2. PHARMACODYNAMIC INTERACTIONS OF MEDICINAL HERBS AND DRUGS

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Introduction: Phytotherapy is increasingly evident in the complex treatment of diseases due to the elucidation of the active compounds from plants with beneficial pharmacological effects. The creation of a scientific base on rational use of medicinal herbs opens new prospects for the pharmacotherapy improving. Therefore, the issue of interactions between drugs and plant drugs in terms of synergism and antagonism becomes current for arguing security and safety of their association. Data on such interactions are minor and dispersed, as they are more difficult due to the varied and rich content of active ingredients from plants. Interactions between herbs and drugs can be detected in pharmacotherapeutic and toxicological aspect.

Purpose and objectives: is the bibliographic study of the pharmacodynamic interactions between medical herbs and drugs, their reflection in the training process.

The results and discussion: Pharmacodynamic studies of herbal drugs and of their active principles have demonstrated the presence of a variety of pharmacological effects (anti-inflammatory, immunostimulant, antioxidant, antimicrobial, sedative, anxiolytic, antispasmodic, etc.). It was determined that the association with drugs can have unpredictable consequences, both therapeutic and toxicologic. Thus, pharmacodynamic interactions can be achieved by: drug interaction with receptors, allosteric modulation of receptor sites; influencing mediator systems (release, uptake, synthesis, metabolism), modifying the activity of enzymes, changing the activity of organs and systems, the development of liver, kidney disturbances etc. Thus, St. John's wort drugs manifest antidepressant action by inhibiting the norepinephrine, serotonin, dopamine reuptake. However, they also induce adverse effects in combination with antidepressants as selective inhibitor of the reuptake of these neurotransmitters. Valerian benzodiazepines shows the same effect by modulating the GABA - ergic system. Echinacea, ginseng, by their phenolic triterpenes, flavonoids, saponins, polysaccharides determine the immunomodulatory effect which can produce contradictory effects in patients under immunosuppressive organ transplantation. Garlic drugs develop multiple metabolic effects, including the inhibition of lipid-lowering hydroxy-methyl-glutaryl - CoA - reductase for stimulation of the efficiency of statins. The associated use of these compounds may increase the incidence of rhabdomyolysis due to increased concentration of statins as a result of pharmacokinetic interactions. It is necessary to mention that the result of pharmacokinetic interactions, particularly produced by the induction and/or inhibition of cytochrome P-450 and transport systems will be characterized by the amplification and/or decrease of the pharmacological effects and adverse reactions.

Conclusion. The associated use of drugs with medicinal herbs for the treatment of diseases requires strict monitoring of the efficiency and safety through the possible pharmacokinetic and pharmacodynamic interactions. The information about the consequences of these interactions must be brought to the attention of physicians, pharmacists and patients in order to ensure a rational pharmacotherapy.

Keywords: herbs, phytotherapy, interaction, pharmacodynamy

3. PHARMACOKINETIC INTERACTIONS OF MEDICINAL HERBS AND DRUGS

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Introduction: The utilization on a large scale from 30 to 85% of basic and active compounds from plants according to WHO data is an actual problem of modern medicine due to the possible interactions with drugs. International bodies (WHO, FDA, EMEA, EFSA) are much concerned about the spreading of medical herbs marketing which do not contain a proper reference material and/or not being certified by the