Antiemetic Selection Challenges and Solutions in COVID 19 Patients

Nilay Aksoy[1*], Mesut Sancar[2]

[1] Department of Clinical Pharmacy, Altinbas University, Istanbul, Turkey.

[2] Department of Clinical Pharmacy, Marmara University, Istanbul, Turkey.

[*] Corresponding author; Nilay Aksoy, Department of Clinical Pharmacy, Altinbas University, Istanbul, Turkey, Tel:00902127094528, Email: nilay.aksoy@altinbas.edu.tr.

Dear Editor

Antiemetics gained an active position in the COVID-19 pandemic as a medical approach to suppressing SARS-CoV-2 induced nausea and vomiting as well as balance side effects from medications in use. Proposed treatments for COVID-19 initiate a concern in regard to influential impact on cardiotoxicity and prolonged Qt intervals. Antiemetic agents pose additional risk through the prolongations of Qt intervals when medication is mixed with COVID-19 pharmacological therapies.[1]

The fundamental understandings of the role of COVID-19 combination treatments in developing Qt prolongation in hospitalized COVID-19 patients exhibiting nausea, vomiting, and GI related complications remains unclear. Because adverse consequences are the attributes of a versatile range of causatives in the clinical nature of COVID-19, such as drugs, age, sex, or metabolic disorders (pH, hypoxia, electrolyte abnormalities, and multi-organ system failure), previous cardiovascular disease, and viral or autoimmune myocardial injuries.[2]

We searched the consequential risks of prolonging Qt intervals on the virtual shelves of scientific databases by courtesy of PubMed, Google Scholar and Science Direct and classified it by crediblemeds.org website. The recommendations concluded from the findings suggest enforcing a monitoring plan for patients taking Hydroxychloroquine-azithromycin medicinal combination in addition eliminating the use of alternative drugs owing to the presence of Qt interval prolongation threats. Precautionary measures include correction of electrolyte disturbance that increase cardiotoxicity, in addition to involving drugs of conditional effects and eliminating drugs that induce Qt prolongation from treatment plan. Drugs Used for Stress Ulcer Prophylaxis such as PPI and H2

receptor antagonists pose either a conditional risk (Omeprazole, Lansoprazole, Esomeprazole, Pantoprazole, Famotidine) or unclassified risk (Dexlansoprazole, Rabeprazole, Ranitidine) according to Crediblemeds.org.

In regard to antiemetics Qt interval prolongation risks. some of them carry a known risk (Ondansetron, Chlorpromazine, Droperidol, Haloperidol), a few carry possible risk (Promethazine) and others carry conditional risk (Metoclopramide, Diphenhydramine). Based on data obtained from various studies operated by Mitra , Roden and Chen D,[5,6,7]. we support the FDA alert [3] against the use of hydroxychloroquine and chloroquine combination for coronavirus disease 2019 (COVID-19) outside the hospital and clinical trial condition and recommend the following for the clinicians. Consider performing a baseline electrocardiogram (ECG) at the time of diagnosis and monitor QTc scores if QT-prolonging is apparent. The average normal QTc scores in healthy individuals after puberty is 420±20 milliseconds. Therefore, QTc $\geq$ 450 ms is considered risk for TdP.[4] According to crediblemeds, conditional factors can trigger certain drugs to induce TdP such as overdosing and hypokalemia. Consider the use of antiemetic and proton pump inhibitor which have conditional Qt risk prolongation (as ex.metaclopromide, pantoprazole) in minimum effective dose and after correction of electrolyte disturbance if present. Retaining a healthy electrolyte balance necessitates the maintaining of potassium and magnesium levels in the upper range of normal levels around 5 (mEq/L) and 2.5 mEq/L respectively. Avoid drugs that carry known risks like Ondasetron, Chlorpromazine and Droperidol.

The pandemic is overwhelming healthcare professionals as death tolls and caseloads remain on a rise. Patient care, diagnosis, and medication management can burden healthcare workforce and lead to burnout, particularly under the ambiguous state of the world. To surpass the pandemic, healthcare providers of varying specialties from doctors to nurses, and well-rounded clinical pharmacists; have to come together and to merge expertise because sharing the adversities, will save more patients life.

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