

Diagnostic Challenges in Infections related to Spinal Cord Injury

Abstract

Spinal cord injury (SCI) is an ancient disease, described by Hippocrates and traction techniques were recommended to straighten the spine. Motor vehicle accidents, falls, attempted suicide, gunshot wounds, military conflicts and support injuries are most common cause of SCIs. Most hospitalized SCI patients have nosocomial infection. SCI Patients may suffer from stress, malnutrition, renal failure; receive medications that impair immune responses. Frequent insertion of urologic, vascular, orthopedic, respiratory, gastrointestinal, and neurosurgical devices predispose to various prosthesis-related infections. Diagnostic challenges include inability to recognize the signs and symptoms of cord damage, and delay in diagnosing spinal epidural abscess. Treatment of infection e.g., two opposing factors resulting from changes in body composition in following SCI can alter the disposition of systematically administered antibiotics, such as vancomycin and aminoglycosides. Frequently diagnosed infections in SCI patients are urinary tract infection (UTI), pneumonia, pressure sores, osteomyelitis, infection due to multi-resistant organisms, and intra-abdominal infection. SCI patients are at high risk for Fournier gangrene that affects the perineal and genital regions and usually results from polymicrobial infection. Common pathogens are Staphylococcus aureus, including methicillin resistant Staphylococcus aureus (MRSA), Streptococci, vancomycin resistant Enterococcus (VRE) gram-negative bacilli including ESBL producing Klebsiella pneumoniae and Escherichia coli. Early diagnosis, gram negative coverage when initiating empirical antibiotic therapy has lower mortality and better outcomes.