**XF-73 Nasal Literature Review**

**Period: 24/05/2025 – 24/06/2025**

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Scientific Highlights

1. Intranasal Testing and Treatment for Staphylococcus aureus With Intravenous Vancomycin and Intranasal Povidone-iodine Prior to Posterior Spinal Fusion: A Retrospective Cohort Study Between Two High-volume Children's Hospitals.
2. Lack of Spontaneous and Adaptive Resistance Development in Staphylococcus aureus Against the Antimicrobial Peptide LTX-109.
3. Staphylococcus aureus: A Review of the Pathogenesis and Virulence Mechanisms.
4. Universal versus targeted chlorhexidine and mupirocin decolonisation and clinical and molecular epidemiology of Staphylococcus epidermidis bloodstream infections in patients in intensive care in Scotland, UK: a controlled time-series and longitudinal genotypic study.
5. Uncovering the silent public health threat: nasal carriers of linezolid-resistant, vancomycin-intermediate and mupirocin-resistant MRSA among healthcare workers in a tertiary care hospital in Central India.
6. Role of Staphylococcus aureus Nasal Carriage in Uremic Pruritus and Infection in Hemodialysis Patients.

SA Decolonisation

1. Have We Succeeded in Reducing the 2-Year Periprosthetic Joint Infection Incidence Rate Following Total Hip Arthroplasty? A National Database Analysis From 2011 to 2019.
2. Human beta defensin-2 protects the epithelial barrier during methicillin-resistant Staphylococcus aureus infection in chronic rhinosinusitis with nasal polyps.
3. Retropharyngeal Abscess Secondary to Rare Posttraumatic Spondylodiscitis: An Unusual Presentation.
4. Antibiotic De-Escalation in the Intensive Care Unit: Rationale and Potential Strategies.
5. Prevalence, Antimicrobial Resistance, and Virulence Potential of Staphylococcus aureus in Donkeys from Nigeria.
6. [Distribution of pathogenic bacteria in ear canal secretions of patients with chronic suppurative otitis media, changes in levels of IL-8 and TLR4 in ear canal secretions, and their clinical significance].
7. Severe Influenza Patients Who Received Ventilator Management During the 2024 to 2025 Major Influenza-Endemic Season in a Tertiary Hospital in Japan.
8. Species diversity, virulence, and antimicrobial resistance of the nasal staphylococcal and mammaliicoccal biota of reindeer.
9. Resisting the resistance: the antimicrobial peptide DGL13K selects for small colony variants of Staphylococcus aureus that show increased resistance to its stereoisomer LGL13K, but not to DGL13K.
10. A Combined Aptamer Pulldown-DNAzyme Cleavage Assay for Intact Methicillin Resistant Staphylococcus aureus Cells.
11. Distribution of Pathogenic Bacteria and Antimicrobial Resistance After Cosmetic Augmentative Rhinoplasty.
12. Dupilumab treatment has no effect on the nasal microbiome in patients with NSAID-exacerbated respiratory disease: a longitudinal pilot study.
13. Efficacy of Mupirocin Nasal Irrigation Versus Saline Nasal Irrigation in Acute Rhinosinusitis: A Randomized Double-Blind Study.
14. Mechanisms of 10-Hydroxyoctadecanoic acid resistance in Streptococcus pneumoniae.
15. Staphylococci in high resolution: Capturing diversity within the human nasal microbiota.
16. Associations between total protein, globulin, and nasal Methicillin-Resistant Staphylococcus aureus (MRSA) colonization in US adults: results from the national health and nutrition examination survey 2001-2004.
17. [Keloid scar as a complication after canaloplasty for congenital atresia of the external auditory canal. A clinical case].
18. Implementation of Methicillin-Resistant Staphylococcus aureus (MRSA) Nasal Polymerase Chain Reaction (PCR) Screening in Pediatric Patients for De-escalation of Antibiotics.

