

Mesenteric Lymphadenitis: A Case Study

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Abstract: Mesenteric lymphadenitis is an inflammatory condition involving the lymph nodes in the mesentery, the tissue connecting the intestines to the abdominal wall. This condition primarily affects children and young adults. It is most often caused by viral infections, such as adenovirus and enterovirus, though bacterial infections, inflammatory bowel diseases, and other factors can also contribute. The inflammation of these lymph nodes typically leads to abdominal pain, often localised to the lower right side, which can closely resemble appendicitis. Diagnosis is usually made through clinical examination and imaging techniques like ultrasound or CT scans. In most cases, mesenteric lymphadenitis is self-limiting and resolves without significant medical intervention. However, treatment may be required for bacterial infections, pain management, or the underlying cause warrants further attention. Despite its generally benign nature, accurate diagnosis is essential to rule out other serious conditions and provide appropriate care.

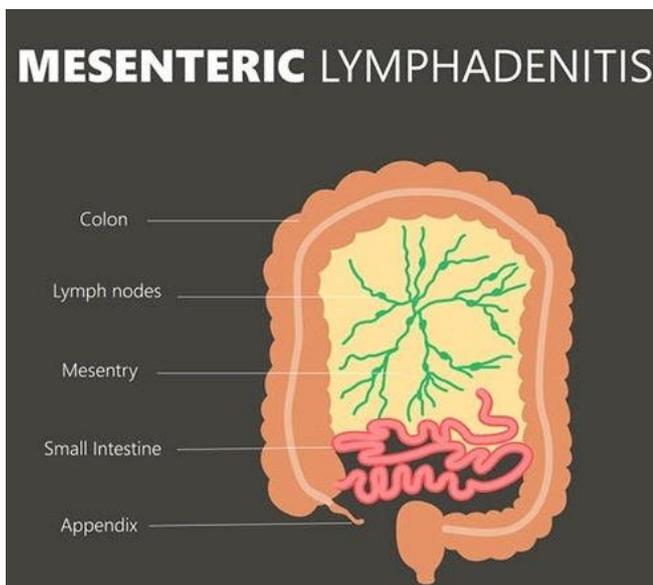
Keywords: abdominal pain, lymph nodes, pain management, infection

1. Introduction

Mesenteric adenitis, also known as mesenteric lymphadenitis is a common cause of abdominal pain in children and young adults. Mesenteric lymph nodes with a short - axis diameter of $>5 - 10\text{mm}$ are commonly found on abdominal CT examination of children with a low likelihood for mesenteric lymphadenopathy and should be considered a non - specific finding. A short - axis diameter of 8 mm might better define the upper limit of normal mesenteric lymph node size in children.

Diagnosis:

- Patient History Collection
- Physical Examination
- Ultrasound
- CT Scan
- MRI
- Complete Blood Count
- CRP
- Endoscopy or Colonoscopy
- Biopsy
- Blood Cultures
- Stool tests



Causes and Risk Factors

- Foodborne illness
- Viral and bacterial infection
- Gastrointestinal infection
- Ulcerative colitis
- Autoimmune diseases
- Malignancy
- Parasitic infection
- Inflammatory bowel disease
- Lymphoma
- Infection exposure

2. Case Study of Mr Y

A twelve - year - old Mr. Y patient, referred to as Mr. Y, was admitted to the hospital presenting with complaints of abdominal pain, fever, nausea, and vomiting. Following a comprehensive investigation and an ultrasound examination, he was diagnosed with mesenteric lymphadenitis. The patient continues to experience a persistent high - grade fever and abdominal pain. His vital signs are recorded as follows.

Temperature: 102.3 °f

Pulse: 108 beats/min

Respiration: 28 breaths/min

Blood pressure: 120/70 mm Hg

Spo2: 99%

The CT Scan Abdomen report showed No evidence of any calculus/ mass. Mild cystitis. Few 8 - 10mm mesenteric lymphadenitis abdominal mass - free fluids in the abdomen.

