

NEUROLOGICAL PRESENTATION OF PARVOVIRUS B19 INFECTION IN TWO PEDIATRIC PATIENTS.

Autori C. Tucci, S. Graziano, M.F. De Leva, M. Pandolfi, S. Buono
AORN SANTOBONO PAUSILIPON, DIP. NEUROSCIENZE, U.O. NEUROLOGIA

Introduction:

Common symptoms of parvovirus B19 (B19V) infection include a mild nonspecific prodromal illness that may consist of fever (15-30% of patients), malaise, headache, myalgia, nausea, and rhinorrhea, typically beginning 5-7 days after initial infection. These symptoms correspond to the initial viremia and dissipate in 2-3 days. Approximately 1 week later, a bright most of the patients develops red macular exanthema on the cheeks and is often associated with circumoral pallor. Transient small joint arthropathy may be the main clinical presentation of parvovirus B19 in adults. Many individuals may experience asymptomatic or unrecognized infection. Rarely, parvovirus B19 infection manifests as myocarditis, vasculitis, glomerulonephritis, or encephalitis. We describe two patients with a documented infection of parvovirus b19 that developed involvement of central nervous system with different outcomes.

Case description:

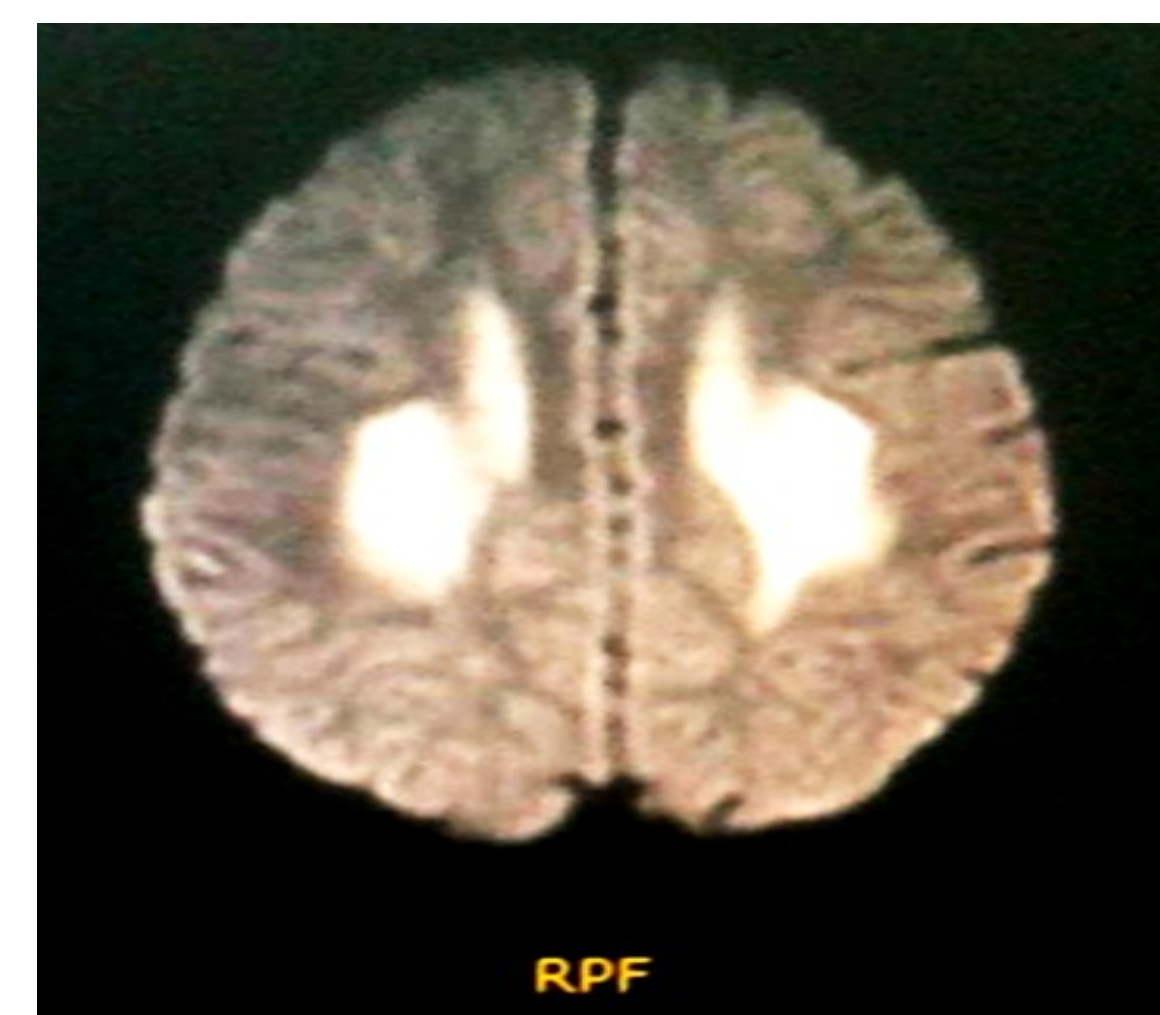
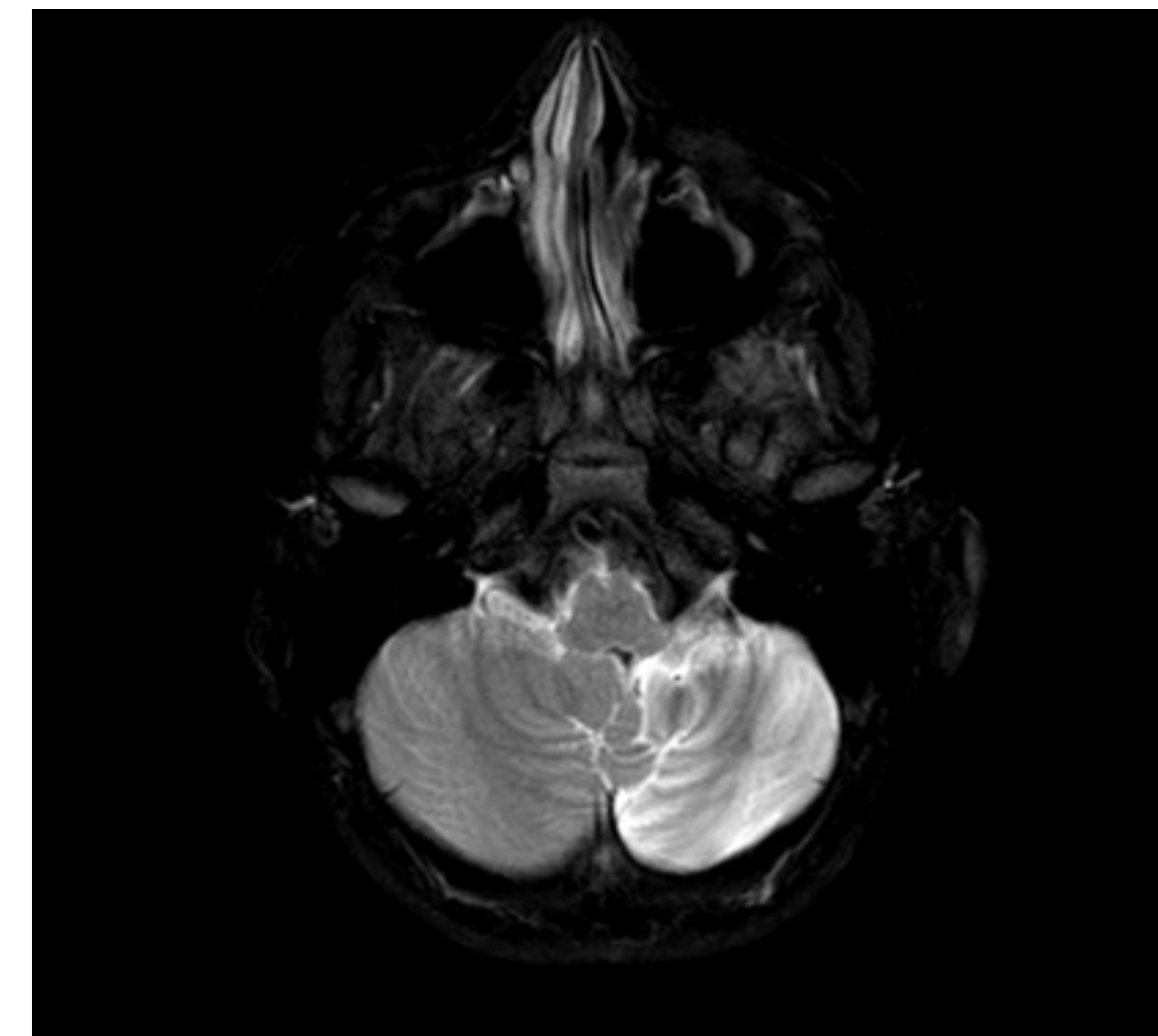
The first patient, an 8 years old girl, showed, after fever, acute right hemiparesis and aphasia. Cardiac evaluation, chest radiography, EEG, and CSF examination were normal. The MRI showed cytotoxic oedema of the corpus callosum and of the bilateral parietal and occipital white matter. After 24 hours her neurological exam was completely negative. MRI after 2 weeks was negative.

The second patient a 3 years old girl developed after fever associated with diarrhea a rapid deterioration of level of consciousness till coma. Cardiac evaluation, chest radiography, EEG and CSF examination were normal. The MRI showed oedema of the corpus callosum. The patient in the days showed persistent neurological compromise, after two weeks she was unable to stay sit and to understand simple orders. The MRI in the same day was negative.

