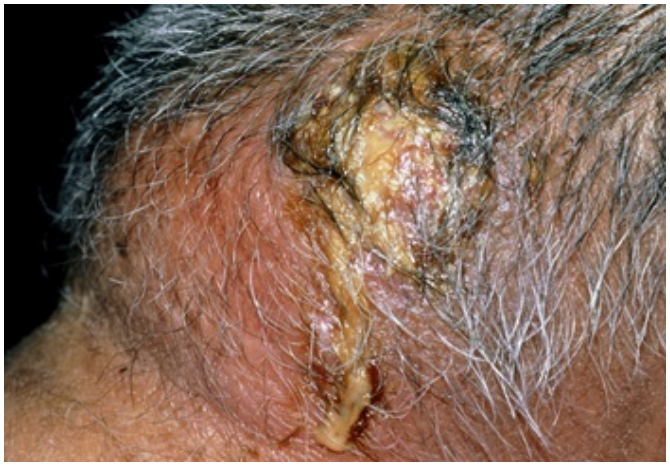
Furuncles and Carbuncles

By **A. Damian Dhar, MD, JD**

Furuncles (boils) are skin abscesses caused by staphylococcal infection, which involve a hair follicle and surrounding tissue. Carbuncles are clusters of furuncles connected subcutaneously, causing deeper suppuration and scarring. They are smaller and more superficial than subcutaneous abscesses (see Cutaneous Abscess). Diagnosis is by appearance. Treatment is warm compresses and often oral antistaphylococcal antibiotics.

Both furuncles and carbuncles may affect healthy young people but are more common among the obese, the immunocompromised (including those with neutrophil defects), the elderly, and possibly those with diabetes. Clustered cases may occur among those living in crowded quarters with relatively poor hygiene or among contacts of patients infected with virulent strains. Predisposing factors include bacterial colonization of skin or nares, hot and humid climates, and occlusion or abnormal follicular anatomy (eg, comedones in acne). Methicillin-resistant *Staphylococcus aureus* (MRSA) is a common cause.



Carbuncle

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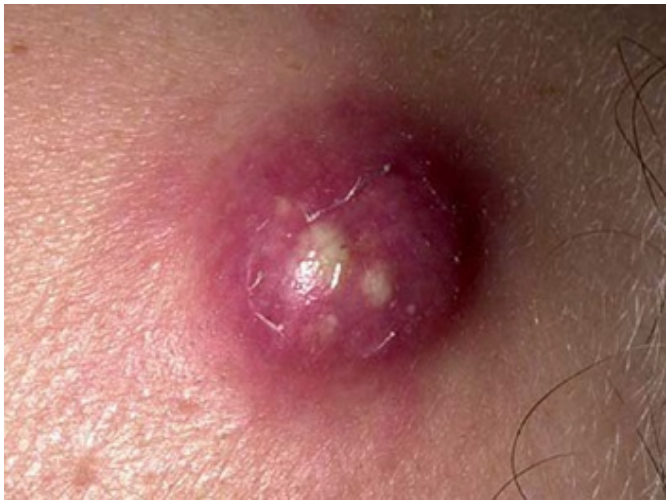
Furuncles are common on the neck, breasts, face, and buttocks. They are uncomfortable and may be painful when closely attached to underlying structures (eg, on the nose, ear, or fingers). Appearance is a nodule or pustule that discharges necrotic tissue and sanguineous pus. Carbuncles may be accompanied by fever and prostration.



Furuncle

Image provided by Thomas Habif, MD.

Diagnosis

Diagnosis is by examination. Material for culture should be obtained.

Treatment

- Drainage
- Often antibiotics effective against MRSA

Abscesses are incised and drained. Intermittent hot compresses are used to facilitate drainage. Antibiotics, when used, should be effective against MRSA, pending culture and sensitivity test results. In afebrile patients, treatment of a single lesion < 5 mm requires no antibiotics. If a single lesion is ≥ 5 mm, an oral antibiotic is given for 5 to 10 days; choices include trimethoprim/sulfamethoxazole (TMP/SMX) 160/800 mg to 320/1600 mg bid, clindamycin 300 to 600 mg q 6 to 8 h, and doxycycline or minocycline 100 mg q 12 h. Patients with fever, multiple abscesses, or carbuncles are given 10 days of TMP/SMX 160/800 mg to 320/1600 mg bid plus rifampin 300 mg bid. Systemic antibiotics are also needed for

- Lesions < 5 mm that do not resolve with drainage
- Evidence of expanding cellulitis
- Immunocompromised patients
- Patients at risk of endocarditis

Furuncles frequently recur and can be prevented by applying liquid soap containing either chlorhexidine gluconate with isopropyl alcohol or 2 to 3% chloroxylenol and by giving

maintenance antibiotics over 1 to 2 mo. Patients with recurrent furunculosis should be treated for predisposing factors such as obesity, diabetes, occupational or industrial exposure to inciting factors, and nasal carriage of *S. aureus* or MRSA colonization.

Key Points

- Suspect a furuncle if a nodule or pustule involves a hair follicle and discharges necrotic tissue and sanguineous pus, particularly if on the neck, breasts, face, or buttocks.
- Culture furuncles and carbuncles.
- Drain lesions.
- Prescribe antibiotics effective against MRSA for patients who are immunocompromised or at risk for endocarditis or if lesions are > 5 mm or expanding.

Last full review/revision May 2013 by A. Damian Dhar, MD, JD

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