

TREATING INFECTIONS IN PORPHYRIC PATIENTS

ANTIBIOTIC CLASSES

Penicillins

Penicillins are safe and should be used wherever possible to treat susceptible infections. Difficulties arise where patients are allergic to penicillin: see below. Amoxicillin-clavulinate (co-amoxiclav, Augmentin) and piperacillin-tazobactam are safe.

Penicillin allergy

See **below**.

Cephalosporins

Cephalosporins appear to be safe.

Carbapenems and monobactams

Imipenem (including imipenem-cilistatin), meropenem, ertapenem and aztreonam appear to be safe.

Aminoglycosides

Aminoglycosides are safe. Penicillins with aminoglycosides are the safest option for life-threatening conditions.

Macrolides

Erythromycin is dangerous and should not be used. There is little information on clindamycin and it is best avoided. Both clarithromycin and azithromycin appear safer. We have used clarithromycin frequently for ulcer eradication therapy in porphyrics without ill-effect. Azithromycin is little metabolised and is possibly safe.

Tetracyclines

Tetracycline is regarded as dangerous. Doxycycline is likely to be safer, as it undergoes less hepatic metabolism, but its use should be restricted to clear indications without an alternative.

Quinolones

The parent quinolone, nalidixic acid, is clearly unsafe and has been linked to acute attacks. Preliminary evidence suggests that certain other quinolones are probably safe: particularly moxifloxacin and levofloxacin which are little metabolised. Ofloxacin and norfloxacin may be slightly safer than ciprofloxacin. We do not recommend the use of other quinolones until more information is available.

Sulphonamides

All, including sulfamethoxazole-trimethoprim (Bactrim) should be avoided.

Agents for anaerobic infections and antiprotozoals

Both metronidazole and tinidazole are regarded as unsafe: tinidazole probably more so. Anaerobic infections are more safely treated with co-amoxiclav (Augmentin) or vancomycin. For protozoal infections, treatment is problematical. For vaginal trichomoniasis, local therapy with Betadine douches may be sufficient. For more serious infections, the use of metronidazole may have to be used, despite the risk of porphyrinogenicity.

PATIENTS ALLERGIC TO PENICILLIN

INTRODUCTION

The combination of acute porphyria and penicillin allergy makes choice of antibiotic for both mild and severe infections extremely difficult. For this reason, the following three questions must **ALWAYS** be answered:

1. Is an antibiotic really needed? For skin infections, would a topical antiseptic suffice?
2. Does the patient indeed have porphyria?
3. Is the patient indeed allergic to penicillin?

Very often, when one examines the grounds on which 2 and 3 were based, it becomes apparent that these diagnoses are doubtful, in which case one is justified in taking more risks.

IF THE PATIENT IS INDEED PORPHYRIC AND HAS DOCUMENTED PENICILLIN ALLERGY

1. Obviously, if the infection is one that does not require a penicillin-type compound, the problem falls away. Thus injectible aminoglycosides or quinolones may be used for urinary tract infections.
2. If gram-positive cover is necessary, we suggest the use of a cephalosporin. These are probably safe in porphyria. There is a quoted 10% risk of allergic cross-reactivity with penicillins but this risk may have to be taken.
3. For staphylococcal infections, fucidin or vancomycin may be used.
4. For severe staphylococcal or enterococcal sepsis, vancomycin is the drug of choice as it is safe in porphyria.
5. A quinolone, clarithromycin or azithromycin may be used in sensitive organisms.
6. Imipenem, meropenem or ertapenem may be used for life-threatening infections.