Epidemiology of Cellulitis at Tertiary Care University Hospital in Thailand

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Background: Cellulitis is one of the common infections in patients attending Siriraj Hospital. Broad-spectrum antibiotic has been provided to most of adult patients with cellulitis. A contributing factor to a high prevalence of prescribing broad-spectrum antibiotic is a lack of data on epidemiology and microbiology of cellulitis in Thai patients.

Objective: To determine patient characteristics, prevalence of causative bacteria and antibiotic susceptibility, antibiotic treatment, and clinical outcomes.

Methods: A retrospective study was conducted in 970 adult patients with cellulitis at Siriraj Hospital from June 2016 and December 2016. The relevant data were collected from patients’ medical records including demographics, underlying illnesses, types of infection, locations and symptoms of cellulitis, isolated bacteria and antibiotic susceptibility, antibiotic treatment regimens, and clinical outcomes.

Results: About 22% of the patients were hospitalized; whereas, 79% were ambulatory patients. The mean age was 60.6 ± 18.5 years and 55% were female. Three-fourth of them had at least 1 underlying illness. The isolated bacteria from the skin lesions and/or blood were recovered in 6% of patients. Gram-positive cocci (beta-hemolytic streptococci and methicillin-susceptible Staphylococcus aureus, MSSA) were recovered in 70% of those with positive cultures. All study patients received antibiotic treatment for cellulitis. Broad-spectrum antibiotics or antibiotic combination was prescribed in most patients (70%). The most common antibiotic regimen among the hospitalized patients was parenteral ceftriaxone-clindamycin combination, followed by oral amoxicillin-clavulanate. Whilst, oral amoxicillin-clavulanate was the commonest antibiotic regimen given to the ambulatory patients. Most patients with cellulitis had a favorable clinical outcome with subsequent complications of cellulitis of 0.4% and cellulitis-related mortality rate of 0.3%.

Conclusion: Cellulitis is a common infection at Siriraj Hospital. Most of adult patients received broad-spectrum antibiotic or antibiotic combination even though the most common isolated bacteria are beta-hemolytic streptococci and MSSA, which the simple narrow-spectrum antibiotics should be sufficient. Therefore, appropriate antibiotic treatment of cellulitis at Siriraj Hospital should be encouraged.

Keywords: Cellulitis, Bacteria, Antibiotics