ACUTE LIVER INJURY IN A GLATOPA-TREATED PATIENT WITH MS

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Case report. A 36-year-old woman presented with unilateral optic neuritis from which she recovered. Optic neuritis recurred at age 42. Brain MRI showed unilateral optic neuritis from which she recovered.

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Significant hepatotoxicity, nephropathy, and skin reactions also occurred with protiramer (TV-5010), a glatiramoid with a higher molecular weight of the same molar ratio of amino acids as GA.4 Glatopa was approved as a GA biosimilar compound in 2015 without a requirement for proof of either efficacy or safety in clinical trials. Sandoz demonstrated Glatopa’s equivalence with Copaxone by similarities in chemistry, polymerization, biological, and immunologic properties.5,6 In a study by the US-FDA using 3 different analytic measures, distinct physicochemical differences were found between Copaxone and commercially available copolymer-1.7 Teva Pharmaceuticals also found differences in charge distribution, molecular density, monomolecular size, and the existence of a novel polypeptide group in Glatopa compared with Copaxone. Therefore, differences in manufacturing between these NBCDs could cause different adverse event profiles. Given that generic GA is only recently available for clinical use in MS and is the likely cause of acute liver injury in the present case report, heightened awareness of possible liver dysfunction and other adverse effects may be warranted.

Liver function tests (panel A) were performed from February 17, 2016 (32 days prior to glatiramer acetate [GA]) to June 13, 2016 (102 days following the start of GA treatment). The gray rectangle represents the 13 days of GA treatment starting at day 0. Alanine transaminase (ALT) (normal range 10–30 U/L) and aspartate aminotransferase (AST) (normal range 6–29 U/L) are depicted on the left y-axis and alkaline phosphatase (alk phos [normal range 33–115 U/L]) on the right y-axis. Liver biopsy (indicated by “Bx” on panel A) on day 20 shows dense portal lymphocytic inflammation (panel B) with interface activity and normal bile ducts and shows lobular lymphocytic inflammation with confluent necrosis (panel C) (hematoxylin and eosin stain, 200×). This histologic picture along with the clinical presentation and temporal profile is consistent with drug-induced liver injury.

Figure Liver injury after glatiramer acetate treatment

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