

QT-prolongation, a serious adverse effect of several drugs

Přemysl Mladěnka

Charles University in Prague, Faculty of Pharmacy in Hradec Králové, Department of Pharmacology and Toxicology, Czech Republic

QT-prolongation could be a serious adverse effect of many drugs with potentially fatal outcome. Many drugs have been withdrawn from the market (e.g. antihistamines terfenadine and astemizole, prokinetic cisapride) due to this reason. The molecular base for QT-prolongation is the attenuation of I_{Kr} -current caused in majority cases by direct blockade of so called hERG-channel in the heart.

This lecture is intended for broader audience and hence, firstly physiological aspects of action potential conduction in the heart will be discussed followed by explanation of mechanism of QT-prolongation, its consequences, risk assessment and treatment. This lecture was prepared by support of Learning Toxicology Through Open Educational Resources project (TOX-OER, No. 2015-1-ES01-KA203-015957) and will serve as an invitation for participation on the project.