

Objective

The purpose of this guidance leaflet is to avoid inappropriate prescription of antibiotics, a source of selection pressure, which leads to the emergence of bacterial resistance and to therapeutic impasses.

Each antibiotic prescription must be cautious, balancing:

- the short-term benefits for the patient, the priority if he/she is indeed suffering from a bacterial infection;
- the adverse effects for the patient on his/her commensal flora and for bacterial ecology through the selection of multiresistant bacteria.

General principles

- Handwashing with soap or using a hand sanitiser helps to reduce the transmission of microorganisms by hand.
- Not every fever is infectious in origin.
- Most infections are viral.
- There is no need to prescribe an antibiotic in case of isolated fever.
- The antibiotic has no immediate effect on pain and fever symptoms that require symptomatic treatment.
- An antibiotic can have individual adverse effects of organ toxicity or allergies.
- True allergies to antibiotics are rare and poorly documented.
- An antibiotic always has an impact on the ecology of the commensal flora (microbial flora of the gastrointestinal tract, respiratory tract, vaginal mucosa and skin).
- The patient should be informed about the natural progress of his/her illness whether or not an antibiotic is prescribed.

Prescription recommendations

- **The prescription is based on:**
 - an accurate diagnosis, using rapid diagnostic tests (RDTs) if possible; otherwise, based on a probabilistic treatment with reference to the most likely bacterial aetiology;
 - the patient's characteristics: age (children and elderly patients), weight, liver and kidney function (creatinine clearance in elderly patients), fragility (diabetes, immunodeficiency), pregnancy and breastfeeding;
 - the choice of an antibiotic with the narrowest possible spectrum;
 - the shortest possible duration of treatment to avoid selection of resistant strains.
- **It is recommended to:**
 - give preference to oral administration;
 - comply with the recommended dosages and treatment durations;
 - evaluate the efficacy of the antibiotic treatment on the symptoms between 48 and 72 hours after starting the treatment;
 - inform the patient about the importance of complying with the dosage and treatment duration.

Avoid unnecessary antibiotic prescription

- Use of rapid diagnostic tests (RDTs) helps avoid unnecessary antibiotic treatment when it is negative: RDT in sore throat, urine test strip in cystitis, etc.
- The presence of bacteria in a sample is not synonymous with infection.
- The purulent or mucopurulent appearance of nasal discharge is not synonymous with bacterial infection.
- In the absence of signs of severity or of a delicate situation, the antibiotic treatment is not urgent.
- If in doubt about the use of an antibiotic prescription, it is preferable to postpone it and reassess in 48 hours.
- Some bacterial infections do not fall under antibiotics, but a surgical procedure, such as drainage of an abscess.
- There is no need to prescribe an antibiotic in the following infections, most of them viral:
 - acute nasopharyngitis, viral sore throat;
 - influenza episode;
 - acute otitis media (AOM) in a child over 2 years of age;
 - congestive acute otitis media and secretory otitis media;
 - otitis externa (other than malignant otitis externa in diabetic patients);
 - otorrhoea;
 - acute bronchitis in a healthy adult, including in smokers;
 - acute exacerbation of simple chronic bronchitis (without obstruction);
 - acute exacerbation of a mild or moderate chronic obstructive pulmonary disease, in the absence of purulent secretions;
 - bronchiolitis and tracheobronchitis of favourable progress within 72 hours, in the absence of an associated AOM;
 - maxillary sinusitis in a child or adult when progress under symptomatic treatment is favourable.
- There is no need to prescribe an antibiotic in asymptomatic bacteriuria (urinary colonisation) outside of pregnancy, including catheterisation.

Preserving the efficacy of some antibiotics

- Three antibiotics (or families of antibiotics), that are especially productive of bacterial resistance, are involved:
 - the combination of amoxicillin and clavulanic acid;
 - 3rd-generation cephalosporins, oral or injectable, especially ceftriaxone;
 - fluoroquinolones.
- There is generally no need to prescribe amoxicillin/clavulanic acid as first-line treatment. Amoxicillin alone at an appropriate dose is usually sufficient.
- There is no reason to make it commonplace to prescribe cephalosporins; this promotes the emergence of extended-spectrum beta-lactamases-producing enterobacteria. Their prescription should be moderated in accordance with their indications.
- There is no need to prescribe a fluoroquinolone in situations where other antibiotics can be used. It is recommended that a fluoroquinolone prescription not be repeated within 6 months of a previous use of this class for a urinary tract infection, or 3 months for a respiratory infection.



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