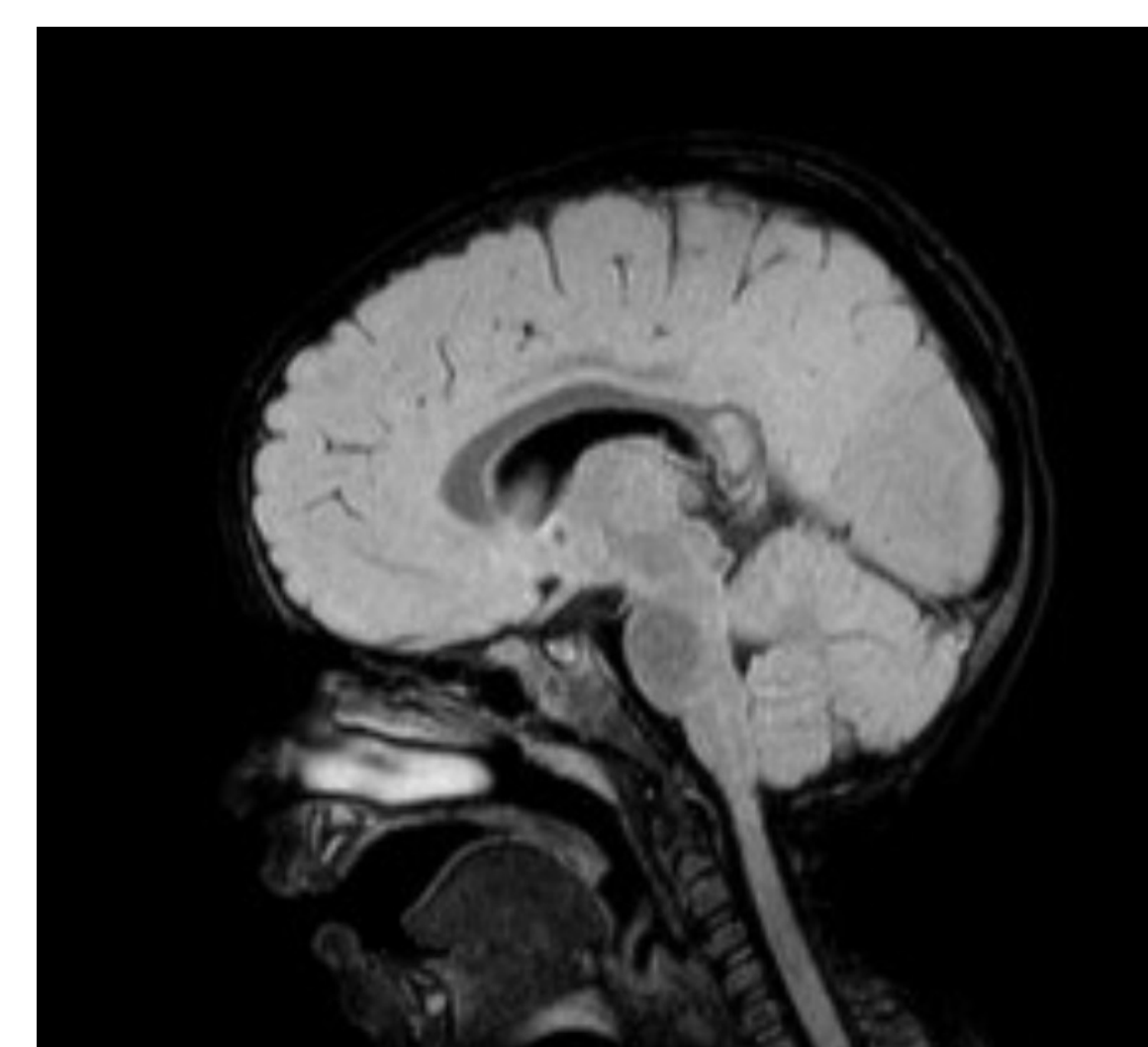
Conclusions:

Although is commonly a mild illness, neurologic manifestations associated with parvovirus B19 infection widely vary. Peripheral nervous system involvement such as neuropathy may be seen more frequently in older immunocompetent individuals. CNS involvement, including meningitis, encephalitis, and seizure, has been demonstrated in younger children and immunocompromised patients. In our cases, both with cytotoxic oedema of the corpus callosum and a reversible damage, the outcome was different with the same therapy (steroids). In the literature, no differences in the prevalence of sequelae were noted between immunocompetent patients and patients with altered immunity or between patients with central nervous system manifestations who received intravenous immunoglobulin with or without steroids and those patients with central nervous system manifestations who did not.

First patient



Second patient



Bibliografia

American Academy of Pediatrics Committee on Infectious Diseases. Parvovirus B19. Kimberlin DW, Brady M, Jackson SA, Long SS, eds. 2015 Red Book: Report of the Committee on Infectious Diseases. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015. 593-596.

Cherry JD, Schulte DJ. Human Parvovirus B19. Feigin RD, Cherry JD, Demmler-Harrison GJ, Kaplan SL, eds. Feigin & Cherry's Textbook of Pediatric Infectious Diseases. 6th ed. Philadelphia, PA: Saunders Elsevier; 2009. Vol 2: 1902-1920.

Douvoyannis M, Litman N, Goldman DL. Neurologic manifestations associated with parvovirus B19 infection. Clin Infect Dis. 2009 Jun 15. 48(12):1713-23