

EUS-guided therapy of nonvariceal refractory bleeding: A prospective observational study

Dear Editor,

EUS has been proposed as an effective therapeutic method for refractory nonvariceal gastrointestinal bleeding (NVGB) with successful outcomes in the treatment of dieulafoy (DL), ulcers, gastrointestinal stromal tumors, and pseudoaneurysms.^[1-3] Doppler flow can show the blood vessels responsible for bleeding^[1,3] and have associated a low risk of re-bleeding with disappearance of its flow after injection of the sclerosing agent. However, there is no standardized method to ensure the effectiveness of the intervention.^[1,3] Nowadays, EUS-guided treatment for NVGB is not standardized and has only been performed in expert centers.

We performed a prospective, observational single-center study to evaluate the usefulness of EUS-guided treatment in patients with NVGB refractory to conventional endoscopic therapy. Patients who had an NVGB refractory to two standard endoscopic therapies and accepted to undergo EUS-guided treatment between January 2010 and December 2020 were included. All procedures were performed by an experienced endoscopist with a linear echoendoscope. A diagnostic EUS with Doppler was performed to delineate the relevant vascular anatomy. