SFDA SAFETY SIGNAL

"A signal is defined by the SFDA as reported information on a possible causal relationship between an adverse event and a drug, the relationship being unknown or incompletely documented previously. Usually more than a single report is required to generate a signal, depending upon the seriousness of the event and the quality of the information. A signal is a hypothesis together with data and arguments and it is important to note that a signal is not only uncertain but also preliminary in nature"

09-08-2022

Saudi Food and Drug Authority (SFDA) – Safety Signal of Olmesartan and Risk of Drug Induced Liver Injury

The Saudi Food and Drug Authority (SFDA) recommends all health care professionals to be aware of the safety signal drug induced liver Injury associated with the use of Olmesartan. The signal has been originated as a result of routine pharmacovigilance monitoring activities.

Introduction

Olmesartan is a potent, orally active, selective angiotensin II receptor (type AT1) antagonist. It is expected to block all actions of angiotensin II mediated by the AT1 receptor, regardless of the source or route of synthesis of angiotensin II. It is indicated for treatment of essential hypertension. [1] Drug-induced liver injury (DILI) remains the most common cause of acute liver failure (ALF) in the western world. Nearly all DILI encountered in the clinical setting is idiosyncratic in nature. In many cases, the mechanism for idiosyncrasy is immune-mediation and is often identified by genetic risk determined by human leukocyte antigen variants. [2]

Methodology

Signal Detection team at the National Pharmacovigilance Center (NPC) of Saudi Food and Drug Authority (SFDA) performed a comprehensive signal review using its national database as well as the World Health Organization (WHO) database (VigiBase), to retrieve related information for assessing the causality between Olmesartan and the risk of drug induced liver Injury. [3] WHO-Uppsala Monitoring Centre (UMC) criteria have been used as standard for assessing the causality of the reported cases. [4]

Results

Case Review: The number of resulted cases for the combined drug/adverse drug reaction is 42 global Individualized Case Safety Reports (ICSRs) as of February 2022. Cases with completeness score >0.8 were extracted and assessed (n=6). [3] The causality assessment resulted in two probable case, two possible cases and one unlikely case. One case was unassessable.

Data Mining: The disproportionality of the observed and the expected reporting rate for drug/adverse drug reaction pair is estimated using information component (IC), a tool developed by WHO-UMC to measure the reporting ratio. Positive IC reflects higher statistical association while negative values indicates less statistical association, considering the null value equal to zero. The result of (IC= 2.4)

revealed a positive statistical association for the drug/ADR combination, which means “drug induced liver Injury” with the use of “Olmesartan” have been observed more than expected when compared to other medications available in WHO database. [3]

Literature Review: The signal was detected from a study that aims to highlight the most impactful drug-induced liver injury related research over the past year. Olmesartan was one of the medications that can be related to hepatic injury. [5] Furthermore, two case reports of patients who developed hepatic injury after receiving Olmesartan. [6] [7]

Conclusion

The weighted cumulative evidences identified from causality assessment of the reported cases, and literature are sufficient to support a causal association between Olmesartan and the risk of drug induced liver Injury. Health regulators and health care professionals must be aware of this potential risk and it is advisable to monitor any signs or symptoms in treated patients.

Report Adverse Drug Events (ADRs) to the SFDA

The SFDA urges both healthcare professionals and patients to continue reporting adverse drug reactions (ADRs) resulted from using any medications to the SFDA either online, by regular mail or by fax, using the following contact information:

National Pharmacovigilance Center (NPC)
Saudi Food and Drug Authority-Drug sector
4904 northern ring branch rd
Hittin District
Riyadh 13513 – 7148
Kingdom of Saudi Arabia
Toll free number: 19999
Email: NPC.Drug@sfda.gov.sa

References:

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6. Manuel de la Torre-Aláez and Mercedes Iñarrairaegui, 2020. Drug Liver Injury Induced by Olmesartan Mediated by Autoimmune-Like Mechanism: A Case Report. European Journal of Case Reports in Internal Medicine, (Vol 7 No 1).
7. Rubín de Célix, C., Serrano, R. and García-Buey, L., 2020. Acute hepatitis due to Olmesartan: an uncommon entity. Revista Española de Enfermedades Digestivas,.