

Henry Ford Health System

Henry Ford Health System Scholarly Commons

Case Reports

Medical Education Research Forum 2020

5-2020

Splenic Artery Embolization for Idiopathic Warm Autoimmune Hemolytic Anemia Refractory to Medical Therapy

Mohamad O. Hadied

Henry Ford Health System, MHADIED1@hfhs.org

Riyad Y. Kherallah

Mariam Salman

Khalid Eteer

Henry Ford Health System, keteer1@hfhs.org

Scott Schwartz

Henry Ford Health System, scotts@rad.hfh.edu

Follow this and additional works at: <https://scholarlycommons.henryford.com/merf2020caserpt>

Recommended Citation

Hadied, Mohamad O.; Kherallah, Riyad Y.; Salman, Mariam; Eteer, Khalid; and Schwartz, Scott, "Splenic Artery Embolization for Idiopathic Warm Autoimmune Hemolytic Anemia Refractory to Medical Therapy" (2020). *Case Reports*. 87.

<https://scholarlycommons.henryford.com/merf2020caserpt/87>

This Poster is brought to you for free and open access by the Medical Education Research Forum 2020 at Henry Ford Health System Scholarly Commons. It has been accepted for inclusion in Case Reports by an authorized administrator of Henry Ford Health System Scholarly Commons.



Mohamad O. Hadied¹, Riyad Y. Kherallah², Mariam Salman³, Khalid Eteer⁴, Scott Schwartz¹

¹Department of Radiology, Henry Ford Health System, Detroit, MI, ²Department of Internal Medicine, Baylor College of Medicine Medical Center, Houston, TX, ³University of Michigan School of Medicine, Ann Arbor, MI, ⁴Wayne State University School of Medicine, Detroit, MI.

Purpose

- To present a novel case of splenic artery embolization to treat idiopathic warm autoimmune hemolytic anemia refractory to medical therapy.

Background

- While Partial Splenic Artery Embolization (PSAE) is a useful procedure that has been performed for a variety of indications including trauma and hypersplenism, it has only been rarely described as a treatment for idiopathic warm Autoimmune Hemolytic Anemia (AIHA).
- Warm AIHA is caused by increased red blood cell (RBC) destruction triggered by antibodies reacting against RBC surface antigens. It is the most common form of AIHA. First line therapy for warm AIHA consists of corticosteroids.
- For cases that are refractory to steroid management, the current management for second line therapy is splenectomy, rituximab, and if these fail, alternative immunosuppressive medications.

Case Report

- A 27-year-old male with a history of warm AIHA who presented with two day history of nausea, vomiting, and epigastric pain. His exam was significant for scleral icterus and sublingual jaundice. Laboratory workup showed a low hemoglobin of 5.5 g/dl and hematocrit of 15.7%. Haptoglobin: <8 g/dl (low). He was started on intravenous methylprednisolone 1g/day.
- Prior to presentation at our institution the patient was managed at an outside hospital where he received corticosteroids, an immunosuppressant, and twelve transfusions. The patient was transferred to our institution for escalation of care after developing autoantibodies that precluded future administration of transfusions.
- Despite these interventions the patient's hemoglobin continued to trend downwards, reaching a nadir of 2.3 g/dl. A repeat CT abdomen showed an enlarged spleen with a span of 16.5 cm in its maximum dimension (Figure 1).
- The patient's hemodynamic instability made him a poor surgical candidate. As such, the decision was made to perform a PSAE.

Images



Figure 1: CT abdomen showed an enlarged spleen with a span of 16.5 cm in its maximum dimension



Figure 2: A) Pre-embolization angiography of the splenic artery showing the three lower branches to be embolized (asterisks) B) Post embolization angiography of the splenic artery with 20-30% residual blood supply to the superior pole

Results

- The decision was made to perform a PSAE. The lower to mid portions of the spleen were embolized with 500-700 micrometer particles followed by gelfoam mixed with gentamicin 80 mg until stasis was achieved. Final run DSA showed 70-80% of the splenic parenchyma was embolized with 20-30% residual arterial supply (Figure 2).
- Following the procedure, the patient's remained clinically stable and his hemoglobin continued to trend upwards until it stabilized at 6 g/dl.
- After embolization, the patient remained inpatient for 8 days for close observation. Laboratory workup also showed increasing haptoglobin, and decreasing LDH (Figure 3).
- The patient was scheduled for an elective splenectomy approximately 3 months after the embolization procedure. There were no surgical complications.

