Jatrogena prolongacija QT-intervalu kao mogući predskazatelj smrtnosti

Iatrogenic QT prolongation as a potential predictor of mortality

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Uvod: Brojni lijekovi svakodnevno korišteni u liječničkoj praksi mogu produljiti trajanje repolarizacije. Nedovoljna svjesnost o toj ozbiljnoj nuspojavi do osobitog izražaja dolazi ukoliko se ti lijekovi kombiniraju.¹⁻³ Cilj istraživanja bila je analiza smrtnosti u bolesnika sa QT ≥ 500 ms u korelaciji s lijekovima koji produljuju QT-interval.

Metode: Tijekom 22 mjeseca snimljeno je i analizirano 28320 EKG zapisa. Bolesnici s fibrilacijom atrija i blokom grane isključeni su iz analize. 680 (2,4%) EKG zapisa sa QT ≥ 500 ms analizirano je ručno. Podaci o bolesnicima i korištenim lijekovima preuzeti su iz centralne bolničke baze podataka i statistički obrađeni.

Rezultati: U razdoblju od 301 ± 163 dana, ukupni mortalitet u skupini od 680 bolesnika iznosio je 21 % (143/680). Lijekovi koji uzrokuju prolongaciju QT-intervalu grupirani su kako slijedi: antiaritmici 31 %, antidepresivi 27 %, antibiotici 21 % i ostali. Amiodaron i sotalol najčešće su korišteni antiaritmici, escitalopram i klorpromazin najčešći antidepresivi, dok su azitromicin i eritromicin bili najčešće korišteni antibiotici. Pokazalo se da je broj lijekova koji uzrokuju prolongaciju QT-intervalu prediktor mortaliteta, neovisno o dobi i spolu bolesnika (HR 1,23, 95%, CI 1,04, p<0,01). Bolesnici na ≥ 2 lijeka koja produljuju QT interval imali su statistički značajno povećanu smrtnost (36% u odnosu na 16%).

Zaključak: Nužna je bolja svjesnost o lijekovima koji produljuju QT interval i njihovom utjecaju na smrtnost bolesnika, osobito ukoliko se više od dva takva lijeka koriste u kombinaciji.

Introduction: A lot of medications regularly used in everyday practice can prolong repolarization period. Unawareness of this deleterious side effect is especially pronounced with combination of such medications.¹⁻³ The aim of our study was to analyze mortality in patients with QT ≥ 500ms in correlation with QT prolonging medications used.

Methods: 28320 ECGs were recorded and analyzed in a 22-month period. Atrial fibrillation and bundle branch blocks were excluded from the analysis. 680 (2.4%) of ECGs with QT ≥ 500ms were analyzed manually. Data on patients and medications used was retrieved from the central hospital data registry and submitted for statistical analysis.

Results: In a period of 301±163 days, all-cause mortality in the cohort of 680 patients was 21% (143/680). QT prolonging medications were grouped as follows: antiarrhythmics 31%, antidepressants 27%, antibiotics 21%, and other. Amiodarone and sotalol were the most common antiarrhythmics used, escitalopram and chlorpromazine the most common antidepressants, while azithromycin and erythromycin were the most frequently used antibiotics. Number of QT prolonging medications was shown to be a predictor of mortality, independent of age and gender (HR 1.23, 95%, CI 1.04, p<0.01). Patients on ≥2 QT prolonging medications had statistically significant increase in mortality (36% vs. 16%).

Conclusion: Increasing awareness of QT prolonging medications and their effect on patient mortality is warranted, especially if more than two QT prolonging drugs are combined.

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