

23. NOSOCOMIAL INFECTIONS IN SURGICAL PRACTICE



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Introduction. Nosocomial infections (NIs), also referred to as healthcare-associated infections (HAIs), are presently a major concern in surgical practice. The rates of nosocomial infections serve as a crucial indicator of the quality of healthcare provision in surgical units. Hence, examining the incidence of NIs and identifying the pathogens more frequently associated with them contributes to a deeper understanding of this issue.

Aim of study. To review articles that addressed nosocomial infections in surgical practice.

Methods and materials. A review of relevant articles was conducted on the incidence of nosocomial infections and pathogenic agents within surgical units.

Results. A recent study (Olof Jannach et al., 2015) revealed that among 358 patients, of which 42% with pancreatic resection, 25% cases with hepatic resection 29%—gastric resection (3%), and esophageal resection—33.5% patients developed one or more surgical site infections (SSIs). The most prevalent were intra-abdominal septic infections (16.5%) and postoperative surgical wound infections (12.3%). The main causative agents were *E. coli* (12.4%), coagulase-negative staphylococci (12.2%), and *Enterococcus faecium* (9.7%). According to other authors (Wondemagegn Mulu et al., 2012), the incidence of surgical site infections in aseptic and contaminated operations was 3.3% and 12.8%, respectively. A total of 42 bacterial pathogens were identified, with *Staphylococcus aureus* being the predominant strain in 26.2% cases, followed by *E. coli* and coagulase-negative *Staphylococcus* species, making up 21.4%. About 100% of Gram-positive bacterial isolates and 95.5% of Gram-negative isolates exhibited resistance to two or more antimicrobial drugs. In the study conducted by (N. Capsamun, 2013), focusing on the pediatric neurosurgery unit as a model, it was found that the incidence of nosocomial infections (NIs) is directly correlated with the length of surgical interventions. Specifically, patients with a surgery duration of 0-1 hour had a NI incidence of 2.12%, those who underwent surgery for 2-3 hours showed- 12.76%, and patients with a surgery duration of 3-4 hours or more had the highest incidence of 44.68%.

Conclusion. NIs pose a significant medical and social challenge due to their increased incidence, diverse etiological factors, and high resistance of causative agents to antimicrobial drugs.

Keywords. Nosocomial infections, surgery-associated nosocomial infections.