

7. MANAGEMENT ON DETECTION AND EVALUATION OF MEDICATIONS ADVERSE REACTIONS

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Introduction: The adverse reaction represents an unintentional and harmful response to a medication that normally occurs during administration of different doses to a patient for prophylaxis, diagnose, or disease treatment, as well as in case of a physiological function modification, being at the same time a damaging and unintentional response determined by a medication. Pharmacovigilance is a scientific discipline which studies the safety of medications through detecting, evaluating, monitoring and preventing the adverse reactions, as well as other problems related to drugs. It has as a goal to monitor the frequency of such known reactions, so as it can evaluate and provide the risk-benefit report for the most used medical remedies.

Purpose and objectives: The study of incidence and importance of detection, evaluation, treatment and prevention of adverse reactions. Establishment of adverse reaction role in regard with the clinical evolution of various diseases. Appreciation of adverse reactions incidence. Elucidation and presentation of the side effects impact on the body. Establishment of various methods/mechanisms for fighting against and preventing adverse reaction.

Materials and methods: For running the research and achieving the abovementioned objectives, the communication files of the adverse reactions received by the Section of Pharmacovigilance and Rational Use of Drugs within the Agency of Drugs and Medical Devices were deeply researched and evaluated. Such materials refer to the period between 2012 and 2013, comprising 180 and 115 reporting files. All such files were received, analyzed, registered in the adverse reactions data base of medications and other suspected pharmaceutical products. Adversary reactions evaluated cases were communicated to the Uppsala Monitoring Center, with the purpose of evaluating adverse reactions, as well as determining their impact on the life quality of patients.

Results: In the studied reporting files the predominance of adverse reactions in the third and fifth life decades can be noticed; a greater incidence of the oral administration of drugs and the predominance of solid pharmaceutical formulas can be distinguished (tablets, powder, capsules). The most frequent reports were the adverse reactions related to the following pharmaceutical groups of medications: anti-tuberculosis, antibiotics, uterotonics, antihypertensives. Among the countries which caused adverse effects prevail India, followed by the USA, Germany, Turkey, Moldova, Romania, Norway and Argentina. The clinical picture of the allergic reactions is prevailed by the cutaneous syndrome (pruritus, hyperemia, eruptions, rash wounds), dyspeptic syndrome (nausea, vomiting, diarrhea, constipations), astheno-vegetative syndrome (headache, fatigue).

Conclusion: Adverse reactions produce negative effects on the further patients' life quality, with a medical-economic impact. The incidence of adverse reactions varies and is specified for each medication group. Undesirable medications effects can cause allergy in the human body, can decrease the effect of other medical remedies that are being administrated at the same time, can generate into a depressive state or fear to further administration of drugs. The methods to be used in fighting against adversary reactions and their prevention consist in identifying them as soon as possible, detailed analysis of the causes that could favor their occurrence and, of course reporting them to the Agency of Drug and Medical Devices.

Keywords: Adverse reaction, medication

8. UTILIZATION OF ANTIOXIDANT MEDICINAL PLANTS

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Introduction: Nature provides us with the most effective remedies that stimulate the functioning of the human body. By knowing and using herbs in the formulation and dose

antioxidant fixed for each individual person, we can be more resistant to stress, focus and greater power of concentration and mental activity. The aim was to evaluate research conducted medicinal plants with antioxidant action, given the increasing incidence and prevalence of many diseases in Moldova pathologies such as cardiovascular, endocrine and cancer are influenced by the presence of oxidative processes.

Materials and methods: Medicinal plants with antioxidant activity were selected based on scientific publications, species were identified by Flora Identification Manual for the Republic of Moldova and reference pharmacopoeias. Were characterized antioxidant active principles responsible for the action and assessed phytopreparations by State Drug Nomenclature Moldova: vegetable drugs, medicinal species, phyto antioxidant action. Was evaluated, also, legal status on their release from pharmacies (OTC / Rx) and their presence in pharmacies in Moldova.

Results: Antioxidants herbs that was evaluated contains: vitamins, flavonoids and tannins in amounts large or small, exhibiting antioxidant by trapping free radicals. Antioxidants act by giving electronic and completing the last layer of free radicals, which are not deficient in electrons, loses its harmful action. Also, flavonoids potentiate the action of other antioxidants, including vitamins E, A and C. We note that among medicinal plants with antioxidant action, rank: *Rosa canina* L.- 14 medicinal products, *Taraxacum officinale* Web. - 10, *Phaseolus vulgaris* L. - 6, *Cynara scolimus* L. - 5, *Vaccinium myrthillus* L. - 4, *Hippophae rhamnoides* L. - 4, *Cichorium intybus* L. - 4, *Centaurea cyanus* L. - 3, *Potentilla erecta* L. - 2 and *Aronia melanocarpa* - 1.

Conclusion: The revaluation result phytopreparations after Nomenclature, we find that in 6350 registered products, 53 exhibit antioxidant, of which: 2 vegetable products, 17 medicinal species, 10 phytopreparations monocomponent and 24 phytopreparations multicomponent. After the release status of the pharmacy, we find that 95% are part of the OTC, 5% is released under doctor's prescription, and their presence in pharmacies is 53%.

Keywords: Antioxidants, phytopreparations, medicinal plants

9. SPECTROPHOTOMETRIC ASSAY OF PROTEIN CARBONYLS IN HUMAN PLASMA

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Introduction: The oxidative stress represents the aggression produced at the molecular level by the imbalance between pro-oxidant and antioxidant agents, with severe functional consequences in all organs and tissues. An overproduction of reactive oxygen species (ROS) results in oxidative damages especially in proteins (the main target of ROS), as well as in lipids, or DNA. A great effort has been undertaken to assess the biomarkers of protein oxidative injury, most cited being the quantitative assay of protein carbonyls, nitrotyrosine levels, GSH level and/or GSH/GSSH ratio. The present study aims at finding a robust spectrophotometric method to quantify the protein carbonyls in human plasma. The study model was represented by bovine serum albumin (BSA), which was subjected to different oxidative damage conditions, in order to be carbonylated.

Materials and methods: Three hydroxyl radical generating systems were investigated: potassium ascorbate / ferric chloride, ascorbic acid / ferrous sulfate and hydrogen peroxide / copper sulfate. All systems were applied to BSA solutions for 10 to 24 h at 37 Celsius degrees. After degradation, the protein carbonyl levels were evaluated by means of a modified Levine's method, using the derivatisation with 2,4-dinitrophenylhydrazine. The carbonyl content was expressed in mg carbonyls/mg proteins. An ABL&E-JASCO model V 530 spectrophotometer was used throughout the experiments.

Results: The best yield for carbonyl generation was induced by potassium ascorbate / ferric chloride system, after 24 h degradation time. The carbonyl proteins pellets are separated only at centrifuge speeds higher than 5000 rpm, with an optimum at 7000 rpm, at 4 Celsius degrees. The protein carbonyls are stable in the BSA solution only for a short period (hours). Levine's method was modified by replacing the solubilisation in guanidine hydrochloride with 1 M NaOH solution.