Pediatric Oncall Journal (January-March 2019)
Volume 16, Issue 1: 61
DOI: https://doi.org/10.7199/ped.oncall.2019.23

PEDIATRIC ONCALL
CHILD HEALTH CARE

TEACHING FILES (GRAND ROUNDS)

NON-TUBERCULOUS MYCOBACTERIAL INFECTION IN A CHILD OPERATED FOR APPENDECTOMY

Lavina Desai[1], Ira Shah[2]
[1]Seth G S Medical College, Mumbai, India, and [2]Pediatric Infectious Diseases, Levioza Health Care, Mumbai, India.

ARTICLE HISTORY
Received 25 November 2017
Accepted 9 April 2018

Clinical Problem

A 12-year-old boy presented in November 2013 with abdominal pain and vomiting. He was operated for acute appendicitis with a perforation 5 months ago. His current CT scan abdomen showed a short segment stricture in the ileum with moderate dilation of proximal ileum and jejunal loops. He was operated for the same and a lymph node biopsy from the abdomen was taken and sent for histopathology and tuberculosis PCR. Histopathology showed reactive lymph nodes and PCR test was positive for non-tuberculous mycobacterial (NTM) infection. He was referred to us for further management in view of NTM report. On examination, he had no abnormality.

Should this child be given anti-tuberculous therapy?

Discussion

NTM have emerged as important opportunistic pathogens.[1] NTM exists widely in soil and water and the highest rate of NTM colonization is found in hospitals and hemodialysis with rates ranging from 60%- 100%. Mycobacterium Avium colonization is more likely on recirculating water systems in hospitals.[2] Other important species responsible for outbreaks include M. Fortuitum, M. abscessus and M chelonae. NTM are ubiquitous in the environment and isolation of NTM from a clinical specimen may represent colonization, infection, and pseudo-outbreaks in healthcare settings.[2] Colonization is defined as the establishment of NTM within the patient's microflora without evidence of disease or tissue invasion. A pseudo-infection is defined as a positive culture result from a patient without evidence of true infection or colonization which is typically caused by contamination during specimen handling.[2] Disease outbreaks usually involve sternal wound infections, plastic surgery wound infections and or postinjection abscesses. Pseudo-outbreaks most commonly relate to contaminated bronchoscopes and endoscopic cleaning machines and contaminated hospital water supplies.[3] An increase in positive acid-fast bacilli smears and cultures obtained from patients without a compatible clinical syndrome, like in our case, should prompt evaluation of pseudo-outbreak.[2] Whereas NTM infection in post-operative wound should be suspected in all post-operative wound infections which occur late and lack local and systemic signs pyogenic infections and have sterile cultures.[1] They usually show delayed healing and do not respond to the antibiotic used for acute pyogenic infections.[4] Analysis of species of NTM and the specimen source may assist in determining the significance of a cluster of isolates. Once an outbreak or pseudo-outbreak is suspected, molecular techniques should be applied promptly to determine the source and identify proper control measures.[2,5] Prevention of nosocomial infections and pseudo-infections due to NTM can be challenging and include disinfectants, strict de-contamination of endoscopes and hospital water systems, single used medical devices and medication vials.[2] A pseudo-outbreak does not need treatment.

CONTACT Lavina Desai
Email: lavinadesai16@gmail.com
Address for Correspondence: Lavina Desai, Seth G S Medical College, Mumbai India.

Compliance with Ethical Standards

Funding: None

Conflict of Interest: None

References :

1. Shah AK, Gambhir RPS, Hazra N, Katoch R. Non-Tuberculous mycobacteria in surgical wounds-a rising cause of concern. Indian J Surg. 2010;72:206-210.
2. Phillip MS, Reyn FV. Nosocomial Infections Due to Nontuberculous Mycobacteria. Clin Infect Dis. 2001;33:1363-1374.
3. Shiferaw MB, Tulu KT, Zegeye AM, Wubante AA. Liver Enzymes Abnormalities among Highly Active Antiretroviral Therapy-Experienced and HAART Naive HIV-1 Infected Patients at Debre Tabor Hospital, North West Ethiopia: A Comparative Cross-Sectional Study. AIDS Res Treat. 2016;2016:1985452
4. Kalita JB, Rahman H, Baruah KC. Delayed postoperative wound infections due to non-tuberculous Mycobacterium. Indian J Med Res. 2005;122:535-539.
5. Shah AK, Gambhir RPS, Hazra N, Katoch R. Non-Tuberculous mycobacteria in surgical wounds -a rising cause of concern. Indian J Surg. 2010;72:206-10.