

## “KOMPLIKASI NEUROLOGIS CAMPAK PADA ANAK: SUATU TINJAUAN SISTEMATIS”

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Article Info	ABSTRAK
<p><b>Article History:</b> Received 19/09/2025. Revised - Accepted 30/09/2025.</p> <hr/> <p><b>Keywords:</b> Children, Encephalitis, Measles, Neurological Complications, Subacute Sclerosing Panencephalitis (SSPE).</p>	<p><b>Latar Belakang:</b> Campak masih menjadi masalah kesehatan global, termasuk di Indonesia, dengan lebih dari 10.600 kasus pada 2023 dan sekitar 3.400 kasus hingga Agustus 2025. Meskipun sebagian besar kasus bersifat <i>self-limiting</i>, komplikasi neurologis seperti ensefalitis dan Subacute Sclerosing Panencephalitis (SSPE) tetap menjadi penyebab utama morbiditas dan mortalitas pada anak. <b>Tujuan:</b> Meninjau bukti terkini mengenai karakteristik klinis, diagnosis, dan penatalaksanaan ensefalitis akibat campak pada anak melalui kajian sistematis literatur. <b>Metode:</b> Pencarian artikel dilakukan menggunakan aplikasi Publish or Perish dengan query “measles encephalitis” AND (child OR children OR pediatric) pada basis data Scopus, PubMed, Semantic Scholar, dan Google Scholar, mencakup periode 2015–2025. Seleksi mengikuti pedoman PRISMA melalui tahap identifikasi, penyaringan, penilaian kelayakan, dan inklusi. <b>Hasil:</b> Dari 157 artikel yang teridentifikasi, 13 artikel memenuhi kriteria. Sebagian besar (69,2%) berupa laporan kasus. Diagnosis paling sering dilakukan melalui analisis Cerebrospinal Fluid (CSF) dan Electroencephalography (EEG) (<math>\geq 70\%</math>), diikuti Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) (46,1%) dan histopatologi (15,4%). Ensefalitis akut dilaporkan pada 84,6% artikel dengan mortalitas sekitar 50%. SSPE ditemukan pada 53,8% artikel dengan perjalanan progresif dan fatal. Kasus pada anak imunokompromais dan neonatus (15,4% masing-masing) menunjukkan perjalanan lebih agresif. Hanya dua artikel melaporkan intervensi terapi dengan hasil tidak konsisten. <b>Simpulan:</b> Ensefalitis akibat campak pada anak tetap menjadi tantangan serius dengan mortalitas tinggi dan keterbatasan terapi. <b>Implikasi:</b> Kajian ini merangkum bukti terkini mengenai spektrum klinis dan diagnostik ensefalitis campak serta menegaskan urgensi penelitian untuk biomarker dan terapi inovatif di masa depan.</p>
	<p><b>ABSTRACT</b></p> <p><b>Background:</b> Measles remains a major global health issue, including in Indonesia, with more than 10,600 cases reported in 2023 and approximately 3,400 cases until August 2025. Although most cases are self-limiting, neurological complications such as encephalitis and Subacute Sclerosing Panencephalitis (SSPE) remain significant causes of morbidity and mortality in children. <b>Objective:</b> To systematically review recent evidence on the clinical characteristics, diagnostic approaches, and management of measles encephalitis in children. <b>Methods:</b> A literature search was conducted using Publish or Perish with the query “measles</p>

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*encephalitis” AND (child OR children OR pediatric) across Scopus, PubMed, Semantic Scholar, and Google Scholar, covering the period 2015–2025. Selection followed PRISMA guidelines through identification, screening, eligibility, and inclusion. **Results:** Of 157 articles identified, 13 met the criteria. Case reports comprised 69.2%. Diagnosis was most frequently based on cerebrospinal fluid (CSF) analysis and electroencephalography (EEG) ( $\geq 70\%$ ), followed by reverse transcriptase polymerase chain reaction (RT-PCR) (46.1%) and histopathology (15.4%). Acute encephalitis was described in 84.6% of articles with nearly 50% mortality. SSPE was reported in 53.8% with progressive and fatal outcomes. Cases in immunocompromised children and neonates (15.4% each) showed more aggressive progression. Only two articles discussed therapeutic interventions with inconsistent outcomes. **Conclusion:** Measles encephalitis in children remains a critical challenge due to high mortality and limited therapeutic options. **Implications:** This review summarizes the latest evidence on the clinical and diagnostic spectrum of measles encephalitis and highlights the urgent need for research on diagnostic biomarkers and innovative therapies in the future.*

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