

**Title: Eculizumab in Management of Gemcitabine-Induced Hemolytic Uremic Syndrome:
A Case Report**

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Introduction: Chemotherapy-induced hemolytic uremic syndrome (HUS) is a relatively rare phenomenon. Literature on gemcitabine-induced HUS (GiHUS) is sparse. Here, we describe a case of GiHUS and the use of eculizumab, a C5 complement inhibitor, in the successful treatment of GiHUS.

Methods: We will discuss the clinical course and management of a 64-year-old woman who was found to have GiHUS.

Results: A 64-year-old woman presented with recurrent episodes of abdominal pain associated with acholic stools. Following extensive workup, she was found to have unresectable adenocarcinoma of the pancreatic head and was started on gemcitabine therapy. Following one month of gemcitabine treatment, the patient's condition deteriorated, and she developed rapidly declining renal function with proteinuria and hematuria. Renal biopsy revealed thrombotic microangiopathy secondary to GiHUS. Continuous renal replacement therapy was initiated and was consequently switched to conventional hemodialysis, followed by plasmapheresis with albumin. However, minimal improvement in renal function was noted. As such, eculizumab was initiated at the dose of 1/week, then transitioned to 1/month for a total of nine doses. The patient showed significant improvement in creatinine clearance and markers of hemolysis.

Conclusion: Gemcitabine-induced HUS is a relatively rare occurrence. No risk factors have been identified for HUS among those on gemcitabine. Conventional treatment for HUS, including hemodialysis, CRRT, and plasmapheresis, have shown minimal improvement. However, the use of eculizumab has shown rapid improvement in our patient with GiHUS, suggesting a potential autonomous and abhorrent pathway for complement activation. Further investigation into the mechanisms and management of GiHUS is thus warranted.