Leg ulcer infection: antimicrobial prescribing

Leg ulcer infection





Background

- There are many causes of leg ulcer; any underlying conditions, such as venous insufficiency and oedema, should be managed to promote healing
- Few leg ulcers are clinically infected
- Most leg ulcers are colonised by bacteria
- Antibiotics don't promote healing when a leg ulcer is not clinically infected

Symptoms and signs of an infected leg ulcer include:

- redness or swelling spreading beyond the ulcer
- localised warmth
- increased pain
- fever



Prescribing considerations

When choosing an antibiotic, take account of:

- the severity of symptoms or signs
- the risk of complications
- previous antibiotic use

Give oral antibiotics first line if possible

Review intravenous antibiotics by 48 hours and consider switching to oral antibiotics if possible



Microbiological sampling

Do not take a sample for microbiological testing at initial presentation, even if the ulcer might be infected

February 2020



 When choosing an antibiotic, take account of prescribing considerations Give advice to seek medical help if symptoms or signs of infection:

- worsen rapidly or significantly at any time, or
- do not start to improve within 2 to 3 days of starting treatment

If the infection is worsening or not improving as expected, consider microbiological testing

When microbiological results are available:

- review the choice of antibiotic, and
- change the antibiotic according to the results if infection is not improving, using a narrow spectrum antibiotic, if possible

Reassess if symptoms worsen rapidly or significantly at any time, do not start to improve within 2 to 3 days, or the person becomes systemically unwell or has severe pain out of proportion to the infection.

- Take account of previous antibiotic use, which may have led to resistant bacteria.
- Be aware that it will take some time for the infection to resolve (with full resolution not expected until after the antibiotic course is completed).



Refer to hospital if there are symptoms or signs of a more serious illness or condition such as sepsis, necrotising fasciitis or osteomyelitis

Consider referring or seeking specialist advice if the person:

- has a higher risk of complications because of comorbidities such as diabetes or immunosuppression
- has lymphangitis
- has spreading infection not responding to oral antibiotics
- cannot take oral antibiotics (to explore possible options for intravenous or intramuscular antibiotics at home or in the community)

When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Leg ulcer infection: antimicrobial prescribing Choice of antibiotic: adults aged 18 years and over



| Antibiotic ¹ | Dosage and course length |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| First-choice oral antibiotic | |
| Flucloxacillin | 500 mg to 1 g ^{2,3} four times a day for 7 days |
| Alternative first-choice oral antibiotics for penicillin aller | rgy or if flucloxacillin unsuitable |
| Doxycycline | 200 mg on first day, then 100 mg once a day (can be increased to 200 mg daily) for 7 days in total |
| Clarithromycin | 500 mg twice a day for 7 days |
| Erythromycin (in pregnancy) ⁴ | 500 mg four times a day for 7 days |
| Second-choice oral antibiotics (guided by microbiologica | ll results when available) |
| Co-amoxiclav | 500/125 mg three times a day for 7 days |
| Co-trimoxazole ^{3,5,6} (in penicillin allergy) | 960 mg twice a day for 7 days |
| First-choice antibiotics if severely unwell (guided by mic | robiological results if available) ⁷ |
| Flucloxacillin with or without | 1 g to 2 g four times a day IV |
| Gentamicin ^{6.8} and/or | Initially 5 mg/kg to 7 mg/kg once daily IV, subsequent doses if required adjusted according to serum gentamicin concentration |
| | 400 mg three times a day orally or 500 mg three times a day IV |
| Co-amoxiclav with or without | 1.2 g three times a day IV |
| Gentamicin ^{6,8} | Initially 5 mg/kg to 7 mg/kg once daily IV, subsequent doses if required adjusted according to serum gentamicin concentration |
| Co-trimoxazole ^{3,5,6} (in penicillin allergy) with or without | 960 mg twice a day IV (increased to 1.44 g twice a day in severe infection) |
| Gentamicin ^{6,8} and/or | Initially 5 mg/kg to 7 mg/kg once daily IV, subsequent doses if required adjusted according to serum gentamicin concentration |
| Metronidazole | 400 mg three times a day orally or 500 mg three times a day IV |
| Second-choice antibiotics if severely unwell (guided by r | nicrobiological results when available or following specialist advice) ⁷ |
| Piperacillin with tazobactam | 4.5 g three times a day IV (increased to 4.5 g four times a day if severe infection) |
| Ceftriaxone with or without | 2 g once a day IV |
| Metronidazole | 400 mg three times a day orally or 500 mg three times a day IV |
| Antibiotics to be added if MRSA infection is suspected of | or confirmed (combination therapy with antibiotics listed above) ⁷ |
| Vancomycin ^{6,8} | 15 mg/kg to 20 mg/kg two or three times a day IV (maximum 2 g per dose), adjusted according to serum vancomycin concentration |
| Teicoplanin ^{6,8} | Initially 6 mg/kg every 12 hours for three doses, then 6 mg/kg once a day IV |
| Linezolid (if vancomycin or teicoplanin cannot be used; specialist advice only) ⁶ | 600 mg twice a day orally or IV |
| 1See BNE for appropriate use and dosing in henatic impa | irment, renal impairment, pregnancy and breastfeeding, and administering intravenous (or, where appropriate, intramuscular) antibiotics |

See BNF for appropriate use and dosing in hepatic impairment, renal impairment, pregnancy and breastfeeding, and administering intravenous (or, where appropriate, intramuscular) antibiotics. ²The upper dose of 1 g four times a day would be off-label.

See the Medicines and Healthcare products Regulatory Agency (MHRA) Public Assessment Report on the safety of macrolide antibiotics in pregnancy.

⁵Not licensed for leg ulcer infection so use would be off-label. ⁶See BNF for information on monitoring of patient parameters.

³The prescriber should follow relevant professional guidance, taking full responsibility for the decision, and obtaining and documenting informed consent. See the GMC's Good practice in prescribing and managing medicines and devices for more information.

Erythromycin is preferred if a macrolide is needed in pregnancy, for example, if there is true penicillin allergy and the benefits of antibiotic treatment outweigh the harms.

Review intravenous antibiotics by 48 hours and consider switching to oral antibiotics if possible. See BNF for information on therapeutic drug monitoring.