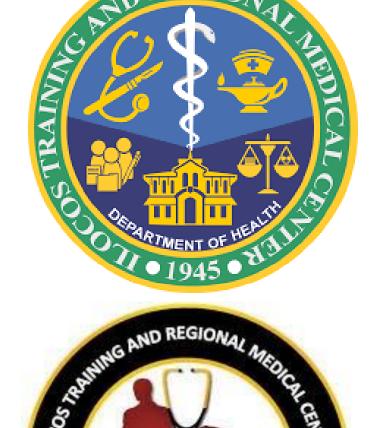
CAS-056





Acute Leukemia Presenting with Febrile Neutropenia, Candidemia, Neutropenic Enterocolitis, and Probable Turner Syndrome: A Clinical Dilemma



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INTRODUCTION

Neutropenic enterocolitis (NE) is a life-threatening condition typically occurring in immunocompromised individuals, particularly following chemotherapy. Its development in chemotherapy-naïve patients with leukemia is rare. Furthermore, candida-associated NE is exceptionally uncommon, and the coexistence of Turner syndrome in such cases is scarcely described.

CASE PRESENTATION

Symptoms: Gingival bleeding, easy fatigability, dizziness (1 month)

Labs:
•Hb: 40 g/L

WBC: 2.05 × 10⁹/L
 ANC: 440 cells/μL
 Platelets: 30 × 10⁹/L

Physical Findings: Short stature, broad chest, widely spaced nipples, underdeveloped breasts → Suggestive of Turner Syndrome GyneHx: Primary amenorrhea

FEBRILE NEUTROPENIA (ANC 258)

- •Treatment:
 - Cefepime
 - •G-CSF
- •Bone Marrow: Acute

Lymphoblastic Leukemia (ALL)

•Course: Persistent fever,

pneumonia, respiratory distress
•Labs: ↑ Procalcitonin (2.481 µg/L),

↑ Pro-BNP (>30,000)

ESCALATION OF MANAGEMENT

- Antibiotic Escalation:
- Meropenem → persistent fever
- Added Vancomycin → persistent fever
- Added Fluconazole → afebrile,
 ANC ↑ to 820 cells/µL
- Duration: 7 days on meropenem,
 vancomycin, fluconazole → afebrile
 ×5 days

NEW ONSET ABDOMINAL SYMPTOMS

- •Symptoms: Abdominal pain, diarrhea, recurrent fever
- Findings: Hypoactive bowel sounds, distension, tenderness
- •Labs: Persistent neutropenia (ANC 358)
- •Impression: Neutropenic Enterocolitis vs C. difficile colitis
- Management:
- •Ceftazidime + Metronidazole + Linezolid
- Continued Fluconazole

OUTCOME AND FOLLOW-UP

- Day 14 of Fluconazole: Blood culture sterile
- Afebrile ×7 days
- •ANC: 658 cells/µL
- Chemotherapy: Advised but declined
- Discharge: Stable, on Ciprofloxacin prophylaxis

DISCUSSION

- •Neutropenic enterocolitis (NE) can occur in untreated leukemia due to marrow failure, mucosal injury, and immune compromise.
- High tumor burden and possible leukemic bowel infiltration may trigger NE even before chemotherapy.
- Candida parapsilosis translocation reflects gut barrier disruption and risk of invasive fungal infection.
- •Management: bowel rest, supportive care, broadspectrum antibiotics, with antifungals for persistent fever or prolonged neutropenia.
- •Turner Syndrome may contribute to genetic instability and immune dysregulation, accelerating leukemia and infectious complications.

CONCLUSION

- •This case illustrates the interplay of febrile neutropenia, neutropenic enterocolitis, candidemia, and probable Turner Syndrome in acute leukemia.
- •Candida parapsilosis underscores the need for early antifungal consideration in persistent febrile neutropenia.
- •NE occurring in a chemotherapy-naïve patient is rare, and its link with Turner Syndrome is not well described.
- •Further research is needed to optimize diagnosis and management in such atypical cases.

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