

## EDITORIAL

**ADVERSE DRUG REACTIONS:  
A MULTIFORM PATHOLOGY RESPONSABILITY OF MANY**

Possibly still are health professionals that when hearing about adverse drug reactions only think in cutaneous rash, blood dyscrasias, anaphylactic shock and congenital malformations. The mentioned adverse effects are real, but relatively infrequent. Furthermore, are unexpected, not related with the pharmacological mechanism of action, unpredictable and dose independent. These adverse drug reactions are like a therapeutic lottery, depending on «luck».

However, when the pharmacological pathology resulting in medical care is analyzed, the perspective is very different. For instance, the predominant adverse drug reactions in emergency wards are those related with the pharmacological mechanism of action: severe hemorrhage due to anticoagulant and antiplatelet drugs; renal insufficiency and hyperkalemia by inhibitors of the renin-angiotensin axis; hyponatremia, falls and fractures by SSRI antidepressants, digitalis intoxication... These are relatively common pathologies, expectable, dose-related, and favored by patient comorbidity, preventable in many cases if the dose would have carefully individualized, if the patient complied better with the instructions (in case the patient understood the information) or if a more carefully clinical surveillance were performed.

A review of the literature reminds us other pathologies attended in other assistance levels, for example:

- Breast cancer attributable to the hormone replacement therapy (HRT): three to four additional cases per 1.000 women treated during 5 years, this is translated in thousands of additional cases of breast cancer according to the sales data of these products between the years 1993 to 2003. Moreover, it was irresponsibly promoted for the prevention of cardiovascular events, dementia, and as the source of eternal youth without proven efficacy at that time (no evidence of efficacy exist today).
- Non-steroidal anti-inflammatory drugs (NSAIDs) - especially celecoxib and diclofenac - increase the risk of acute myocardial infarct in 50-70%, because their high consumption by elderly people, these drugs are associated with a considerable number of deaths by

myocardial infarct.

- Proton pump inhibitors, SSRI antidepressants, benzodiazepines, and antipsychotics are the cause thousands of cases of femoral neck fracture in elderly people.
- High dose of erythropoietin (to achieve a level of 12g/dL of hemoglobin or more) increase the mortality in 25%, therefore, one additional death is induced by the treatment of four patients.

The previous adverse reactions are only some examples. The list is very long, covering all medical and surgical specialties, and practically any pathology: For instance, obesity and parkinsonism by antipsychotics and prokinetics, increase in the risk of suicide by the use of SSRI antidepressants in children's and antiepileptic agents in adults (frequently in no approved indications), stroke and death secondary to antipsychotics, respiratory depression by fentanyl and opiate derivatives, traffic accidents by CNS depressants, cancer by immunosuppressive agents, resistant and opportunistic nosocomial infections secondary to broad spectrum antibiotics, fractures by thiazolidinediones, cancer by ezetimibe... In some highly specialized areas we should recognize that we know almost nothing; for instance let's reflect on the safety of the new and old antineoplastic chemotherapeutic agents in real practice.

Studies on the usage of medicaments unequivocally indicate that many drugs are unnecessary consumed by people, as well as the opposite, many people needing the medication do not consume it by lack of access or other reasons. Both situations originate an unnecessary and preventable pathology. An important part of the iatrogenic pathology that affects the population might be the consequence of the non-rational prescription of unneeded drugs or the prescription of medicaments that are not the first choice. A particular concern is the pressure for the prescription of new drugs, patent protected, more expensive, not even directly compared in Randomized Clinical Trials with already available agents. Remember Vioxx®: New drugs are associated with major uncertainty regarding their safety.

The influence of commercial promotion on drug

prescription is undeniable: It is necessary to remember that commercial innovation is not equivalent to therapeutic innovation, meaning that increased efficacy equals additional safety, more comfort and improved life quality for our patients. The only truth is that new therapeutic agents are more expensive compared to well-known alternatives with more experience of usage.

Rational, reflexive and prudent prescription of drugs is not only a physician responsibility. Health care systems and health insurers have the responsibility to provide continuous formation to their workers with independence from the pharmaceutical industry, along with the

facilitation of medical practice by the means of selecting the best alternatives for each health related problem, allowing more focus to manage the knowledge of problems that are really essential.

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