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GLIMEPIRIDE INDUCED CHOLESTATIC HEPATITIS IN A WOMAN WITH DIABETES MELLITUS 2 AND DEPRESSION : A CASE REPORT

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Abstract : Over the past few years, there has been a significant rise in the incidence and prevalence of type 2 diabetes mellitus. The availability and use of a large range of oral hypoglycemic medications have also resulted in several adverse drug reaction. Seldom has sulfonyl urea been linked to drug-induced hepatotoxicity in reports. Glimepiride is a sulfonyl urea of the second generation that is used to treat diabetes mellitus. A case study was provided of a female patient diagnosed with type 2 diabetes mellitus who had been on glimepiride for a number of years.

INTRODUCTION

Because of our changing lifestyle and bad eating habits, the incidence of diabetes has been sharply rising. Additionally, there are several drugs available for the treatment of DM. A second generation sulfonyl urea called glimepiride is used to treat type 2 diabetes. Because of its effectiveness, flexible dose schedule, and safety, this medication is frequently given. Glimepiride is recommended for non-insulin dependent diabetic mellitus as an addition to diet and exercise(1). Without a doubt, one of its key characteristics is that it doesn't have many typical negative effects. It can be used in addition to other diabetic drugs. By inhibiting the k+ channel of pancreatic beta cells, it decreases blood sugar, triggering depolarization and the release of endogenous insulin produced by the body. There have been a few documented rare occurrences of cholestatic liver damage with this drug says literatures(2). Here, we describe a patient who, on glimepiride treatment, developed cholestatic hepatitis. The results of the liver biopsy, the clinical and laboratory data, and the glimepiride rechallenge all corroborate this.

CASE REPORT

A 65-year-old female patient with a history of diabetes mellitus 2 has been taking glimepiride 2 mg daily for the previous two months. According to her social history, she is a widow who faces a lot of hardship from her family. She began experiencing early satiety, weight loss, lower retrosternal discomfort spreading to her back, and increased fatigue two years into the treatment. She also saw that the sclera in her eyes was discolored yellow, which was followed by darkening of the urine, light-colored feces, and intense vomiting. After consulting with a doctor, the patient was admitted to the hospital for more testing.

Initial laboratory testing conducted upon admission showed that the patient's total serum bilirubin was 4.06 mg/dl, direct bilirubin was 3.69 mg/dl, serum albumin was 2.7 g/dL, and alkaline phosphatase was 725 U/L. Due to the patient's uncontrolled blood glucose, insulin has to be used in place of the oral hypoglycemic medication to improve glucose control. After a viral hepatitis serology was conducted, HAV, HBV, and HCV were not detected. Gallstones were found during the ultrasound examination.

The patient's diagnosis of drug-induced cholestasis was made in light of the symptoms and results of laboratory testing. The human mixer injection was used in lieu of the discontinued medication glimepiride. Although the abnormal liver function test results significantly lowered within ten days, they did not return to normal levels. Following symptom improvement, the patient's condition allowed for their discharge. Causality assessment was performed using WHO causality Assessment Scale and Naranjo Scale ,the event was found out possible and severity was assessed to be moderate.

DISCUSSION

Unrecognized, drugs undoubtedly have a significant role in liver damage. Almost all medicine classes have the potential to cause liver illness, and drug-induced liver damage (DILI) is a typical occurrence. The majority of DILI instances are benign and become well when drugs are stopped(3). The most often prescribed medications for the management of diabetes mellitus these days are sulphonyl urea. They do, however, occasionally have negative medication responses despite their benefits. The most common of these are damage to the liver. Medication is a major, and often overlooked, cause of acute cholestasis .We learned that the patient's symptoms get better and the drug's negative effects stop after the offending medication is stopped and replaced with another. Additionally, we must keep an eye on the patient's laboratory and clinical results. Liver cirrhosis and maybe liver failure would undoubtedly result from continuing the medication or from not treating the symptoms, which include fever, vomiting, and other symptoms that increase with time. Any patient reporting cholestatic hepatitis should have a complete and accurate medication history collected by the doctor ,however cholestasis can be of two types; acute and chronic. Other substances that might damage the liver include fibrates, anabolic steroids, chlorpromazine, and oral contraceptives. Similar responses are also seen with other antibiotics, such as erythromycin, nitrofurantoin, and trimethoprim-sulfamethoxazole(4)

CONCLUSION

Finally, we report a rare instance of glimepiride-related liver damage that highlights the need for glimepiride usage to be done carefully. Liver function tests should be performed on all glimepiride-using individuals on a regular basis, particularly if they have a history of liver illness. Any patient with type 2 diabetes who is on an oral hypoglycemic medication and has unexplained cholestatic jaundice should have their diagnosis evaluated(4). It is crucial that the doctor has a thorough awareness of the patient's medication history. The primary goal of managing drug-induced cholestasis is to stop the medicine immediately and switch to a different possible medication.

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