

Introduction

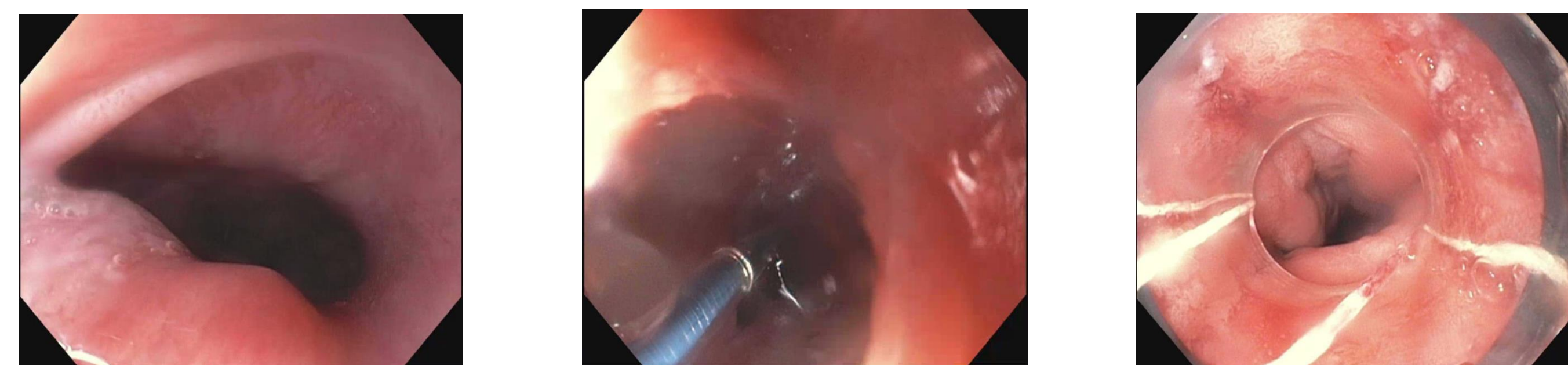
We introduce the use of a Steris Carr-Locke injection needle to act as a stiffener for the safe insertion of a balloon tamponade tube in a patient with a known benign upper esophageal stricture.

Case Description

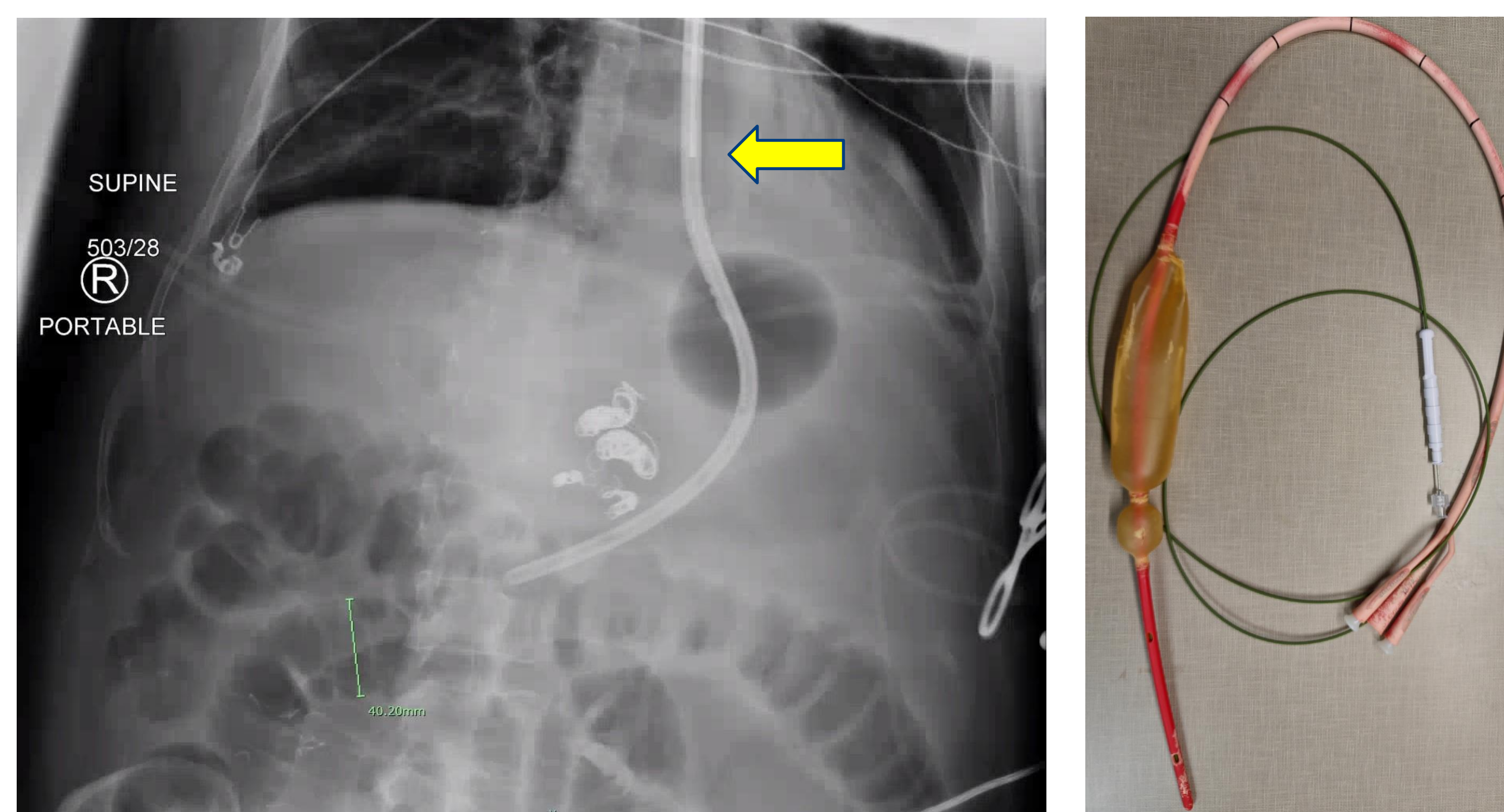
Our patient was a 61-year-old male with a past medical history of NASH cirrhosis complicated by known varices, squamous cell carcinoma of the esophagus that underwent radiation therapy resulting in an upper esophageal sphincter that had been dilated with a through the scope balloon as well as underwent variceal ligation the week prior to presentation. Patient presented to the emergency department with complaints of hematemesis and dizziness. While in the ED, the patient had massive hematemesis with associated hypotension dropping his pressures to 64/40 mmHg. The ED performed rapid sequence intubation and secured venous access with a central venous catheter and large bore IVs. After rapid sequence intubation, the patient experiences PEA arrest with presumption of cause as hemorrhagic shock. Massive transfusion protocol is initiated and ROSC is achieved after a total 5 minutes of coding the patient, administering epinephrine, and blood. Gastroenterology attempts to perform an EGD but is met with resistance of what is a known radiation-associated stricture off the upper esophagus at approximately 20 centimeters from the incisors and the scope cannot be passed through.