Conclusion

- In conclusion, our case shows the utility of PSAE as an acute life-saving intervention for a poor surgical candidate with idiopathic warm AIHA refractory to medical therapy as a bridge to definitive splenectomy.

References

- Spigos D. G., Jonasson O., Mozes M., Capek V. Partial splenic embolization in the treatment of hypersplenism. *American Journal of Roentgenology*. 1979;132(5):777-782
- Madoff D. C., Denys A., Wallace M. J., et al. Splenic arterial interventions: anatomy, indications, technical considerations, and potential complications. *Radiographics*. 2005;25(supplement 1):S191-S211
- Miyazaki M., Itoh H., Kaiho T., Ohtawa S., Ambiru S., Hayashi S., Nakajima N., Oh H., Asai T., Iseki T. Partial splenic embolization for the treatment of chronic idiopathic thrombocytopenic purpura. *American Journal of Roentgenology*. 1994;163(1):123-126. doi: 10.2214/ajr

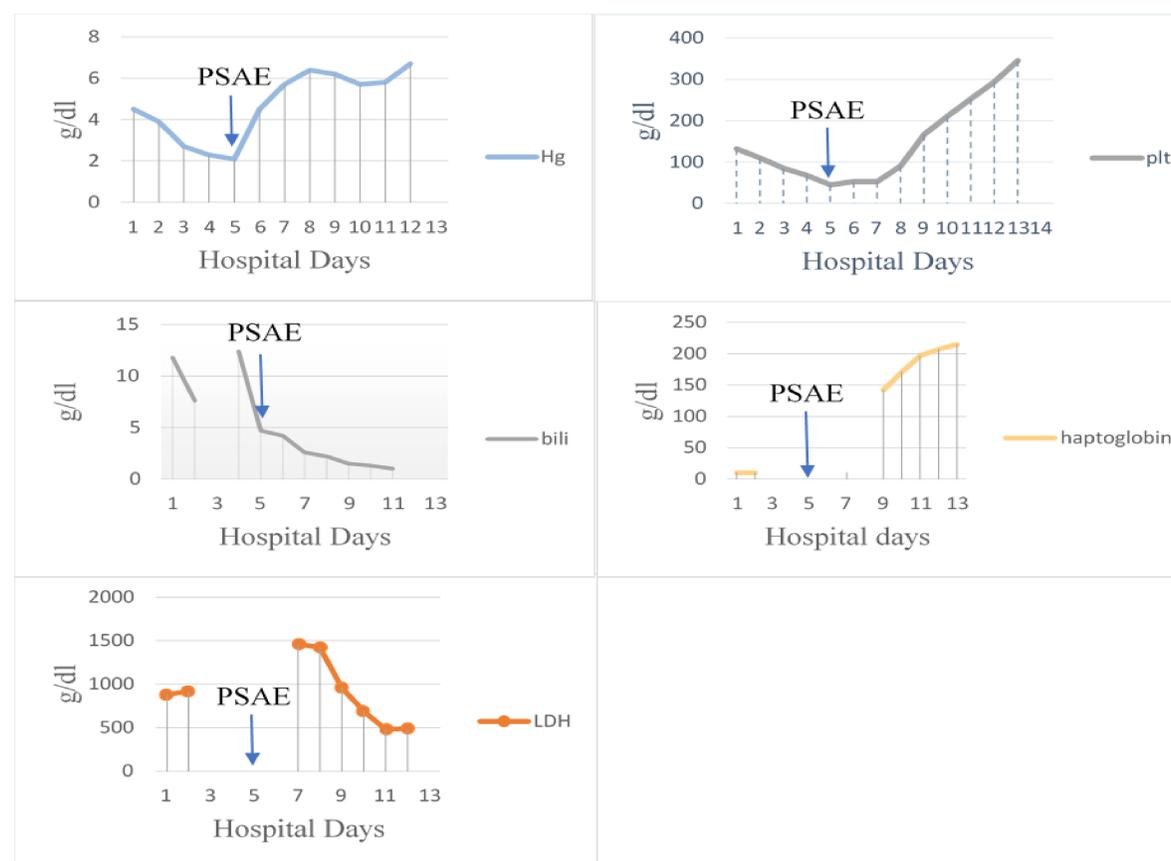


Figure 3: Inpatient change in pertinent lab values hemoglobin (Hg), platelets (plt), bilirubin (bili), haptoglobin, and lactate dehydrogenase (LDH) over the patient's hospital course.