EVALUATION OF ANTIBIOTIC PRESCRIBING PRACTICES IN PUBLIC AND PRIVATE HOSPITALS

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1. BACKGROUND AND OBJECTIVE:

The development of bacterial resistance these last ten years is a public health major problem in the world and needs to implement actions.

In France, the national drug safety agency has defined a list of "critical antibiotics".

- Antibiotics particularly generator of bacterial resistance (amoxicillin-clavulanate, cephalosporine, fluoroquinolone)
- Antibiotics called "last resort" (antibiotics against Gram-positive cocci, carbapenem...)

At our regional level, an evaluation of prescription of these critical antibiotics was proposed to all medical centers. The aim was to evaluate the quality of prescription of these critical antibiotics.

2. DESIGN:

The regional working group (pharmacists, infectious diseases physicians and biologists) had developed a collection grid including data on patients, antibiotics and 4 criterias: adequate molecule, compliance with medical prescriptions, duration of antibiotic therapy and reassessment at 72 hours.

This is a prospective study proposed to all health institutions (public and private), which had to be completed on a given day in all care units and had to be conducted by a team of multiprofessional evaluators.

3. RESULTS:

- **Quantitative part:**
  - Response rate: 84%
  - 7026 patients hospitalized
  - 1391 patients (20%) receiving antibiotics (89% were hospitalized in medical, surgery or obstetrics units)
  - 865 prescriptions of "critical antibiotics particularly generator of bacterial resistance"
    - Fluoroquinolones: 14%
    - Other third-generation cephalosporine: 3%
    - Ceftriaxone: 30%
    - Amoxicillin-clavulanate: 33%
  - 42 prescriptions of antibiotics called "last resort" (74% carbapenem)

- **Indications**
  - 38% respiratory infections
  - 16% urinary tract infections
  - 16% intraabdominal infections

- **Expertise of infections diseases physician:**
  - Yes: 87%
  - No: 13%

- **Types of treatment**
  - Curative: 91%
  - Prophylactic: 9%

- **Qualitative part:**
  - 92% of the prescriptions had a proper indication
  - 66% of the prescriptions complied to the guidelines
  - The duration of antibiotic therapy was adequate in 82% of the cases
  - 44% of the prescriptions were reassessed and adapted by the physician

- **Average age:** 69.9 years (+/- 20 yr)
- **Sex ratio:** 1.1

4. CONCLUSION:

This study is original because of its regional dimension and antibiotic analysis. The number of analysed prescriptions was significant with an overall proper prescription in adequation with the guidelines. However, actions must be implemented on duration and reassessment and adjustment of treatment. These results were presented to the participating hospitals. These 3 points will be reevaluated during a new regional audit.