

Cellulitis Disease Prevalence And Treatment

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Introduction

Cellulitis is a skin infection caused by the bacteria (Raff, 2016) *Staphylococcus aureus*, particularly when the physical skin barrier, the immune system, and the circulatory system are impaired. It manifests itself in the human skin as reddish, swollen, and tender parts. The disease is devastating and easily spread across the human body, hence making it painful. The largely affected part of the human body is the lower limbs, though other areas are no exception. It affects both the overlying and, minimally, the subcutaneous tissues of the skin. The bloodstream and the lymph nodes are not exempted, though this is witnessed only at the advanced level of the disease. If not well managed, the disease can become lethal.

Incidence and Prevalence

Studies reveal that the incidence rate of cellulitis is 24.1/per 1000 persons a year. Males of approximately all ages are usually vulnerable and show a high risk of contracting the disease. The incidence rate increases with an increase in age. It is also evident from the research studies that 78% of cellulitis cases were reported to receive treatment in outpatient setups. This is a considerably higher incident rate than population-based studies. Less than 20% of the patients studied developed the disease again and also required care in a period of 28 days and above. Studies also reveal that the lower extremity is the common site of the disorder in both genders. The study used in assessing the incidence and prevalence included an equal number of both genders in an age range of 0-64 years. The population had both sick and healthy individuals. Though the insurance claims have some limitations, they were used to evaluate the prevalence rates. The limitations associated with insurance claims include data entry errors as well as over or underreporting. (Quirke, 2017)

Pathophysiology

Cellulitis is associated with the infestation of the staphylococcus aureus bacteria. The most common pathogenic bacteria are Group A Streptococcus and Staphylococcus. This bacteria is harmless and is usually found on the skin's surface. It is only harmful when the skin surface is broken, and the bacteria gain access to the subcutaneous layer and the dermis. Conditions such as insect and animal bites, recent surgery, athlete's foot, burns, and dry skin usually predispose the skin to cellulitis. The bacteria then becomes an antigen to the body since it is foreign. The body reacts to the foreign body by causing swelling, pain, redness, and itching. These are the results of the body's inflammatory response to kill the foreign body. If the cellulitis spreads to the fascial lining, it causes necrotizing

fasciitis. This may result in an immediate medical emergency.

Physical Assessment and Examination

The physical assessment and examination of cellulitis are based mainly on the morphology of the lesion and the clinical setting. The diagnosis is more accurate and improved with the help of dermatologists. The symptoms of the disease are swelling and redness, as well as swollen glands in the affected area. The physician is expected to mark the edges of the redness with a pen. This is to evaluate if the redness surpasses the boundary marked over the days. The patient may be questioned about other dermatological disorders, in particular, those caused by fungus. He or she should let the physician know of other comorbid conditions. These may be risk factors for cellulitis, and the most renowned ones are human immunodeficiency virus (HIV) infection/acquired immunodeficiency syndrome (AIDS), diabetes, chronic liver disease, and diabetes. Edema and impaired lymphatic drainage are also some of the predisposing factors to leg cellulitis. The leg is usually the most vulnerable site of cellulitis infection.

Treatment Plan and Patient Education

The treatment plan includes antibiotic regimens. This has been found effective in more than 90% of the patients. Drainage may be employed in the cases of abscesses. Drainage is seen to suffice in the absence of antibiotics. This only applies if the abscess is relatively isolated. Methicillin-resistant *Staphylococcus aureus* and macrolide or erythromycin-resistant *Streptococcus pyogenes* usually complicate the treatment of the disease. Less severe cases of cellulitis are treated with semisynthetic penicillin, such as first and second-order cephalosporin, clindamycin, and macrolides. Beta-lactam antibiotic therapy is used in the treatment of cellulitis, and it does not need the draining of the abscess. Parenteral therapy is used in cases of severe cellulitis. Though the disease is not contagious, the patients are expected to maintain high levels of hygiene. They are expected to wash their hands regularly with soap and water and also not to share towels. They are also expected to keep the wound clean and dry. (Quirke, 2015)

Follow-up and Evaluation of the Treatment Plan

Early treatment positive response is a clear indicator of drug efficacy. However, the disease is indolent since the edema and inflammation have a prolonged time to clear. The ultimate determination of absolute cure or failure to cure relies on the global assessment of the course of the illness. Adjunctive measures such as compression and elevation that may result in improvement within two days may not predict the ultimate cure. Therefore, early follow-up may result in false positive results.

References

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