

# Outcomes in Variceal Hemorrhage Following the Use of a Balloon Tamponade Device

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## Background

Upper variceal hemorrhage is associated with high morbidity and mortality. A balloon tamponade device (BTD), such as the Sengstaken-Blakemore or Minnesota tube, may be used in cases of acute, uncontrollable variceal hemorrhage, when endoscopic and pharmacologic therapies prove insufficient. While the use of these devices may be effective at controlling acute bleeding, the effects on patient outcomes remain less clear. With this study, we sought to describe the number of patients with variceal hemorrhage and a BTD who (1) survive to hospital discharge, (2) survive to one-year following hospital discharge, and (3) develop complications related to a BTD.

## Methods

In this retrospective study, we performed a query of ICD-9 codes to identify patients at a single, urban, tertiary care center in Boston who underwent placement of a Sengstaken-Blakemore or Minnesota tube during hospitalization for upper gastrointestinal hemorrhage between 2003 and 2014. Patient characteristics and outcomes were summarized using descriptive statistics.

## Results

A total of 34 patients with a BTD were identified. Median age was 57.5 (IQR 47 - 63) and 76% (26/34) were male. Approximately 59% (20/34) of patients survived to hospital discharge, and 41% (13/32) were alive after one year. Two patients were lost to follow-up. Of those surviving to hospital-discharge, 95% (19/20) had undergone transjugular intrahepatic portosystemic shunt (TIPS) during that hospitalization, while 36% (5/14) of patients who did not survive to hospital discharge had TIPS. One complication, an esophageal perforation, was detected. Moreover, one patient underwent liver transplantation during a subsequent hospitalization.

## Conclusion

In this retrospective cohort of patients undergoing BTD therapy for upper variceal hemorrhage, approximately 59% of patients were alive at hospital discharge and 41% were alive after one year. Placement of a BTD as a temporizing measure in the management of acute variceal hemorrhage may be helpful in these circumstances, particularly when utilized as a bridge to more definitive therapy such as TIPS.