Isolated Direct Hyperbilirubinemia Due to Cytarabine Administration

Mehak M. Laharwal, MBBS1, Cindy S. Law, MD2, Evan Orosz, DO2, Anish V. Patel, MD1.
1Saint Barnabas Medical Center, Livingston, NJ; 2Robert Wood Johnson Medical School, Rutgers University, New Brunswick, NJ.

INTRODUCTION: Drug induced liver injury (DILI) is the most common cause of liver injury in the US. The patterns can be hepatocellular or cholestatic. Recently, cases of isolated bilirubin elevation have been reported.

CASE DESCRIPTION/METHODS: A 33-year-old woman with no past medical history, presented to the emergency room with fatigue and exertional dyspnea. She was diagnosed with Acute Myeloid Leukemia. Initial blood work showed normal liver enzymes. She was started on an induction regimen of high dose cytarabine (Ara-C; HiDaC; 1.5 g/m2) and daunorubicin. On day 4, she was noted to have a total bilirubin of 3.1 mg/dL, direct bilirubin 2.3 mg/dL, normal ALT, AST, alkaline phosphatase and INR. R-factor was 0.2, indicating a cholestatic pattern of injury. The patient was asymptomatic with unchanged physical examination. Ultrasound showed a normal appearing liver and biliary tree. Toxicology and serologies for viral and autoimmune hepatitis were negative. Daunorubicin has been only noted to induce a hepatocellular DILI while Ara-C can cause both hepatocellular and cholestatic injury. Rousset Udall Causality Assessment Method was applied giving a score of 11—indicating that DILI was "highly likely" related to Ara-C as compared to other causes of hepatotoxicity. The dose of Ara-C was halved. Direct bilirubin peaked at 12.1 mg/dL and decreased progressively over time. AST, ALT, alkaline phosphatase and INR remained normal. She did not develop acute liver failure and remained asymptomatic during hospitalization. With each subsequent HiDaC course, she had a less severe increase in direct bilirubin levels (Figure 1).

DISCUSSION: We present a rare case of isolated direct hyperbilirubinemia due to Cytarabine (Ara-C). It is a pyrimidine analogue whose active form is responsible for its antineoplastic effects and toxicity. Ara-C causes elevations of serum aminotransferases in about 40% of leukemia patients, with greater elevation in those receiving HiDaC. In our patient however, only direct hyperbilirubinemia was noted. The mechanism is not established but may be related to cytotoxicity increasing the permeability of gallbladder mucosa, or due to a toxic or immunogenic intermediate. Isolated case reports indicate that this toxicity is reversible. Lowering the dose of cytarabine for future treatments should be considered. Physicians should be aware of this rare adverse effect as early recognition can avoid unnecessary extensive investigation in the absence of other clinically relevant causes of hepatotoxicity.

S2681 Presidential Poster Award

Granulomatous Hepatitis: An Uncommon Presentation of Lymphoma

Anoopk N. Patel, MD1, Grace Monkey Saxon2, Aqua Nasir, MBBS2, David Krakow, MD2.
1Emory University School of Medicine, Atlanta, GA; 2Emory University Hospital, Atlanta, GA.

INTRODUCTION: Hepatic granulomas represent inflammatory changes in the liver and are often sequelae of a systemic illness rather than a primary liver disease. As such, hepatic granulomas are often a valuable clue to a larger systemic process. We present a case of granulomatous hepatitis due to a rare subset of diffuse large B cell lymphoma (THRLBCL).

CASE DESCRIPTION/METHODS: A 70-year-old South Asian woman with type II diabetes presented with 6 weeks of worsening fatigue, jaundice, non-productive cough, and intermittent fevers as a hospital transfer. At the neighboring hospital, a liver biopsy showed granulomatous hepatitis. On presentation, physical exam showed ill-appearing, drowsy woman with scleral icterus, anasarca, protuberant abdomen, and diminished breath sounds in the lower lungs. Labs revealed hypercalcemia of 12.4 and elevated liver chemistries: AST 338, ALT 178, ALP 882, and bilirubin 2.3. Imaging showed severe increase in direct bilirubin levels (Figure 1).

DISCUSSION: We present a rare case of isolated direct hyperbilirubinemia due to Cytarabine (Ara-C). It is a pyrimidine analogue whose active form is responsible for its antineoplastic effects and toxicity. Ara-C causes elevations of serum aminotransferases in about 40% of leukemia patients, with greater elevation in those receiving HiDaC. In our patient however, only direct hyperbilirubinemia was noted. The mechanism is not established but may be related to cytotoxicity increasing the permeability of gallbladder mucosa, or due to a toxic or immunogenic intermediate. Isolated case reports indicate that this toxicity is reversible. Lowering the dose of cytarabine for future treatments should be considered. Physicians should be aware of this rare adverse effect as early recognition can avoid unnecessary extensive investigation in the absence of other clinically relevant causes of hepatotoxicity.

S2681 Figure 1. The core biopsy of liver showed an atypical lymphoid and histiocytic infiltrate including scattered large atypical lymphoid cells (THRLBCL) was made shortly before the family comfort measures were taken.

S2682 CT111 as a Mimic of AFLP: Post-Partum Liver Failure as Index Presentation of a Urea Cycle Disorder

Rah Spiller, MS, DO1, James Kwon, MD2, George Leonard, MD, PhD2, Matthew Yeh, MD, PhD3, Phillip C. Lindholm, MD4.
1Madigan Army Medical Center, Joint Base Lewis McChord, WA; 2Madigan Army Medical Center, Joint Base Lewis McChord, WA; 3University of Washington, Seattle, WA; 4Uniformed Services University of the Health Sciences, JBMC, WA.

INTRODUCTION: Pregnancy physiology creates a unique differential for liver disease to include urea cycle disorders (UCD) and acute fatty liver of pregnancy (AFLP) in addition to other common diseases. UCD typically present in neonates (1 in 35,000 births) yet can also present as adult disease. AFLP typically present in pregnancy (1 in 35,000 births) yet can also present as adult disease. AFLP is an obstetric emergency and can rarely present post-partum. Due to significant overlap in clinical presentation, the Swansea criteria for AFLP was required for final diagnosis.

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[2681] Figure 1. CT abdomen without contrast showing heterogeneous hepatic atrophy with lobulated hepatic contour in keeping with severe inflammatory and fibrotic changes.