THROMBOPOIETIN AND THROMBOPOIETIN RECEPTOR AGONISTS: NEW APPROACHES AND POSSIBILITIES

Nesterenko M. A.
Scientific supervisor: ass. Tsyvunin V. V.
National University of Pharmacy, Kharkiv, Ukraine
mnesterenko777@gmail.com

Introduction. Human thrombopoietin is a major hematopoietic growth factor that regulates megakaryocytopoiesis and platelet production. The discovery and production of thrombopoetin in recombinant form has made it possible to significantly advance the treatment of chemotherapy-induced thrombocytopenia. The first and the only drug based on recombinant human thrombopoietin in Ukraine is Emaplag (YURIA-PHARM Ltd). However, the potential of thrombopoietin and thrombopoietin receptor agonists (TPO-RAs) is not fully disclosed.

Aim. To analyze the experimental and clinical data dedicated to the additional effects and indications of drugs based on thrombopoietin and TPO-RAs for different conditions associated with low level of platelets.

Materials and methods. Google Scholar, EMBASE, MEDLINE and Cochrane Library resources have been applied for search and analysis up to February 2019 using terms thrombopoietin and thrombopoietin receptor agonists.

Results and discussion. It has been detected that thrombopoietin and TPO-RAs (eltrombopag, romiplostim and lusutrombopag) can be administered not only in case of chemotherapy-induced thrombocytopenia, but also in different conditions which are accompanied with low level of platelets – severe aplastic anemia, persistent or chronic immune thrombocytopenia, chronic immune thrombocytopenic purpura, chronic idiopathic thrombocytopenic purpura, chronic liver disease (recurrent hepatocellular carcinoma) associated thrombocytopenia, perioperative thrombocytopenia, immune thrombocytopenia in pregnancy, prolonged isolated thrombocytopenia after allogeneic stem cell transplantation, drug-induced thrombocytopenia caused by heparin and low-molecular-weight heparins, quinidine, sulfonamides, antibiotics, fluoroquinolones, amphotericin B, methyldopa, acetaminophen, acetylsalicylic acid, diclofenac etc.

Conclusions. The literature data analysis shows the new directions of thrombopoietin and thrombopoietin receptor agonists (eltrombopag, romiplostim and lusutrombopag) use including different types of thrombocytopenia (idiopathic, immune, perioperative, after allogeneic stem cell transplantation, caused by liver diseases, drugs etc.).

THE POSSIBILITIES OF MEDICAL CANNABIS TO REDUCE SIDE EFFECTS OF DRUGS (LITERATURE REVIEW)

Reus A.V.
Scientific supervisor: ass. Tsyvunin V. V.
National University of Pharmacy, Kharkiv, Ukraine
reus1kill@mail.ru

Introduction. Cannabis and cannabinoid drugs are widely used to treat disease or alleviate symptoms in many countries, except Ukraine. Randomized clinical trials show the effectiveness of cannabinoids for the following indications: appetite stimulation in HIV/AIDS, chronic pain, spasticity due to multiple sclerosis or paraplegia, depression, anxiety disorder, sleep disorder, psychosis, glaucoma, or Tourette syndrome. In addition, cannabis medicines can be used to correct side effects of drugs, which is not widespread known.

Aim. Verification the possibilities of medical cannabis use for reduction or prevention of side effects of pharmacotherapy.

Materials and methods. Cochrane Library, Pubmed (MEDLINE), ScienceDirect (Scopus) and Google Scholar resources were searched up to March 2019. The search terms were «cannabis», «side effects», «correction».