Adding antibiotics for abscess management

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Clinical question

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

Bottom line

Adding antibiotics that treat methicillin-resistant *Staphylococcus aureus* (MRSA) infection to incision and drainage for a small abscess increases the cure rate from 85% to 92%, meaning an additional 1 in 15 patients are cured compared with placebo at 1 month. About 25% of patients will experience adverse effects, with gastrointestinal adverse effects occurring for an additional 1 in 11 taking clindamycin and 1 in 47 taking trimethoprim-sulfamethoxazole, compared with placebo.

Evidence

Evidence consists of 2 recent systematic reviews of 4 and 14 RCTs, and 2406 and 4198 patients, respectively.[1,2] Results are statistically significant unless otherwise mentioned.

- Both relied heavily on 2 new high-quality RCTs (2051 patients) of clindamycin or trimethoprim-sulfamethoxazole in adults and children with single abscesses of less than 5 cm that had undergone incision and drainage.[3,4] Prevalence of MRSA was about 45%.
- Treatment failure at 1 month was 8% versus 15% with placebo (number needed to treat of 15).[2]
  - -If limited to trials without MRSA coverage (eg, cephalexin), results are no longer statistically significant.[2]
  - -At 1 to 3 months, treatment failure was 18% versus 25% (number needed to treat of 14).[2]
- The total rate of adverse effects was 25% versus 22% with placebo (number needed to harm [NNH] of 38).[1]
  - -Gastrointestinal adverse effects occurred about 10% more often with clindamycin than placebo (NNH = 11) and were 2% more frequent with trimethoprim-sulfamethoxazole than placebo (NNH = 47).[2]
- Limitations were that 1 systematic review only included studies of antibiotics that had activity against MRSA (clindamycin or trimethoprim-sulfamethoxazole),[1] and only 2 studies included patients with diabetes (2.4% and 11% of study populations, respectively).[2]

Context

- Older systematic reviews[5,6] and guidelines[7] found no improvement when antibiotics were added to incision and drainage but did not include the newest RCTs.
- Antibiotics are recommended with systemic illness, extensive tissue damage, or when the patient is at risk of poor healing or complications (eg, patient is immunocompromised or uses a prosthetic device).[8]
- Perirectal, perineal, and paronychial abscesses, or sites requiring specialized management, are excluded from the RCTs.[3,4]
- Risk factors for community-acquired MRSA infection include recent antibiotic use, contact sports, group housing, lower socioeconomic status, and intravenous drug use.[9]

Implementation

Incision and drainage is the mainstay of treatment for simple skin abscesses, with consideration of antibiotics, particularly in those at risk of MRSA infection. Practical issues around optimal incision and drainage technique, including pain management, have not been well studied.[10] One small RCT reported no difference in pain between a transdermal lidocaine-tetracaine patch and injectable lidocaine.[11] Similarly, there was no difference in pain (or treatment outcomes) with wound irrigation compared with no irrigation.[12] Wound packing in lesions less than 5 cm showed no benefit in treatment outcomes and was associated with increased pain immediately and 48 hours later.[13]

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Competing interests
None declared

The opinions expressed in Tools for Practice articles are those of the authors and do not necessarily mirror the perspective and policy of the Alberta College of Family Physicians.

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