Impetigo

Impetigo is a highly contagious, superficial and bacterial skin infection transmissible through direct contact with an infected person's skin or clothing. It can lead to a bullous or non-bullous clinical presentation after about 10 days of incubation, after transmission. Though self-eliminating, antibiotics significantly shorten the length of illness and help prevent complications such as post-streptococcal glomerulonephritis, rheumatic fever or staphylococcal scalded skin syndrome. Prevention through an adequate hygiene practice deters the spread of further disease, and an infected person is safe to return to school or work after about 24 hours into treatment or once the lesions are crusted over and dried.

PLAY PICMONIC

Pathophysiology

Transmission

Transmission

Most commonly spread through direct contact with another infected person and their lesions, the bacteria is spread by transmission from their skin or clothing. Children aged 2 to 5 years are commonly the most affected population. Places of increased congregation (e.g. daycare centers) increase the susceptibility of transmission from infected individuals.

Incubation

Incubator

Once transmitted, colonization produces characteristic lesions in about 10 days but not all colonized infections will develop impetigo. Incidence of impetigo is most common during the warmer, summer months.

Signs & Symptoms

Non-Bullous

Nun-Bull

Commonly caused by S. aureus, S. pyogenes or a combination of both, this presentation ("impetigo contagiosa") begins as papules and can evolve into pustules with the classic formation of thick, adherent, "honey-colored," and crusty lesions. The face and extremities are the most commonly affected areas of infection, though the entire body is susceptible to the infection. This form of impetigo is most common. A physical examination alone cannot differentiate between S. pyogenes or S. aureus infections.

Bullous

Bull

S. aureus causes bullous impetigo, producing fluid-filled blisters (bullae). Bullae will affect surrounding tissues and other areas of the body, commonly on the extremities or torso, and may eventually burst resulting in the characteristic yellow exudate susceptible to crusting over the excoriated lesion. The bullae can be painful, itchy and irritating. Systemic signs of infection (e.g. fever, lymphadenopathy) are more common in bullous impetigo.

Diagnosis

Clinical Presentation

Clinical-clipboard Present

Though physical exam alone cannot differentiate between streptococcal and staphylococcal, non-bullous impetigo, a subjective history including time of lesion onset, exposure to other infected individuals, evolution of the lesion over time, associated signs and symptoms and gram stain testing or culturing of exudate from the lesion provides an ample amount of clinical data for a plan of care. Often, diagnostic testing is not required in uncomplicated presentations of impetigo.

Treatment

Antibiotics

ABX-guy

Uncomplicated Impetigo can resolve without medical intervention within 2-3 weeks, but treatment shortens the disease presence significantly. Topical or oral antibiotics targeting group A streptococcus and S. aureus are indicated for the treatment of impetigo. Clinical presentation and severity of disease (e.g. a few lesions versus disseminated and/or severe presentation) will dictate whether a topical vs. oral constitution is needed. The most common topical antibiotics include mupirocin or retapamulin, while oral antibiotics include cephalosporins or dicloxacillin.

Prevention

Hygiene

High-jeans

During initial infection and up to 48 hours into treatment duration, a person is considered highly infectious and should be observant not to touch open lesions, improve hand hygiene, and practice social distancing. Hygiene practice should include washing the affected areas with soap and water, and covering them with a loose bandage or clothing. Clothing and sheets in contact with the infected person should be washed at a high temperature during and after 48 hours of treatment.

Return to Work or School

Back to School and Work

Once the lesions are crusted over, dried up or after a 24 hour waiting period from treatment onset, a person is safe to return to work or school with a lower transmission threshold. It is equally important to ensure any porous or non-porous personal items brought to or kept at work or school are cleaned with an appropriate antibacterial agent to further decrease risk of transmission.

Complications

Post-streptococcal Glomerulonephritis

Post Stripper Glow-mare

A delayed and non-suppurative (non-exudate producing) complication often occurs within 1-2 weeks following an impetigo infection. It is a rare and emergent complication affecting vasculature of the kidneys, leading to hematuria or reddish-brown colored urine, abdominal discomfort or swelling, hypertension and oliguria.

Rheumatic Fever

Roman Fever-beaver

A complication associated with and following a group A infection, including impetigo, rheumatic fever presents as a disseminated, pink rash across the body with systemic signs and symptoms including nausea and vomiting, lymphadenopathy and pain. It is not typically emergent, but requires medical intervention, such as bed rest until fever and sedimentation rate decreases. Plus a return to baseline of resting pulse rate and ECGs.

Staphylococcal Scalded Skin Syndrome

Staff-oreo Scalded Skin

Toxin-producing S. aureus can lead to excessive blistering of the skin if systemic or multiple surfaces are affected. Signs and symptoms include fever, large surface areas of dermal involvement with a scalded or peeling presentation, and severe pain. This condition is emergent and will require intensive management including intravenous antibiotics.