Resection of a Giant Hepatic Hemangioma Resolves Coagulopathy in an Adult: A Case Report

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BACKGROUND

- Kasabach-Merritt phenomenon (KMP) manifests as a triad of thrombocytopenia, microangiopathic hemolytic anemia, and disseminated intravascular coagulation
- KMP classically presents in infants with cavernous hepatic hemangiomas
- The incidence of KMP in adults with cavernous hepatic hemangiomas is extremely rare

CASE PRESENTATION

- 42M with clinical symptoms of chronic dyspnea, abdominal fullness, early satiety, and varicose veins
- Laboratory findings reflected (1) mild anemia, (2) mild thrombocytopenia, and (3) mild elevation of his international normalized ratio
- Initial triple contrast CT of the abdomen and pelvis demonstrated a 16-cm hemangioma on the right lateral aspect of the liver
- Interval CT revealed that the hemangioma had grown to 25-cm
- The hemangioma exerted a mass effect on the intrahepatic vasculature and ducts and the inferior vena cava.
- The gallbladder, stomach, duodenum, and pancreas were displaced inferiorly

OPERATIVE DETAILS

- Pre-operative angioembolization of the right hepatic artery branches in segments VI and VII, and the right inferior phrenic artery
- After entry via a bilateral subcostal “chevron” incision, the right hepatic lobe was mobilized
- After intraoperative ultrasound identification of the right hepatic vein and right portal vein, the liver parenchyma was marked for transection
- Transection of segments VI and VII was performed with rapid serial firings of vascular loads of an electronic linear stapler
- The Pringle time was 8 minutes, estimated blood loss 600 mL
- Topical hemostatic agents were applied due to oozing from various raw surfaces without evidence of clot
- Platelet count was 119, and tromboelastography revealed a maximum amplitude of 53



Figure 1. Portal venous phase of “triple phase” CT. Note the mass effect of the hemangioma on surrounding structures

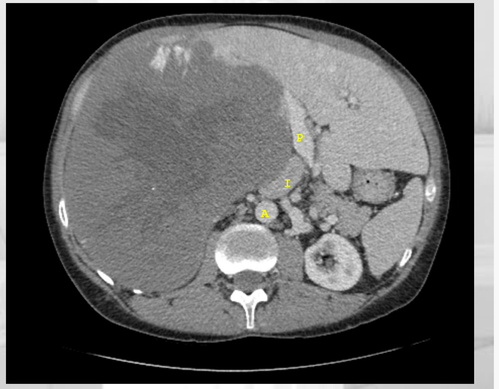
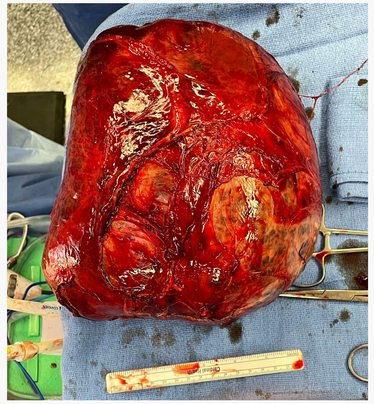


Figure 2. Portal venous phase of “triple phase” CT. The IVC and main portal vein are displaced medially





POSTOPERATIVE COURSE

- Admitted to ICU post-op for close monitoring and left on POD#1
- Discharged on post-operative day #6 with sustained platelet count of 244
- Continued to do well at clinic visit on POD#15; platelet count maintained

CONCLUSIONS

- Kasabach-Merritt-like phenomenon may be present in adult patients with giant, cavernous liver hemangiomas
- Evidence of deranged coagulation may be mild and theoretically can be exacerbated in settings like trauma
- May be an indication for earlier resection as opposed to observation until symptomatic

REFERENCES

- Lewis D, Vaidya R. Kasabach Merritt Syndrome. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing; July 22, 2021.
- Albitar HAH, Iyer V. Giant Liver Hemangioma with Kasabach-Merritt Syndrome. *Am J Med*. 2020;133(1):56-57. doi:10.1016/j.amjmed.2019.06.024
- Famularo G. Kasabach-Merritt Syndrome. *Am J Med*. 2020;133(12):e747. doi:10.1016/j.amjmed.2020.02.032
- Famularo G, Galluzzo M, Ottaviani P, Tarsitani P. Kasabach-Merritt syndrome arising from a vascular fistula. *Am J Emerg Med*. 2019;37(7):1394.e3-1394.e4. doi:10.1016/j.ajem.2019.04.013
- Pantelic M, Pantelic M, Djuric P, Markovic K, Vucinic T, Juloski JT. Kasabach-Merritt Syndrome in an Adult. *Turk J Haematol*. 2020;37(1):53-54. doi:10.4274/tjh.galenos.2019.2019.0068
- Mahajan P, Margolin J, Iacobas I. Kasabach-Merritt Phenomenon: Classic Presentation and Management Options. *Clin Med Insights Blood Disord*. 2017;10:1179545X17699849. Published 2017 Mar 16. doi:10.1177/1179545X17699849
- Groteau SE, Liang MG, Kozakewich HP, et al. Kaposiform hemangioendothelioma: atypical features and risks of Kasabach-Merritt phenomenon in 107 referrals. *J Pediatr*. 2013;162(1):142-147. doi:10.1016/j.jpeds.2012.06.044
- Volchenboum S. Chapter 119 – Thrombocytopenia. *Comprehensive Pediatric Hospital Medicine*. 2007; 744-749. doi:10.1016/B978-032303004-5.50123-X
- Liu X, Yang Z, Tan H, Xu L, Sun Y, Si S, Liu L, Zhou W, Huang J. Giant liver hemangioma with adult Kasabach-Merritt syndrome. *Medicine*. 2017; 96 (31). doi: 0.1097/MD.0000000000007688
- Bajenaru N, Balaban V, Săvulescu F, Campeanu I, Patrascu T. Hepatic hemangioma -review-. *J Med Life*. 2015;8 Spec Issue(Spec Issue):4-11.

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