Abstract

Health Science Journal
ISSN 1791-809X

2023
Vol.17 No.P30

Acute Bacterial Meningitis with Coincident Cocaine Use

A.I. Facciuto[2], C. Nasta[2], A. Di Sisto[2], MC Giordano[2], F. Schettini[1], V. Brunelli[1], Prof. M. Giordano[2]

[1]U.O.C. Medicina Interna e P.S. Ospedale "A. Guerriero" Marcianise
[2]Università degli studi della Campania "Luigi Vanvitelli"

Background

Man with cocaine addiction and nasal septum perforation, recent episode of otitis media treated discontinuously with antibiotic therapy.

Case history

A 42 years old man came to our Emergency Department due to psychomotor agitation, intense headache, otalgia, fever and vomiting for several days. Triage code Red.

Patient's assessment was difficult due to agitation, however, there were no obvious signs of meningeal irritation. Haemogas analysis values were normal. On laboratory examinations: neutrophilic leukocytosis and increased PCR; high plasma cocaine levels. On suspicion of stroke a brain CT scan was performed which revealed a focal oval hyper density involving the right transverse sinus and hypodense material causing right mastoid cells obliteration. A brain CT angiography was performed. It showed a contrast medium opacification defect at the confluence of the cerebral venous sinuses and at the proximal portion of the right transverse sinus, suspicion of cavernous sinus thrombosis. Chest CT scan was negative for pathological findings. Neurological counseling stated a toxic metabolic encephalopathy. During next clinical assessment, the patient appeared drowsy, uncooperative, increasing body temperature (BT) and nuchal rigidity began to appear. A spinal tap was performed which showed cloudy, greyish CSF, reduced glucose levels, increased proteins and albumin levels, elevated leucocytes in the CSF and positivity for Streptococcus Pneumoniae on filmarray for meningitis and encephalitis.The patient was transferred to the ICU, sedated and underwent endotracheal intubation. Antibiotic therapy for S. Pneumoniae meningitis in a patient under 50 years old treatment: Ceftriaxone 2 g every 12 hours and Vancomycin 2 g as a continuous infusion and 1 g every 12 hours and anticoagulant therapy with Enoxaparin were administered. Once critical phase passed, the patient was transferred to the Internal Medicine department. However BT was constantly elevated,a worsening thoracic objectivity and expectoration of thick, yellowish secretions were observed. So blood cultures and filmarrays for pneumonia on bronchial aspirates were carried out. These exams were positive for carbapenemase-producing Klebsiella Pneumoniae and Acinetobacter Baumannii. Antibiotic therapy was optimized: Vancomycin and Ceftriaxone were discontinued. Linezolid 600 mg every 12 hours and Meropenem/Vaborbactam 2 g every 8 hours were introduced. There was a progressive improvement in the patient's clinical condition, improvement in neurological condition and normalization of inflammation indices. The patient was discharged with a diagnosis of "S. Pneumoniae meningitis treated with antibiotic therapy, in a patient with perforation of the nasal septum, acute otitis media and thrombosis of the right cavernous sinus. History of Psoriasis and drug addiction. Positive rectal swab for Klebsiella Pneumoniae NDM".

Discussion

Cocaine is a stimulant that can adversely affect the central nervous system and the immune system.Through various mechanisms, cocaine is toxic to neurons, endothelial cells, lymphocytes, granulocytes, and macrophages resulting in systemic damage. This case is interesting because the patient's meningitis was caused by group A Streptococcus, which is more common in the age group 0-5 years as a cause of bronchitis, otitis media and sinusitis. Group A streptococcal infections are seen also in debilitated patients with chronic lung disease, nephrotic syndrome, thalassemia major, AIDS. We could suppose a link between group A streptococcal meningitis and drug abuse.