SA / MRSA Colonisation / Infection

1. Safety and Efficacy of S53P4 Bioactive Glass in Osteomyelitis Management: A Systematic Review and Meta-Analysis.
2. Staphylococcus aureus Endocarditis Immunothrombosis.
3. Combined Effects of Dual-Scale Modified Surface with Micro- and Nanostructures on the Cellular Biocompatibility, Osteoinduction, and Antibacterial Properties of Titanium Implants.
4. Targeting the MEK1/2 pathway to combat Staphylococcus aureus infection and inflammation in cystic fibrosis.
5. Dual-functional titanium implants via polydopamine-mediated lithium and copper co-incorporation: synergistic enhancement of osseointegration and antibacterial efficacy.
6. Clinical and microbiological profile of spondylodiscitis: a retrospective analysis.
7. Bacteriological Profile and Antibiotic Susceptibility in Patients With Diabetic Foot Infections.
8. Trends and characteristics of multidrug-resistant MRSA in Norway 2008-2020.
9. Thymol-loaded polycaprolactone wet-spun fibers and their ability to suppress bacterial action and chronic wound-associated pro-inflammatory enzymes activity.
10. Association of time to positivity with disease severity in bloodstream infections - a population-based cohort study.
11. Infectious complications of atopic dermatitis, an update.
12. Enterobacterales abundance in oral cancer patients and elevated clindamycin resistance rates in head and neck infections at a Hungarian Tertiary Hospital.
13. Antibacterial and Angiogenic Copper Phosphate-Modified Carbonate Apatite Honeycomb Plugs for Enhanced Gingival and Alveolar Bone Regeneration.
14. Financial and Clinical Toxicity of Empiric Vancomycin for Intra-Abdominal Infections: A Cohort Study.
15. Incidence, microbiology and mortality of ventilation-associated pneumonia in a large Italian cohort of critically ill patients. Results from the PROSAFE project.
16. Analysis of clinical characteristics and risk factors for Staphylococcus aureus disseminated infection secondary to acute osteoarticular infections in children.
17. Development and Characterization of a Collagen-Based Three-Dimensional In Vitro Model to Mimic Biofilm Formation in a Wound Bed.
18. Microbiological Profiles, Antibiotic Susceptibility Patterns and the Role of Multidrug-Resistant Organisms in Patients Diagnosed with Periprosthetic Joint Infection over 8 Years: Results from a Single-Center Observational Cohort Study from Romania.
19. New approaches to disinfection of thermolabile medical devices using an indirect method with cold atmospheric plasma-aerosol.
20. Linking Virulence and Iron Limitation Response in Staphylococcus aureus: The sRNA IsrR Is Involved in SaeRS Activation.
21. Clinical Evaluation of MAP-1 Antimicrobial Coating on Patient Privacy Curtains: Insights from a Randomized Trial in a Hong Kong Hospital.
22. Trends in Incidence and Epidemiology of Methicillin-Resistant Staphylococcus aureus Bacteremia, Six Emerging Infections Program Surveillance Sites, 2005-2022.
23. Staphylococcus aureus-derived Signature Protein(s) in Murine Vaginal Lavage Fluid: Investigating the Underlying factors of Infertility as a Consequence of Sperm Impairing Bacterium.
24. An Unusual Case of Aortic Vegetation Causing Coronary Artery Microembolization and Sudden Death: A Case Report.
25. Understanding the Molecular Epidemiology of Community-Acquired Methicillin-Resistant Staphylococcus aureus in Northern Saudi Arabia: A Spotlight on SCCmec and spa Typing.
26. Epidemiology and resistant profile of bacterial pathogens in a tertiary health care hospital, Medan City: a retrospective study.
27. Evaluation of Bacterial Profiles and Antibiotic Susceptibility in Orthopedic Patients With Surgical Site Infections After Implant Surgery.
28. Bronchopulmonary colonization patterns in Spanish people with cystic fibrosis: Results of a national multicentre study.
29. Population sequencing for phylogenetic diversity and transmission analyses.
