



# Sepsis-Associated Encephalopathy in a Child with the Torsion of Meckel's Diverticulum

## Meckel Divertikülü Torsiyonu Olan Bir Çocukta Sepsis İlişkili Ensefalopati

Sepsis-Associated Encephalopathy

Esra Gurkas<sup>1</sup>, Ünsal Yılmaz<sup>2</sup>, Ercan Demir<sup>2</sup>, Kıvılcım Gücüyener<sup>2</sup>

<sup>1</sup>Department of Pediatric Neurology, Ankara Pediatric&Pediatric Hematology Oncology Training and Research Hospital,

<sup>2</sup>Department of Pediatric Neurology, Gazi University Faculty of Medicine, Ankara, Turkey

### Özet

Sepsis-ilişkili ensefalopati enfeksiyona sistemik yanıtta ikincil gelişen yaygın bir beyin fonksiyon bozukluğudur ve yüksek mortalite oranı ile ilişkilidir. Biz 4 yaşındaki sepsis-ilişkili ensefalopati görülen bir erkek hastayı sunduk. Hasta karın ağrısı ve kusma ile başvurdu. Yatışının ikinci gününde, dikkat bozukluğu, konfüzyon ve deliryumun eşlik ettiği bilinç bozukluğu geliştirdi. Rutin laboratuvar testleri, beyin manyetik rezonans görüntüleme ve beyin omurilik sıvısı incelemesi normaldi. Elektroensefalografide sağ hemisferde epileptiform deşarjların eşlik ettiği yüksek voltajlı yavaş dalga aktivitesi izlendi. Hasta acilen ameliyata alındı ve torted, gangrenöz Meckel divertikülü ve komşuluğundaki ince bağırsağa uzanan iske-mi alanı görüldü ve bu alanlar çıkarıldı. Hastanın üçüncü gün bilinci normale döndü ve izlemde sekelsiz olarak taburcu edildi. Sepsis-ilişkili ensefalopati hastalarında kötü prognozun üstesinden gelmek için, belirtilerinin erken tanınması ve altta yatan nedenin uygun tedavisi çok önemlidir.

### Anahtar Kelimeler

Sepsis ilişkili Ensefalopati; Meckel Divertikülü; Çocuk

### Abstract

Sepsis-associated encephalopathy (SEA) is a diffuse brain dysfunction secondary to the systemic response to infection and is associated with high mortality rate. We report a 4-year-old boy with SEA. He presented with abdominal pain and vomiting. On the second day of admission, he developed consciousness disturbance with impaired attention, confusion and delirium. Routine laboratory tests, brain magnetic resonance imaging and cerebrospinal fluid examination were normal. Electroencephalography (EEG) showed high-voltage slow wave activity on the right hemisphere with epileptiform discharge. He immediately underwent surgery and a torted, gangrenous Meckel's diverticulum with extension of ischemia to adjacent small bowel was seen and resected. His consciousness had become normal by the third day and he was discharged without any sequela. To overcome a poor prognosis in patients with SEA, the early recognition of the symptoms of SEA and also appropriate treatment of the underlying cause are essential.

### Keywords

Sepsis-Associated Encephalopathy; Meckel's Diverticulum; Children

DOI: 10.4328/JCAM.4468

Received: 06.03.2016 Accepted: 01.04.2016 Printed: 01.04.2016 J Clin Anal Med 2016;7(suppl 2): 158-60

Corresponding Author: Esra Gurkas, Department of Pediatric Neurology, Ankara Pediatric&Pediatric Hematology Oncology, Training and Research Hospital, Diskapi, Ankara 06110 Turkey. T.: +90 3125969628 GSM: +905332500455 F.: +90 3123472330 E-Mail: esragurkas@yahoo.com



### Competing interests

The authors declare that they have no competing interests.

### References

1. Papadopoulos MC, Davies DC, Moss RF, Tighe D, Bennett ED. Pathophysiology of septic encephalopathy: a review. *Crit Care Med* 2000;28:3019-24.
2. Ziája M. Septic encephalopathy. *Curr Neurol Neurosci Rep* 2013;13(10):383.
3. Hsu AA, Fenton K, Weinstein S, Carpenter J, Dalton H, Bell MJ. Neurological injury markers in children with septic shock. *Pediatr Crit Care Med* 2008; 9: 245-51.
4. Menezes M, Tareen F, Saeed A, Khan N, Puri P. Symptomatic Meckel's diverticulum in children: a 16-year review. *Pediatr Surg Int* 2008;24(5):575-7.
5. Tseng YY, Yang YJ. Clinical and diagnostic relevance of Meckel's diverticulum in children. *Eur J Pediatr* 2009;168:1519-23.
6. Prasad TR, Chui CH, Jacobsen AS. Laparoscopic resection of an axially torted Meckel's diverticulum in a 13-year-old. *J Laparoendosc Adv Surg Tech A* 2006 ;16(4):425-7.
7. Young GB, Bolton CF, Archibald YM, Austin TW, Wells GA. The electroencephalogram in sepsis-associated encephalopathy. *J Clin Neurophysiol* 1992;9: 145-52.
8. Lee SY, Lee KH, Hwang HS, Jeong DC, Chung SY, Kang JH. Septic encephalopathy complicating acute appendicitis. *Pediatr Crit Care Med* 2009;10:e11-13.
9. Ichikawa K, Kajitani A, Tsutsumi A, Takeshita S. Salmonella encephalopathy successfully treated with high-dose methylprednisolone therapy. *Brain Dev* 2009;31(10):782-84.
10. Hosokawa K, Gaspard N, Su F, Oddo M, Vincent JL, Taccone FS. Clinical neurophysiological assessment of sepsis-associated brain dysfunction: a systematic review. *Crit Care* 2014;18(6):674.
11. Als LC, Nadel S, Cooper M, Pierce CM, Sahakian BJ, Garralda ME. Neuropsychologic function three to six months following admission to the PICU with meningoencephalitis, sepsis, and other disorders: a prospective study of school-aged children. *Crit Care Med* 2013;41(4):1094-103.

### How to cite this article:

Gurkas E, Yılmaz Ü, Demir E, Gücüyener K. Sepsis-Associated Encephalopathy in a Child with the Torsion of Meckel's Diverticulum. *J Clin Anal Med* 2016;7(suppl 2): 158-60.