

2. Streszczenie w języku angielskim

For many years, anticoagulants have been the basic group of pharmaceuticals used in medicine. There are many classes of drugs that act at different sites in the clotting cascade. Examples of new oral anticoagulants are dabigatran, a direct thrombin inhibitor, and apixaban and rivaroxaban, direct factor Xa inhibitors. These drugs are excreted by the kidneys and with the faeces through hepatic metabolism. Their plasma concentration depends on interactions with other drugs and with food. There are few absolute contraindications to anticoagulant treatment with DOAC, such as hemorrhagic diathesis or clinically significant bleeding or any CNS bleeding. The currently predominant acronym for direct non-vitamin K antagonists is the acronym DOAC. The indications for the treatment of DOAC coincide with the majority of indications for the use of other anticoagulants. Contraindications are mainly the presence of artificial heart valves, severe or moderate mitral stenosis, GFR <15, pregnancy and breastfeeding. Pharmacodynamics and pharmacokinetics are different in obese subjects compared to those of normal or extremely low body weight. The patient's weight affects the absorption, distribution, metabolism and excretion processes. Monitored therapy is about to measure the concentration of the drug in the patient's blood and select the dose based on the measurement results. DOACs do not require routine monitoring. However, there are clinical situations, such as patients with high or extremely low body weight, where monitored therapy may affect the efficacy and safety of the therapy. Therefore, based on the selection criteria of patients in the main multicentre clinical trials, the aim of the study was to determine the concentration of DOAC in the plasma of patients with body weight <50 kg and > 100 kg for dabigatran and <50 kg and > 120 kg for rivaroxaban and apixaban. DOAC levels were determined in 38 Caucasian patients 15 minutes before taking the next dose of DOAC and 4 hours later. The samples were tested in special analyzers using drug-specific tests. Based on our own experience, the correct concentration of each DOAC was considered to be 40-200ng / ml. Concentrations over 400ng / ml were considered unsafe. Most of the patients fell within the therapeutic range. However, a few high weight patients were found to have levels that were too low. And one patient with extremely low body weight had these levels too high. Therefore, the work showed that monitored therapy during the treatment of DOAC in patients with extremely high or low body weight has an impact on the safety and effectiveness of the therapy.