A Blakemore is attempted to be placed for stabilization of bleeding from esophageal varices but is met by the same resistance as the scope and is coiled at the back of the oropharynx. An endoscopic needle was gathered from the travel cart and inserted into the gastric suction port of the Blakemore tube in order to stiffen the tamponade balloon. The Blakemore tube is successfully passed into the esophagus and stomach and the gastric balloon is inflated and confirmation occurs via abdominal x-ray. Patient is transferred to the IR suite for emergent TIPS with Blakemore in place.

Photos



A) Upper esophageal stricture seen on prior endoscopy. B) Through-the-scope balloon dilation performed. C) Banding completed the week prior to presentation. D) KUB completed after IR TIPS was emergently completed. The Blakemore is seen with inflated balloon and the KUB demonstrates the tip of the Steris injection needle as pointed out by the yellow arrow. E) Sengstaken-Blakemore tube with Steris Carr-Locke injection needle acting as a stiffener, at this point retracted from end of tube.



Discussion

A novel technique was used in this case to successfully place a Blakemore tamponade balloon into a patient with an active variceal hemorrhage who also had known esophageal stricture from radiation therapy. Unfortunately, the stricture precluded timely-endoscopic interventions to the variceal bleed in an unstable patient and the decision to place a Blakemore assisted in controlling the hemorrhage enough to transfer the patient successfully to IR for TIPS. Previous techniques have been described in the literature such as an immersive bath in cold water to help stiffen the rubber¹. The use of a bougie has also been described to help guide the tamponade tube down the esophagus². These have their limitations due to rapid warmth of the rubber within the patients oropharynx. The bougie technique is limited by potential dislodgement of the tamponade balloon into the esophagus and potential trauma from rapid removal required during the process. We present a novel technique that is safe as it remains within the lumen of the tamponade tube and is easily removable. The needle is spring loaded and will not deploy unless purposely pushed.

References

1. Dearden, J., Hellawell, G., Pilling, J., Besherdas, K. and Van Someren, N., 2004. Does cooling Sengstaken-Blakemore tubes aid insertion? An evidence based approach. *European Journal of Gastroenterology & Hepatology*, 16(11), pp.1229-1232.
2. Gottula, A., 2022. *Air Care Series: Balloon Tamponade of Variceal Hemorrhage — Taming the SRU*. [online] Taming the SRU. Available at: <<https://www.tamingthesru.com/blog/air-care-series/balloon-tamponade-of-variceal-hemorrhage>> [Accessed 8 October 2022].