**M3 Literature Review**

**Period: 08/10/2024 – 08/11/2024**

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Scientific Highlights:

1. Metagenomic, metabolomic, and lipidomic shifts associated with fecal microbiota transplantation for recurrent Clostridioides difficile infection.
2. [Clostridioides difficile infections: Update and therapeutic guidelines].
3. Internet Parent-Child Interaction Therapy for Maternal Guilt in a Child Abuse Case: A Single Case Study.
4. Systematic review of the orally administered microbiome therapeutic, fecal microbiota spores, live-brpk, to prevent recurrence of Clostridioides difficile infection in adults.
5. Cerebral salt wasting syndrome in a child with central diabetes insipidus following surgery for recurrent craniopharyngioma: A case report.
6. Microbiota restoration for recurrent Clostridioides difficile infection.
7. Fecal microbiota transplantation through colonoscopy in the treatment of recurrent Clostridioides difficile: Experience at a university center.
8. Impact of Clinical and Pharmacological Parameters on Faecal Microbiota Transplantation Outcome in Clostridioides difficile Infections: Results of a 5-Year French National Survey.
9. Risk of rehospitalization due to Clostridioides difficile infection among hospitalized patients with Clostridioides difficile: a cohort study.
10. Comparing rates of recurrent infection for first occurrence of Clostridioides difficile between tapered oral vancomycin and standard vancomycin: a retrospective, propensity matched cohort study.
11. Successful Use of Fecal Microbiota Transplantation in Management of Nonobstructive Recurrent Cholangitis Following Total Pancreatectomy and Islet Autotransplant.
12. Fecal microbiota transplantation in a patient with chronic diarrhea and primary and secondary immunodeficiency (common variable immunodeficiency and splenectomy).
13. Treatment outcomes of mild to moderate Clostridioides difficile infection in inflammatory bowel disease: an Australian experience.
14. Multicenter study on Clostridioides difficile infections in Mexico: exploring the landscape.
15. Gonococcal infections and risk factors for reinfection: a descriptive and case-case analysis of notifications in the Australian Capital Territory, 2017-2022.
16. Epidemiology and Outcomes of Recurrent C Difficile Infection Among Hematopoietic Cell Transplant Recipients: A Single-center, Retrospective 10-year Study.
17. Improved health-related quality of life in patients with recurrent Clostridioides difficile infection after treatment with faecal microbiota transplantation.
18. Fecal Microbiota Transplantation for Recurrent Clostridioides difficile Infections in a Cystic Fibrosis Child Previously Screen Positive, Inconclusive Diagnosis (CFSPID): A Case Report.
19. Epidemiology of Clostridioides difficile PCR ribotype 181 after the COVID-19 pandemic in Northern Greece.
20. Comparative effectiveness of treatments for recurrent Clostridioides difficile infection: a network meta-analysis of randomized controlled trials.
21. Faecal (or intestinal) microbiota transplant: a tool for repairing the gut microbiome.

Clostridioides difficile/ Clostridium difficile

1. TcdB from Hypervirulent Clostridioides difficile Induces Neuronal Loss and Neurotransmitter Alterations in the Intrinsic Enteric Nervous System.
2. Informing estimates of probability of Clostridioides difficile infection for testing and treatment: expert consensus from a modified-Delphi procedure.
3. Validation of electronic health record data to identify hospital-associated Clostridioides difficile infections for retrospective research.
4. Examining the impact of the COVID-19 pandemic on hospital-associated Clostridioides difficile infection.
5. The Impact of Clinical Pharmacist-Driven Weekend Antimicrobial Stewardship Coverage at a Quaternary Hospital.
6. A Mouse Model of Mild Clostridioides difficile Infection for the Characterization of Natural Immune Responses.
7. Mice colonized with the defined microbial community OMM19.1 are susceptible to Clostridioides difficile infection without prior antibiotic treatment.

Fidaxomicin & Clostridium difficile

1. Gut microbiome therapy: fecal microbiota transplantation vs live biotherapeutic products.
2. Normalization of short-chain fatty acid concentration by bacterial count of stool samples improves discrimination between eubiotic and dysbiotic gut microbiota caused by Clostridioides difficile infection.
3. Safety and efficacy of fecal microbiota transplantation for viral diseases: A systematic review of clinical trials.
4. Unraveling Cecal Alterations in Clostridioides difficile Colonized Mice through Comprehensive Metabolic Profiling.

Clostridioides difficile vaccine

1. Opportunistic infections changed before and after SARS-CoV-2 infection in inflammatory bowel disease patients: a retrospective single-center study in China.
2. Community-led diphtheria vaccination campaign to manage a diphtheria outbreak in a remote Aboriginal community.
3. Comparative safety of different antibiotic regimens for the treatment of outpatient community-acquired pneumonia among otherwise healthy adults.
4. Inno4Vac Workshop Report Part 2: RSV-Controlled Human Infection Model (CHIM) Strain Selection and Immune Assays for RSV CHIM Studies, November 2021, MHRA, UK.
5. Challenges of Infectious Diseases in Older Adults: From Immunosenescence and Inflammaging Through Antibiotic Resistance to Management Strategies.
6. Safety and Immunogenicity of an Adjuvanted Clostridioides difficile Vaccine Candidate in Healthy Adults: A Randomized Placebo-Controlled Phase 1 Study.
7. Multivalent vaccine tackles C. difficile.
8. Novel coenzyme Q6 genetic variant increases susceptibility to pneumococcal disease.
9. Inno4Vac Workshop Report Part 1: Controlled Human Influenza Virus Infection Model (CHIVIM) Strain Selection and Immune Assays for CHIVIM Studies, November 2021, MHRA, UK.

