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INTERNATIONAL SOCIETY OF PHARMACOVIGILANCE

# ABSTRACTS

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reports from consumers before, even without having an official implemented system for that purpose. Countries with older systems, such as Netherlands, Denmark and Sweden, have about 21–35 % of reports were collected directly from patients; On the other hand in some countries the value is residual.
**Conclusion:** Patient' reports became accepted mandatorily by all countries through European Union, although, their contribution to Pharmacovigilance is quite variable. The older systems and those who promote the system have better results in reporting levels. The contribution of patients for pharmacovigilance is often considered important and useful in terms of information given and quality of reports, contributing to a better knowledge and improvement of medicines.

## P 099

## Mitoxantrone Treatment-Induced Cardiotoxicity in Patients with Multiple Sclerosis

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**Introduction:** Multiple Sclerosis (MS) is a chronic, autoimmune, neurodegenerative and demyelinating disease of the central nervous system, which affects the quality of life of patients and their families. This disease is characterized by relapses or exacerbations, which are clinical consequences of increased inflammatory activity in the CNS. Few treatment options for patients with secondary progressive multiple sclerosis (SPMS) is available. Mitoxantrone (type II topoisomerase inhibitor) could be used to treat MS, most notably the subset known as SPMS. Mitoxantrone will not cure MS, but could be effective in slowing the progression of SPMS and extending the time between relapses in relapsing-remitting MS and progressive relapsing MS.
**Aim:** Systematic assessment of the scientific evidence on the efficacy and safety of Mitoxantrone use in patients suffering from MS.
**Methods:** A systematic critical review without meta-analysis was conducted through information collection in electronic databases such as PubMed, B-On, ScienceDirect, Elsevier and SciELO. Language restriction to Portuguese, Spanish and English was applied. PICO parameters were applied and the following keywords were used: Cardiotoxicity, Mitoxantrone, Multiple sclerosis and Safety. Were selected items with less than 10 years from 2005–2014, full access and interest. The final selection of relevant items was done by full reading and giving priority to original articles.
**Results:** Conventional therapy includes immunomodulatory and immunosuppressive drugs, which act at different stages of the disease and reduce the frequency of relapses or exacerbations, control the symptoms exacerbation and delay long-term disability. The available therapy isn't completely safe, due to its adverse effects, however, there are patients who have an effective response. Many drugs have been investigated to provide a better quality of life to the patient. Mitoxantrone is an anthracenedione synthetic agent originally developed for cancer treatment. Preclinical studies have also shown that mitoxantrone has immunosuppressive properties, leading to clinical investigation in patients with MS. Currently this drug is approved in the USA and Europe for the treatment of the most active MS forms. The use of mitoxantrone, in patients with MS, is associated with significant risks, such as cardiotoxicity.
**Conclusion:** The use of mitoxantrone should be carefully considered, and doctors should prescribe the smallest possible cumulative dose to reach clinical effects and desired monitor patients during and after the treatment. Effectively each administration of mitoxantrone should be accompanied by monitoring cardiac function to improve the safety of treatment for patients and enable early detection of any side effects, especially in high risk groups.

## P 100

## Compromise of the Effectivity of Oral Contraceptives in Concomitant Use with Antibiotics

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**Introduction** Oral hormonal contraception is the most widely used method worldwide for women in preventing unwanted pregnancy by removing the follicular stimulating hormone (FSH) in the ovarian cycle. The concomitant use to other drugs could induce hormone blockade. Among the described medicines, the possible interactions between oral antibiotics and oral contraceptives (OC) remain a subject that generates controversy among the scientific community. Co-administration with potent enzyme inducers of microsomal hepatic metabolism, as rifampicin, can increase the hepatic catabolism of estrogen or progestogen, reducing the half-life and respective effectivity.
**Aim:** To assess the interaction between OC and antibiotics and characterize the mechanisms involved in the effect of the antibiotic therapy with OC's.
**Methods:** A systematic review was conducted from the PubMed, Medscape, SciELO. Language restrictions to Portuguese, Spanish and English were applied. PICO parameters were applied and the following keywords were used: (patients OR individuals OR person OR women) AND (antibiotics) AND (oral contraceptives) AND (drug interaction) AND (efficacy) AND (pregnancy). Articles were selected based on information related to antibiotic therapy and OC's efficacy relationship. A total of 30 articles were selected for analysis.
**Results:** In 1974, Reimers reported that five of 88 women who used CO and rifampicin were pregnant. Swenson (1980) found an increased excretion and reduced half-life plasma of ethinylestradiol in 5 women taking OC, and 4 were treated with tetracycline and ampicillin Moreover, Back et al. (1990) observed 13 oral contraceptive users women who were also taking ampicillin and not found hormonal changes in plasma concentrations compared with previously controlled cycles. The explanation for these conflicting results may be related to individual variations in the metabolism of OC. The women may have low bioavailability of ethinylestradiol due to the extensive metabolism of steroids in the intestinal wall and liver, large intrahepatic circulation of ethinylestradiol and intestinal flora particularly susceptible to antibiotics.
**Conclusion:** Rifampicin is the only antibiotic scientifically proven interaction, to accelerate metabolism of OC, through the induction of CYP450, leading to decreased effectivity. Most of the analyzed antibiotics decreased the level or effect of OC indirectly by altering intestinal flora, remaining a low risk of contraceptive failure. However, the main adverse reactions reported with the use of antibiotics include: nausea, vomiting and diarrhoea, which could also have interference on the efficacy of OC's. Information to women is essential to manage this interaction and to ensure the oral contraceptive effectivity.