30. Use of AngioVac device in debulking endocarditis vegetations before lead extractions.
31. A 3-year retrospective analysis of microbial species and key biomarkers associated with wound infections in Shantou Hospital, China.
32. Lysozyme Fiber-Inspired Versatile Supramolecular Hydrogel Against Drug-Resistant Pathogens and Biofilm Formation.
33. Exploring properties of surgical mask modified by iodine-doped cellulose film with 2D reduced graphene oxide decorated with TiO(2) nanocomposite.
34. Molecular versus conventional assay for diagnosis of hospital-acquired pneumonia in critically ill patients: a single center experience.
35. Enhanced antimicrobial efficacy by impregnation of vascular grafts with nanocolloidal silver.
36. Evaluating the Efficacy of 0.5% Sodium Hypochlorite Disinfection for Microbial Control in Korle Bu Teaching Hospital's Burns and Plastics Unit.
37. The Role of Skin Dysbiosis and Quorum Sensing in Atopic Dermatitis.
38. Colonizing Bacteria Aggravate Inflammation, Cytotoxicity and Immune Defense During Influenza A Virus Infection.
39. Deciphering the Complex Relationships Between the Hemostasis System and Infective Endocarditis.
40. Diagnostic and Treatment Challenges in the Clinical Curing of MRSA Coxitis in a Tetraplegic Immunocompromised Patient: A Case Report and Literature Review.
41. The effect of five versus two personnel on bacterial air contamination during preparation of sterile surgical goods in the operating room: a randomised controlled trial.
42. Ultrasonic chamber combined with photodynamic therapy inhibits bacterial growth on dental devices.
43. Cathelicidin expression in the pathogenesis of atopic dermatitis and the therapeutic potential of vitamin D.
44. A time-series analysis approach to quantify change in antibiotic resistance and antibiotic consumption during COVID-19 Epidemics: a multicenter cross-national ecological study on behalf of QUARANTINE (QUantifying change in Antibiotic Resistance, ANTibiotic use, and INfection control during COVID-19 Epidemics) study project.
45. Methicillin-resistant Staphylococcus aureus (MRSA) infection of the temple region of the face: Case report.
46. Microbiological monitoring of the hospital environment: risk assessment and strategies in infection control systems.
47. Diversity and antibiotic susceptibility profiles of bacterial isolates from wound infections in patients at the surgical unit of Kisii teaching and referral hospital, Kenya.
48. Post-Surgical Abdominal Myonecrosis: The Unusual Role of Candida albicans.
49. Management Strategies for Chronic Suppurative Otitis Media and Why They Fail.
50. Development of Substrate-Independent Antifouling and Bactericidal Surfaces Using Visible Light Cross-Linked Hydrogel Coatings for Biomedical Applications.
51. Microbiological colonization of the pancreatic tumor affects postoperative complications and outcome after pancreatic surgery.
52. A Rare Case of Orf Virus Precipitating Methicillin-Resistant Staphylococcus Aureus Bacteremia Superinfection Leading to Native Hip Joint Septic Arthritis.
53. Necrotizing Fasciitis Caused by Gas-producing Methicillin-sensitive Staphylococcus aureus: A Case Report.
54. Deep Infections After Open and Closed Fractures.
55. Comparing the in Vitro Efficacy of Commonly Used Surgical Irrigants for the Treatment of Implant-Associated Infections.
56. Gram-positive ESKAPE pathogens in Germany: A comprehensive analysis of occurrence and resistance development in animal, food, and environmental sources.
57. Rapid microbial evaluation of acute exacerbations of bronchiectasis using FilmArray Pneumonia plus Panel in a real-world setting.
58. Preoperative Patient Optimization for Lower Extremity Total Joint Arthroplasty Surgery.
59. The Importance of Early Source Control in Persistent MRSA Bacteremia: A Case Report.
60. Hospital-onset bacteraemia and fungaemia as a novel automated surveillance indicator: results from four European university hospitals, 2018 to 2022.

