There’s Pus About, So Are Antibiotics In or Out? Adding antibiotics for abscess management

Clinical Question: Does the addition of antibiotics to incision and drainage improve cure rates in single, uncomplicated skin abscesses?

Bottom Line: Adding antibiotics that cover MRSA during incision and drainage for a small abscess increases the cure rate from 85% to 92%, meaning an additional one in 15 patients will be cured compared to placebo at one month. Approximately 25% of patients will experience adverse effects, with gastrointestinal adverse effects occurring for an additional one in 11 on clindamycin and one in 50 on trimethoprim-sulfamethoxazole, compared to placebo.

Evidence:
- Two recent systematic reviews, including four and 14 randomized controlled trials (RCTs), 2,406 and 4,198 patients, respectively.\(^1,2\) Results statistically significant unless mentioned.
  - Both relied heavily on two new high-quality RCTs (2,051 patients) of clindamycin or trimethoprim-sulfamethoxazole in adults and children with single abscesses <5 cm that had undergone incision and drainage.\(^3,4\) Prevalence of MRSA \(\sim 45\%\).
  - Treatment failure at one month example:\(^2\) 8% versus 15% placebo, Number Needed to Treat (NNT)=15.
    - If limited to trials without MRSA coverage, no longer statistically significant.\(^2\)
  - Recurrence or new lesion within one month example:\(^2\) 8% versus 15% (placebo), NNT=15.
    - At 1-3 months:\(^2\) 18% versus 25%, NNT=14.
  - Subgroup analysis demonstrated benefit with antibiotics that cover MRSA, but not those without (example: cephalixin).\(^2\)
  - Total adverse effects:\(^1\) 25% versus 22% (placebo), Number Needed to Harm (NNH)=38.
    - Gastrointestinal adverse effects:\(^2\)
      - Clindamycin: \(\sim 10\%\) more than placebo, NNH=11.
      - Trimethoprim-sulfamethoxazole: 2% more than placebo, NNH=47.
Limitations: One systematic review only included studies of antibiotics that have activity against MRSA;1 only two studies included patients with diabetes (2.4% and 11% of study populations, respectively).2

Context:
- Older systematic reviews5-6 and guidelines7 found no improvement when antibiotics added to incision and drainage but did not include the newest RCTs above.
- Antibiotics are recommended with systemic illness, extensive tissue damage or at risk of poor healing or complications (examples: immunocompromised or prosthetic device).8
- Perirectal, perineal, and paronychial abscesses, or sites requiring specialized management, excluded from above RCTs.3,4
- Risk factors for community-acquired MRSA include recent antibiotic use, contact sports, group housing, lower socioeconomic status, and IV drug use.9

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References:

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