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### **Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health**

#### **Title**

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#### **Permalink**

<https://escholarship.org/uc/item/9kx3j95w>

#### **Journal**

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 9(3)

#### **ISSN**

1936-900X

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#### **Publication Date**

2008

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## Ultrasound-Guided Needle Drainage versus Incision and Drainage (I&D) of Skin Abscesses

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**Objective:** To determine if ultrasound-guided needle aspiration of small, uncomplicated skin abscesses is as effective as standard treatment using incision and drainage.

**Methods:** Patients with small (<4cm) uncomplicated skin abscesses identified by ultrasound in the emergency department and urgent care at two sites were randomized to ultrasound-guided needle aspiration or traditional incision and drainage (I&D) of abscess. Patients were excluded from the study if they had the following characteristics: known immunodeficiency, signs of systemic infection, abscesses involving the hand, intra-abdominal space, internal hardware, large (>4cm), deep or tracking abscesses, need for admission or IV antibiotics, inability to take clindamycin, recurrent abscesses in same location, current use of antibiotics. Both groups were placed on a seven-day course of oral clindamycin. Patients were followed-up with at two days, one week, and again at one month. Treatment failure was defined as requiring an additional drainage procedure.

**Results:** Of the 16 patients enrolled, seven were randomized to needle aspiration and nine to I&D. There were two treatment failures in the needle aspiration group and one in the I&D group. When asked if the procedure resulted in a scar which bothered them, one in the I&D but none in the needle aspiration group responded positively. When asked at one-month post procedure if they had another abscess in the future if they would want it treated in the same way, there was a significant difference with 8/9 of the I&D group stating that they would not want it treated in the same way, compared to only 1/7 of the needle aspiration group ( $p<0.009$ ). Eight (50%) cultures grew MRSA.

**Conclusion:** Although limited by a small number of subjects, these preliminary data suggest that ultrasound-guided needle aspiration of small, uncomplicated skin abscesses may be an efficacious alternative to standard I&D. Patient satisfaction with the procedure was significantly higher in the needle aspiration group.