Guidelines / Prevention Practice

1. Knowledge, practices, educational needs and hospital engagement in Infection Prevention and Control (IPC) among Italian healthcare workers and students: results from a national multicentre survey.
2. Current Practices in Antibiotic Prophylaxis for Transoral Endoscopic Thyroid and Parathyroid Surgery: A Comparative Study.
3. Longitudinal Assessment of Solid Organ Transplant Recipients With SARS-CoV-2 Infection.
4. Diagnosis and Management of Candida Endophthalmitis and Chorioretinitis.
5. Meta-analysis of controlled studies comparing biologic and synthetic unabsorbable mesh in contaminated fields.
6. Does BMI Impact Outcomes in Patients Undergoing Open Abdominal Wall Reconstruction? A Systematic Review and Meta-Analysis.

Breast Surgery

1. Go Pre or Stay Sub? Immediate implant-based breast reconstruction: A systematic review and meta-analysis.
2. Outcomes of Air Versus Saline-filled Breast Expanders: A Systematic Review and Meta-analysis.
3. A web-based predictive model for secondary skin infections in breast cancer patients undergoing reconstruction.
4. Immediate lymphovenous anastomosis is effective in preventing breast cancer-related lymphedema: A systematic review and meta-analysis.
5. Prophylactic Absorbable Antibiotic Beads: Effect on Tissue Expander Reconstruction Outcomes following Mastectomy Skin Necrosis.
6. COVID-19 Pandemic's Effects on Breast Cancer Screening, Staging at Diagnosis at Presentation, Oncologic Management, and Immediate Reconstruction: A Canadian Perspective.
7. Evaluation of Perforator Fasciocutaneous Flaps for Oncoplastic Immediate Reconstruction Following Breast Conservative Surgery in Lower and Lateral Breast Quadrant Lesions Perforator Fasciocutaneous Flaps for OBCS.
8. Nomogram for Predicting Post-Operative Pulmonary Infection in Patients with Traumatic Intra-Cranial Hematoma.
9. Post-surgical Pyoderma Gangrenosum in Breast Surgery: An Updated Systematic Review, Takeaways, and the 6 Commandments.
10. The Role of Autologous Fat Grafting in Delayed Breast Reconstruction Using Tissue Expanders.
11. Effectivity of Topical Quinolones and Metronidazole on Cancer Ulcers in Patients with Locally Advanced Breast Cancer: A Randomized Controlled Trial.
12. Long-term follow-up outcomes of intraoperative radiotherapy for breast-conserving treatment in early breast cancer: A retrospective cohort study.
13. The Use of Negative Pressure Wound Therapy for Breast Surgeries: A Systematic Review and Meta-Analysis.
14. The Bra Project: Preventing Wounds in Women After Sternotomy.
15. Use of antibiotic-impregnated discs in breast reconstruction among the obese population: A retrospective propensity score-matched analysis.
16. Risk factors for complications after reduction mammaplasty: a systematic review and meta-analysis.
17. Necrotizing fasciitis of the breast with extension to the chest wall myofascial layer in a lactating mother: a rare case report.
18. Outcomes of a Virtual Medicine Hybrid Model for Postoperative Care Following Mastectomy and Immediate Tissue Expander Breast Reconstruction: A Retrospective Review.
19. Safety of Combined Deep Inferior Epigastric Artery Perforator Flaps and Gynecologic Procedures.
20. Comparative Outcomes of Proton versus Photon Post-Mastectomy Radiation Therapy in Pre-Pectoral Implant-Based Breast Reconstruction.
21. Assessing the Impact of Frailty on Patient-Reported Outcomes and Clinical Complications in Two-Stage Implant-Based Breast Reconstruction.
22. Pilot Study: A Prospective Placebo-control Trial Evaluating Topical Tranexamic Acid in Postmastectomy Breast Reconstruction.
23. Karydakis Flap as a Simple Surgical Method in the Treatment of Pilonidal Disease V.S Open Surgery with Average 30-month-follow up: A Clinical Trial.
24. Brain Abscess Mimicking Brain Tumors: A Systematic Review of Individual Patient's Data.
25. Clinical and economic burden of surgical site infections following selected surgeries in France.
26. Surgical Site Infection Owing to Mycobacterium mageritense After Immediate Breast Reconstruction Using a Deep Inferior Epigastric Perforator Flap.
27. Regional analgesia techniques for postoperative pain after breast cancer surgery: a network meta-analysis.
28. Development and external validation of a nomogram for predicting sepsis following flexible ureteroscopy.
29. A commentary on "Impact of previous COVID-19 infection on postoperative complications and functional recovery: a 1-year follow-up ambispective cohort study".
30. Outcomes of ambulatory breast surgery among Filipino patients with stage I-III invasive breast cancer: a single institution experience in Cebu, Philippines.
31. From cosmetic to critical: breast implant rupture revealing invasive lobular breast carcinoma.
32. Closed Expander Salvage With Dual-port Tissue Expander in Implant-based Breast Reconstruction for High Body Mass Index and Ptotic Patients.
33. Comedications Associated with Immune-Related Adverse Events from Immune-Checkpoint Inhibitors.
34. Study of Treatment Modalities and Clinical Outcomes of Screen-Detected Cancers at a Tertiary Care Unit in the UK.
35. Use of Tissue Expander and Breast Implant in Postmastectomy Reconstruction: Presentation of a Clinical Case.
36. Local Antibiotic Delivery Systems for Infection Prophylaxis in Implant-Based Breast Reconstruction: What Is the Evidence?
37. Complications of Prosthetic Breast Reconstruction in Prophylactic Versus Therapeutic Mastectomy: A Systematic Review and Meta-analysis.
38. Efficacy of Flat-Silicone Versus Round-Silicone Perforated Drains in Seroma Formation and Other Outcomes Following Mastectomy: A Single-Blinded Randomized Controlled Trial.

