

Bacterial Skin Infections



Fadi Ibrahim, MD^{a,*}, Tariq Khan, MD^a, George G.A. Pujalte, MD^b

KEYWORDS

- Impetigo • Erysipelas • Cellulitis • Abscess
- Methicillin-resistant *Staphylococcus aureus*
- Methicillin-sensitive *Staphylococcus aureus*

KEY POINTS

- Impetigo involves the epidermis and is seen in children 2 to 5 years of age.
- Erysipelas involves the upper dermis and is most commonly caused by β -hemolytic streptococci.
- Cellulitis involves the deeper dermis and subcutaneous fat and is most commonly implicated by *Staphylococcus aureus* and GAS. It can be divided into nonpurulent and purulent cellulitis and treatment is based on extent of infection and risk factors.
- Abscesses involve the dermis and deeper skin tissues as a result of pus formation. Incision and drainage is the primary treatment.

INTRODUCTION

The integumentary system is an integral part of the immune system, serving as the first line of defense against bacterial infections.¹ The most common factor leading to the development of skin and soft tissue infection (SSTI) involves a breach of this barrier. A multitude of conditions can arise from this process differing mainly by the depth and extent of skin involvement. **Fig. 1** provides a graphical illustration of various SSTIs and their localization to various layers within the skin.

^a Family Medicine, Mount Sinai Hospital, 1500 s California avenue, Chicago, IL 60608, USA;

^b Family Medicine and Sports Medicine, Department of Family Medicine, Mayo Clinic, 4500 San Pablo Road, Jacksonville, FL 32224, USA

* Corresponding author.

E-mail address: fadi.ibrahim07@gmail.com

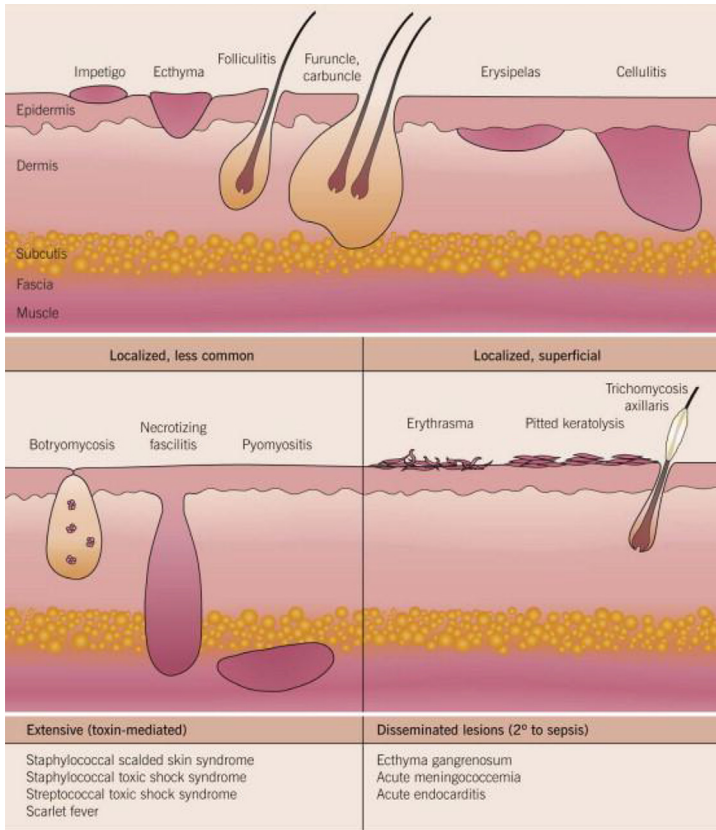


Fig. 1. Categorization of bacterial infections by depth and extent of skin involvement. More common, localized infections are depicted first; these infections are often secondary to *Staphylococcus aureus* or group A streptococci. (From Bologna JL, Schaffer JV, Duncan KO, et al. Bacterial diseases. In: Dermatology essentials. Philadelphia: Elsevier; 2014. p. 574–90; with permission.)

IMPETIGO

Impetigo is a superficial soft tissue skin infection involving the epidermis. Nonbullous and bullous impetigo constitute the different types of impetigo. Pathogenesis includes primary (direct bacterial invasion of intact skin) or secondary “impetiginization” (bacterial infection of compromised skin flora). Common causes of alterations in the normal skin flora include abrasions, trauma, insect bites, eczema, and scabies. The most common organisms isolated include group A hemolytic streptococci and *Staphylococcus aureus*. Impetigo has increased occurrence in close contact, warm, and humid environments. Predisposing factors include lack of hygiene, poverty, and cramped areas.^{2–5}

Evaluation and Work-Up

Nonbullous and bullous impetigo are differentiated easily based on several characteristic features. **Fig. 2** and **Table 1** summarize the key differences of these conditions.

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