2.1 Investigation

Hb 13.4

WBC: 3500 cells/cumm

Urine culture: no growth

Stool culture: no growth

Blood group: A1 positive

2.2 Signs and symptoms

Book picture	Mother picture
• Abdominal pain	Present
• Fever	Present
• Nausea and Vomiting	Present
• Diarrhea	Absent
• Loss of Appetite	Present
• Fatigue	Present
• Feeling tired or lack of energy	Present
• Occasionally, Weight loss	Absent

2.3 Management of mesenteric lymphadenitis

- Pain medication
- Hydration
- Rest
- diet
- Warm heat applied to the abdomen
- Antibiotics

2.4 Complication

- Abscess
- Intestinal obstruction
- Peritonitis
- Sepsis
- Ischemic colitis

2.5 Nursing management

- Monitor vital signs
- Pain assessment
- Antibiotic
- Liquid diet

Assessment

- Presenting symptoms
- Pain location
- Inquire about changes in bowel habits.
- A history of recent viral or bacterial infections.
- Abdominal examination
- Laboratory tests (CBC, CRP, Stool cultures)

Nursing Diagnosis

- Acute pain related to inflammation of mesenteric lymph nodes.
- Risk of infection related to inflammation and potential for bacterial or viral infection.
- Imbalance nutrition related to pain and nausea, affecting the ability to eat and absorb nutrients.
- Anxiety related to uncertain diagnosis, fear of potential complications, and discomfort from the condition.

Planning

- Administer prescribed pain medication
- Position the patient in a comfortable position
- Monitor vital signs frequently, especially temperature.
- Monitor the patient's weight, fluid intake, and output to assess nutritional status
- Monitor for signs of infection and complications, such as sepsis or worsening abdominal pain.

- If the patient is unable to tolerate solid foods due to pain or nausea, consider administering intravenous fluids to maintain hydration

Implementation

- Administer prescribed analgesics
- Offer comfort measures such as repositioning the patient. semi - fowler's position or side - lying with knees drawn up to alleviate abdominal pressure
- Encourage fluid intake to prevent dehydration from fever, vomiting and diarrhoea.
- Perform regular hand hygiene to prevent the spread of infection.
- Encourage the patient to express feelings and fears about the diagnosis and the plan for treatment ensuring open communication
- Administer electrolyte solutions to tolerate dehydration.

Evaluation

- The patient reports a decrease in pain severity. (using pain scale)
- The patient can engage in activities with minimal discomfort
- The patient can tolerate oral intake or is receiving adequate intravenous fluids for dehydration.
- No new symptoms of infection like worsening abdominal Pain or increased tenderness are noted.
- The patient expresses reduced anxiety and increased confidence in managing the condition.

3. Conclusion

Mesenteric lymphadenitis, often caused by viral or bacterial infections, is an inflammatory condition of the lymph nodes in the mesentery of the abdomen. It commonly presents with symptoms like abdominal pain, fever, and tenderness.

Nursing care for mesenteric lymphadenitis involves pain management, infection control, nutritional support, and patient education. Effective implementation of interventions, such as administering prescribed medications, monitoring vital signs, and providing comfort measures, can significantly enhance the patient's recovery. Regular evaluation is essential to monitor the effectiveness of interventions and adjust the care plan accordingly.

Overall, with appropriate nursing interventions, most patients with mesenteric lymphadenitis recover without complications. Early detection, supportive care, and addressing any complications promptly are key to ensuring a positive outcome for the patient.

References

- [1] Manning, D. M., & Geiger, M. (2021). Abdominal pain and the differential diagnosis of mesenteric lymphadenitis. *American Family Physician*, 103 (10), 593 - 600. <https://www.aafp.org/afp/2021/0515/p593.html>
- [2] Henderson, S. O., & Arodiwe, O. (2020). Acute abdominal pain and mesenteric lymphadenitis. *Emergency Medicine Clinics of North America*, 38 (4), 625 - 637. <https://doi.org/10.1016/j.emc.2020.07.003>

- [3] Jain, A., & Srivastava, P. (2018). Diagnosis and management of mesenteric lymphadenitis in children. *International Journal of Pediatrics and Adolescent Medicine*, 5 (4), 139 - 142. <https://doi.org/10.1016/j.ijpam.2018.08.002>
- [4] American College of Emergency Physicians (ACEP). (2019). Clinical policy: Acute abdominal pain in children. *Annals of Emergency Medicine*, 74 (1), 26 - 34. <https://doi.org/10.1016/j.annemergmed.2019.02.014>
- [5] UpToDate. (2024). Mesenteric lymphadenitis in children. Retrieved from <https://www.uptodate.com>