

## **PSEUDOMONAS FOLLICULITIS**

**Background:** *Pseudomonas* folliculitis is a relatively recently recognized, community-acquired skin infection, which results from the bacterial colonization of hair follicles after exposure to contained, contaminated water (eg, whirlpools, swimming pools, water slides, bathtubs). First reported in 1975 in association with whirlpool contamination, the skin infection is caused by strains of *Pseudomonas aeruginosa* that are acquired secondary to skin contamination.

The rash has also been described following the use of diving suits in both seawater and fresh water immersion, and, less commonly, following the use of contaminated bathing objects (eg, synthetic and natural sponges). *Pseudomonas* folliculitis has occurred after skin depilation and with no obvious recreational exposure. Perioral *Pseudomonas* folliculitis may be associated with long-term use of antibiotics for acne vulgaris.

*Pseudomonas* folliculitis also occurs as an acneiform eruption in patients on long-term tetracycline therapy for acne.

**Pathophysiology:** The ubiquitous bacterial organism, *P aeruginosa*, found in soil and fresh water, gains entry through hair follicles or via breaks in the skin. Bacterial serotype O:11 is the most commonly reported isolate for water-associated *Pseudomonas* folliculitis, but other serotypes that have been reported include O:1, O:3, O:4, O:6, O:7, O:9, O:10, and O:16. Serotype O:11 is possibly more invasive or better adapted to survive in halogenated water.

Minor trauma from wax depilation or vigorous rubbing with sponges may facilitate the entry of organisms into the skin. Hot water, high pH (>7.8), and low chlorine level (<0.5 mg/L) all predispose to infection.

### **Frequency:**

- **In the US:** The actual incidence is difficult to assess because of the transient nature of the bather population.

**Mortality/Morbidity:** Most cases resolve without any adverse reactions.

**Race:** No racial differences in incidence are known.

**Sex:** No sexual differences in incidence are known.

**History:** *Pseudomonas* folliculitis is characterized by a rash, described as a dermatitis or a folliculitis.

- The rash onset is usually 48 hours (range, 8 h to 5 d) after exposure to contaminated water, but it can occur as long as 14 days after exposure.
- Lesions begin as pruritic, erythematous macules that progress to papules and pustules. Lesions are most prevalent in intertriginous areas or under bathing suits.