

<b>បន្ទីរពេទ្យ</b> <b>កាល់ម៉ែត</b> <b>HOPITAL</b> <b>Calmette</b>	<b>SOP for Management of Neutropenic Enterocolitis in Adult</b>	Date/Place  April 2024/PP	Number of page
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**OBJECTIVES**

To provide guidelines for Physicians and Nurses for the management of neutropenic enterocolitis in haemato-oncology patients.

**SCOPE**

This document outlines the indication for treatment and management for all those patients presumed or diagnosed with neutropenic enterocolitis.

**REFERENCE TEAM**

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<b>Hospital Director</b>	<b>Head of Technical Bureau</b>	<b>Representative of Compilation Team</b>

Definition	Neutropenic enterocolitis is a life-threatening necrotizing inflammation of intestinal tract in patients with neutropenic fever with a mortality rate of 30 to 50%.
Risk Factors	<ul style="list-style-type: none"> <li>- Conditions complicating prolonged neutropenia i.e. hematological malignancies, aplastic anemia, etc.</li> <li>- Patients receiving cytotoxic chemotherapies</li> </ul>
Diagnostic criteria	<ul style="list-style-type: none"> <li>- Fever</li> <li>- Absolute neutropenia count <math>\leq 500/\text{mm}^3</math></li> <li>- Abdominal symptoms i.e. pain, diarrhea, constipation, GI bleeding, etc.</li> <li>- Bowel wall thickening on CT or US exam <math>&gt; 4 \text{ mm}</math></li> </ul>
Laboratory testing	<ul style="list-style-type: none"> <li>- CBC, Coagulation studies</li> <li>- Chemistry panels: RFT, LFT, Electrolytes, CRP, Procalcitonin</li> <li>- Infectious workup: <ul style="list-style-type: none"> <li>- Hemoculture , Urine culture, Stool culture, etc.</li> <li>- Clostridium difficile toxin A &amp; B</li> </ul> </li> </ul>
Principles of therapy	<ul style="list-style-type: none"> <li>- Bowel rest (NPO) +/- nasogastric suction</li> <li>- Intravenous fluids and parenteral nutritional support</li> <li>- Blood product support (PRC, Platelet, and Plasma): <ul style="list-style-type: none"> <li>- Maintaining hemoglobin above 7 g/L</li> <li>- Platelet above 20 Giga/L</li> <li>- Correct coagulation abnormalities</li> </ul> </li> <li>- G-CSF (if no contra-indication and preferably should be given intravenously in case of severe thrombopenia)</li> <li>- Empiric antimicrobial therapy <ul style="list-style-type: none"> <li>- Antibiotherapy agents (anti-pseudomonas agents): <ul style="list-style-type: none"> <li>- Piperacillin-tazobactam or</li> <li>- Cefepime or</li> <li>- Carbapenem</li> </ul> </li> <li>** In severe cases, bi-therapy or tri-therapy is recommended in association with anaerobic coverage agent (i.e. metronidazole) and aminoglycoside (i.e. amikacin or gentamicin).</li> <li>- Antifungal agents: <ul style="list-style-type: none"> <li>- Voriconazole or Amphotericin B (if fever persists more than 48 to 72H despite broad-spectrum antibiotics)</li> </ul> </li> </ul> </li> </ul>

	<p>** Supportive care and antimicrobial therapy should continue until resolution of clinical symptoms, resolution of bowel thickening on US or CT scan, and ANC <math>\geq 1000/\text{mm}^3</math>.</p>
Complications	<ul style="list-style-type: none"> <li>- Bowel perforation and abscess formation</li> <li>- Sepsis and septic shock</li> <li>- Gastrointestinal bleeding</li> <li>- Malnutrition (from prolonged NPO)</li> </ul>
Prevention	<ul style="list-style-type: none"> <li>- Antibacterial prophylaxis: oral ciprofloxacin or levofloxacin</li> <li>- Antifungal prophylaxis: oral fluconazole</li> <li>- G-CSF (if no contra-indication) after chemotherapy</li> </ul>
Important notes	<ul style="list-style-type: none"> <li>- Surgical treatment is avoided in neutropenic enterocolitis due to neutropenia and thrombocytopenia but considered when complications like perforation arise.</li> <li>- Neutropenic enterocolitis, especially when it involves the right lower quadrant, can mimic acute appendicitis; resulting in unwanted surgical intervention.</li> <li>- Probiotics should be avoided in neutropenic enterocolitis.</li> <li>- Chemotherapy should be delayed at least 1 or 2 weeks after complete resolution and dose or regimen should be modified to prevent recurrence.</li> </ul>