, dan epilepsi. Tatalaksana farmakologis seperti obat anti epilepsi dan multivitamin, dan tatalaksana non-farmakologis yang meliputi fisioterapi, terapi okupasi dan terapi wicara dapat memperbaiki keluaran perkembangan pasien.

### Kata kunci

Infeksi *cytomegalovirus*, CMV, epilepsi, palsy serebral, tuli sensorineural, gangguan perkembangan global.

## ABSTRACT

### Background

Cytomegalovirus (CMV) is the leading cause of congenital infections in developing countries and can cause the most common spectrum of developmental disorders of pediatric patients, it can also result in sensorineural deafness and epilepsy. The large number of asymptomatic CMV cases leads to delay in diagnosis and reduces the accuracy of diagnosis and inappropriate treatment. The diagnosis of CMV infection can be established based on the clinical manifestation, serological examination, antigenemia, polymerase chain reaction (PCR) and imaging. Management includes ganciclovir antiviral, epilepsy drugs, and physiotherapy for rehabilitation.

### Case Presentation

Long-term monitoring and multidisciplinary intervention were carried out on a 2-months-old girls with active CMV infections that cause cerebral palsy and epilepsy. This study looked at the clinical outcomes of seizure attacks, rehospitalization due to status epilepticus, growth status, cognitive and language function, hearing function, degree of cerebral palsy, EEG patterns, and side effects of pharmacological, and non-pharmacological interventions.

During the 20 months of observation, the outcomes achieved were a complete remission of seizures, no rehospitalization due to status epilepticus, improved degree of cerebral palsy, normal hearing function, EEG patterns that became normal, and the absence of side effects from pharmacological and non-pharmacological interventions. The output that had not been achieved is the improvement of cognitive function and language. The problem experienced is the reduced frequency of rehabilitative therapy in patients due to the Covid-19 pandemic.

### Conclusion

CMV infection can cause global developmental disorders, hearing loss, cerebral palsy, and epilepsy. Pharmacological management such as anti-epileptic drugs and multivitamins, and non-pharmacological management including physiotherapy, occupational therapy and speech therapy can improve the patient's developmental outcome.

### Keywords

Cytomegalovirus infection, CMV, epilepsy, cerebral palsy, sensorineural deafness, disorders of global development.