Vancomycin & CDI

1. Unveiling the impact of antibiotic stress on biofilm formation and expression of toxin-antitoxin system genes in Clostridium difficile clinical isolates.
2. Oral Vancomycin to Prevent Clostridioides difficile in Stem Cell Transplant Recipients: The Last Frontier in Antimicrobial Prophylaxis.
3. Evaluation of Primary Oral Vancomycin Prophylaxis Against Clostridioides difficile Infection During Autologous Stem Cell Transplantation.

CDI

FMT/ Fecal Microbiota Transplant

1. Gut microbiome therapy: fecal microbiota transplantation vs live biotherapeutic products.
2. Normalization of short-chain fatty acid concentration by bacterial count of stool samples improves discrimination between eubiotic and dysbiotic gut microbiota caused by Clostridioides difficile infection.
3. Safety and efficacy of fecal microbiota transplantation for viral diseases: A systematic review of clinical trials.
4. Unraveling Cecal Alterations in Clostridioides difficile Colonized Mice through Comprehensive Metabolic Profiling.

Competitors

1. Synergistic oral beta-lactam combinations for treating tuberculosis.
2. Endoscopic diagnosis and management of adult inflammatory bowel disease: a consensus document from the American Society for Gastrointestinal Endoscopy IBD Endoscopy Consensus Panel.
3. Sterility in the offspring of spr-5; met-2 mutants may be caused by inherited H3K4 methylation and altered germline transcription.
4. International expert guidance for defining and monitoring small bowel strictures in Crohn's disease on intestinal ultrasound: a consensus statement.
5. Antioxidant and Pro-Oxidant Properties of Selected Clinically Applied Antibiotics: Therapeutic Insights.
6. Trends in COVID-19-Attributable Hospitalizations Among Adults With Laboratory-Confirmed SARS-CoV-2-COVID-NET, June 2020 to September 2023.
7. SQ31f is a potent non-tuberculous mycobacteria antibiotic by specifically targeting the mycobacterial F-ATP synthase.

CDAD

1. Adjunctive linezolid versus clindamycin for toxin inhibition in β-lactam-treated patients with invasive group A streptococcal infections in 195 US hospitals from 2016 to 2021: a retrospective cohort study with target trial emulation.
2. Risk of Intestinal Complications, Extraintestinal Morbidity, and Mortality in Patients with Crohn's Disease and Ocular Involvement.
3. Impact of Gut Microbiota and SCFAs in the Pathogenesis of PCOS and the Effect of Metformin Therapy.
4. Genetic insight into the relationship between inflammatory bowel disease and Clostridioides difficile infection.
5. Post-Discharge Outcomes of Elderly Patients Hospitalized for Inflammatory Bowel Disease Flare Complicated by Clostridioides difficile Infection.
6. A Review of Epithelial Ion Transporters and Their Roles in Equine Infectious Colitis.
7. Gut Microbiota and New Microbiome-Targeted Drugs for Clostridioides difficile Infections.
8. Risk of Clostridioides difficile infection in inflammatory bowel disease patients undergoing vedolizumab treatment: a systematic review and meta-analysis.
9. Therapy of Aspiration: Out-of-Hospital and In-Hospital-Acquired.
10. NKp46(+) ILC3s promote early neutrophil defense against Clostridioides difficile infection through GM-CSF secretion.
11. Lateral effects of infection prevention measures during COVID-19 pandemic on hospital-acquired Clostridioides difficile infection.
12. Dynamics of metal/metalloid bioaccumulation and sensitivity in post-larvae shrimp (Macrobrachium rosenbergii) exposed to settleable atmospheric particulate matter from an industrial source.

CMC

1. Novel antibacterial pullulan derivatives modified with quaternary phosphonium salts for infected wound treatments.

Guidelines

1. Closing the gap on infection prevention staffing recommendations: Results from the beta version of the APIC staffing calculator.
2. Encapsulated donor faeces for faecal microbiota transplantation: the Glyprotect protocol.
3. Whole-genome sequencing of toxigenic Clostridioides difficile reveals multidrug resistance and virulence genes in strains of environmental and animal origin.
4. Persistent varices in cured patients: Understanding the role of hepatic venous pressure gradient.
5. Public health rapid response in managing COVID-19 outbreaks in residential aged care facilities: a regional public health unit perspective.
6. Predicting clinical trial success for Clostridium difficile infections based on preclinical data.
7. Pneumatosis Intestinalis and Pneumoperitoneum After Lung Transplantation: Single-Center Experience and Systematic Review.
8. Cardiovascular Computed Tomography and Magnetic Resonance Imaging Guideline of the Brazilian Society of Cardiology and the Brazilian College of Radiology - 2024.
9. Large Clostridial Toxins: A Brief Review and Insights into Antigen Design for Veterinary Vaccine Development.
10. When and What to Test for Diarrhea: Focus on Stool Testing.
11. Human Health Risk Assessment and Water Quality Index of piped water supply system in Gulshan-e-Iqbal Town, Karachi (A Preliminary Town level study).
12. Necrotizing Gallstone Pancreatitis in a Pediatric Patient: A Case Report and Review of Diagnostic and Management Challenges.
13. Fidaxomicin resistance in Clostridioides difficile: a systematic review and predictive modeling with RNA polymerase binding sites.

Non-toxigenic C. difficile

1. Dogs in Rio de Janeiro as reservoirs of Clostridioides difficile ribotypes causing CDI in humans.

MGB

Other news of possible interest