Impetigo Essay, Research Paper

Impetigo is a bacterial infection caused by Streptococcus and/or Staphylococcus organisms. Both staphylococcus and streptococcus are part of the normal flora found on human skin, but given the opportunity they can become pathogenic. Streptococcus is a spherical bacterium that is arranged into chains. It is Gram positive and catalase negative. Group A Streptococcus (GAS), such as Streptococcus pyogenes, are responsible for most cases of streptococcal infections. The letter A is part of a classification system that separates streptococcal organisms according to the composition of the cell wall. Other illnesses associated with GAS are “strep throat”, necrotizing fasciitis, and streptococcal toxic shock syndrome (4,9).

Staphylococcus is arranged into clusters of spherical bacteria. They are Gram positive and catalase positive. Staphylococcus bacteria are classified into two major groups, aureus and non-aureus. Staphylococcus aureus is another organism that causes impetigo. It is distinguished from other species by a positive result in a coagulase test. Staphylococcus aureus is also associated with soft tissue infection as well as toxic shock syndrome and has been found to be the causative agent in pneumonia, boils, arthritis, meningitis and osteomyelitis. The pathogenic abilities of Staphylococcus are most commonly associated with the toxins it produces in the stationary phase of the bacterial growth curve (2).

Impetigo involves an infection of the superficial, top layers, of the skin. It is characterized by the development of red blisters that start to rupture and ooze fluid. A yellowish or honey colored crust then develops. It usually effects the face, hands, arms, and legs but may spread to other areas by scratching. Occasionally a person will become ill experiencing symptoms like headache, muscle aches, fever, nausea and fatigue. In rare cases the infection may spread and cause post-streptococcal glomerulonephritis (kidney failure). A diagnosis will primarily be based on the appearance of the lesions on the skin but a culture can be taken from active lesions to test for the presence of streptococcus or staphylococcus (6,7).

The occurrence of impetigo is worldwide. Children are most at risk for developing impetigo, particularly if they are exposed to poor hygienic conditions. Most outbreaks occur in areas like schools and day care centers. They may acquire impetigo through direct contact with an infected person or the bacteria will enter through a break in the skin caused by insect bites, animal bites or other trauma to the skin. Children who often have cuts and scrapes on their body are more vulnerable to impetigo. Household items like toys or cups probably do not play a major role in the transmission of the disease. Sometimes it develops out of the blue with no apparent source of infection. The incubation period from date of exposure to the first signs is commonly around four to ten days (8).

If a person is though to have impetigo they should be taken to a doctor to confirm a diagnosis. In mild cases it can be treated by applying topical antibiotics like Polysporin to the lesion (3). This should be done by first by soaking a washcloth in a mixture of vinegar and water, then pressing the cloth for several minutes against the lesion to remove the crust. This should be done several times a day until a crust no longer is forming. Now the antibiotic ointment can be applied.

For more severe cases the doctor can prescribe an oral antibiotic. Depending on the type of bacteria that caused the infection will determine the antibiotic used. Most

S. aureus are penicillin resistant, but vancomycin and nafcillin are known to be affective against most strains (2). In the cases of staphylococcal impetigo flucloxacillin is used (1). It is extremely important to always finish the prescription otherwise your body may develop immunity to the drug.

Impetigo is highly contagious so people must be careful when treating someone with the disease. Good personal hygiene is important for both the infected person and also anyone who is treating them. An infected person will remain contagious while the lesions remain active. The following precautions should be taken to help prevent the spread of infection:

n Patients should avoid close contact with other people.

n Bathing with an antibacterial soap such as Sapoderm or Gamopthem is recommended.

n Wash all clothing, towels, sheets, or any other item that comes in contact with draining fluid in very hot water. Do not share any towels or clothing with anyone else.

n Some recommend keeping lesions covered loosely with bandages.

n The patient should be kept home until all the lesions are no longer active and have formed a crust. (6, 10)

According to the Center for Disease Control several million persons get impetigo annually (4). More people will die of diseases associated with other more invasive strains of bacterial staphylococcus and streptococcus. Impetigo has a very high cure rate with treatment. It is unlikely that anyone will die of impetigo. Even in cases where a person develops complications like kidney failure the long term prognosis is excellent. As for current research I have not come across any sites that told of any work being done. This is probably due to the high cure rate and the fact that impetigo is usually not a life threatening disease.

Bibliography

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