

The Common Bacterial Infections in Patients with Leg or Hand Infections

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Abstract: *The aim of this study was to determine the common bacteria involved in leg or hand infections. The documentary data of 91 patients with leg or hand inflammation were collected and statistically studied using descriptive statistics. Our findings indicated that the ratio of female to male was 0.47 (Figure I). Age mean was 41.75 and 79.34 years old in females and males, respectively (Figure II). Staphylococcus aureus and Enterobacter infection were higher than other types of bacterial infections.*

Keywords: *Bacterial infection, Leg, Hand, Infection.*

1. Introduction

Hand or leg infections, are inflammatory conditions caused by an invasive pathogen, usually bacteria. Inflammations may have symptoms such as swelling; rash and pain on pressure. Infections of the hand or leg are often initially caused by seemingly trivial injuries. Germs then penetrate via the lymph system, causing localised inflammation and ulceration. Infection can be either mono- or polymicrobial, with a wide variety of potential pathogens[1]. Multiresistant gram-negative bacteria are the prime mover of nosocomial infections[2]. Healthcare-associated infections (HCAI) represent up to 50 % of all infections among patients admitted from the community[3].

The factors to consider in antibiotic selection include the severity of the infection, the presence of peripheral vascular disease, and the possibility of drug-resistant organisms in the infection[4]. Infection of foot ulcers is a common, often severe and costly complication in diabetes[5]. The most common site of hand infections is subcutaneous tissue and the most common mechanism is trauma [6]. The aim of this study was to determine the common bacteria involved in leg or hand infections.

2. Materials and Methods

The documentary data of 91 patients with leg or hand inflammation were collected and statistically studied using descriptive statistics.

3. Results

Our findings indicated that the ratio of female to male was 0.47 (Figure I).

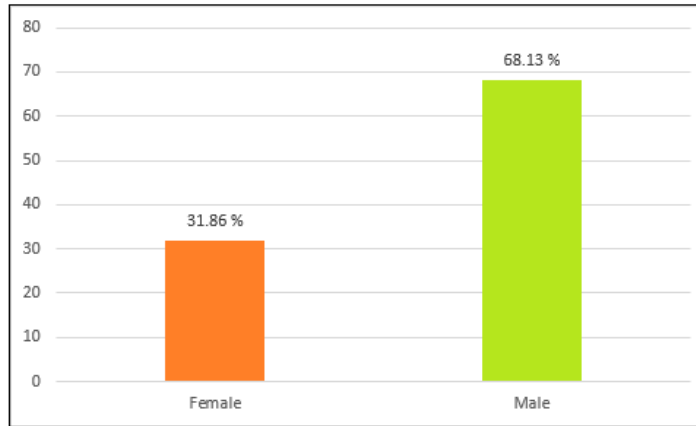


Fig. 1. Percentage of female and male patients with hand or leg infections.

Age mean was 41.75 and 79.34 years old in females and males, respectively (Figure II).

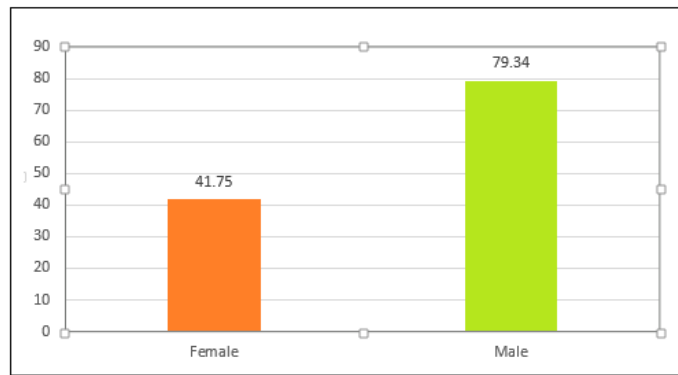


Fig. 2 Age mean in male and female patients.

Figure III shows the bacterial infections in patients with leg or hand infections; according to which, Staphylococcus aureus and Enterobacter infection were higher than other types of bacterial infections.

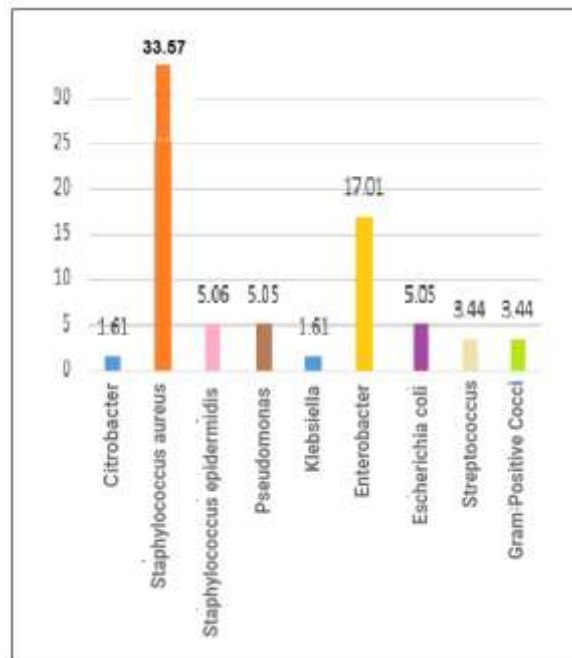


Fig. 3 . The bacterial infections in patients with leg or hand infections.

4. Discussion

Our findings indicated that *Staphylococcus aureus* and *Enterobacter* infections were higher than other types of bacterial infections in patients with leg or hand infections. In line with our finding it has been shown that *Staphylococcus aureus* is one of the most common nosocomial pathogens which can cause a broad spectrum of infections [7].

Staphylococcus aureus is associated with various infections ranging from skin and soft tissues such as surgical site infections and abscesses to lower respiratory tracts and bloodstream[13=8].

Chronic wounds are colonized by many different bacteria. The detection rate for *S. aureus* has regressed by 17.1% over the past decade [15=9].

Staphylococcus aureus and *Pseudomonas aeruginosa* are the most common bacteria isolated from chronic wounds. They can express virulence factors and surface proteins affecting wound healing. The co-infection of *S. aureus* and *P. aeruginosa* is more virulent than single infection [10].

Venous leg ulcers are the most common cause of chronic leg wounds, accounting for up to 70 % of all chronic leg ulcers and carrying with them a significant morbidity, especially for elderly patients, Chronic non-healing wounds of the lower extremities are susceptible to microbial invasion and can lead to serious complications, such as delayed healing, cellulitis, enlargement of wound size, debilitating pain, and deeper wound infections causing systemic illness. treatment measures are often required, in addition to systemic and topical antibiotics, such as the application of wound bandages, compression therapy, and wound debridement, which can hasten clearance of the infection and help to promote healing[11].

Infections of the hand are commonly encountered in general practice. Delay in diagnosis increases the risk of tissue loss and functional impairment. Staphylococcal infections are most common, but polymicrobial infections are often seen in immunocompromised patients. The outcome of a hand infection is related to how early it is diagnosed and initially treated. There is very little spare tissue in the hand and any destruction is devastating[12].

Enterobacter is also common bacterium observed in isolated from the finger tips of 13.3 percent of hospital personnel while they were working in the wards [13] which can be transmitted to patents as well.

5. Conclusion

Staphylococcus aureus and *Enterobacter* infections were higher than other types of bacterial infections in patients with leg or hand infections.

6. Acknowledgment

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