Mupirocin resistance

1. Thienoacene-Based Conjugated Oligoelectrolytes for Membrane-Targeting Antimicrobial Approaches: Synergistic Biofilm Eradication and Antimicrobial Resistance Reversal.
2. Mupirocin-Piperine Microemulsion Hydrogels Accelerate Healing of Infected Wounds through Deep Penetration and Biofilm Disruption.
3. Genomic and Phenotypic Characterization of Mupirocin Resistant Staphylococcus aureus Clinical Isolates.

Competitors

1. Co-delivery of Azithromycin and nisin through liposomes for skin infection to reduce antimicrobial drug resistance.
2. Clinical manifestations of 42 Moroccan patients with chronic granulomatous disease.
3. The neglected model validation of antimicrobial resistance transmission models - a systematic review.
4. Proteome-wide reverse vaccinology to identify potential vaccine candidates against Staphylococcus aureus.
5. A Novel Interaction of Staphylococcal Protein A With Human Fibronectin and Its Implications in Host Cell Adhesion.
6. Enantioselective effects of chiral antibiotics on antibiotic resistance gene dissemination and risk in activated sludge.
7. Detecting and classifying metabolic activity of Staphylococcus aureus by D(2)O-probed single-cell Raman spectroscopy and machine learning.
8. Monoclonal antibody neutralizes Staphylococcus aureus serine protease-like protein B (SplB)-induced pathology.
9. Pathogen-specific host response in critically ill patients with blood stream infections: a nested case-control study.
10. Sustainable production and antibacterial efficacy of silver nanoparticles on cellulose nanofibers from mushroom waste.
11. The secreted proteases aur, scpA, sspA and sspB suppress the virulence of Staphylococcus aureus USA300 by shaping the extracellular proteome.
12. A case of infectious endocarditis and vertebral discitis caused by Streptococcus pneumoniae serotype 23A.
13. Systematic mapping review of preclinical and clinical studies of Staphylococcus aureus vaccines.
14. Lipid-coated nanoparticles enhance the delivery of bacterial virulence factors as a potent toxoid vaccine platform against bacterial infections.
15. Identification of Effective Inhibitors against Epsilon Toxin (ETX) of Clostridium perfringens: Virtual Screening and Molecular Dynamics Simulation.
16. The global economic burden of antibiotic-resistant infections and the potential impact of bacterial vaccines: a modelling study.
17. Cefadroxil-Mupirocin Integrated Electrospun Nanofiber Films for Burn Wound Therapy.
18. Povidone-iodine nasal spray (Nasodine(®)) for the common cold: a randomized, controlled, double-blind, Phase III clinical trial.