

## **Bacillus cereus Bacteremia and Multi-Organ Failure With Diffuse Brain Hypoxia During Acute Lymphoblastic Leukemia Induction Therapy. A Case Report**

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**Abstract :** *Bacillus cereus* is a toxin-producing, facultatively anaerobic gram-positive bacterium that is widely distributed environmentally. It can quickly multiply at room temperature with an abundantly present preformed toxin. When ingested, this toxin can cause gastrointestinal illness, which is the commonly known manifestation of the disease. *Bacillus cereus* sepsis is a disease that is mostly concerning in the population of the immunocompromised patients. One of them is acute lymphoblastic leukemia's patients during induction. Pediatric acute lymphoblastic leukemia is a common pediatric hematologic malignancy. It is characterized by the rapid proliferation of poorly differentiated lymphoid progenitor cells inside the bone marrow. We present here a 21-month-old boy undergoing induction chemotherapy for acute lymphoblastic leukemia who developed bacillus sepsis bacteremia and, as a result, multi organ failure leading to seizures and multiple strokes. Our case report highlights the extensive overall and neurological damage that can be caused because of bacillus cereus bacteremia, which can lead to higher mortality rate and decreased in survivorship in a highly curable disease. It is very subtle and difficult to recognize and appears to be deteriorating extremely fast. There should be a low threshold for work up and empiric coverage for neutropenic patients during acute lymphoblastic leukemia induction therapy.

**Keywords :** acute lymphoblastic leukemia, bacillus cereus, immunocompromised, sepsis

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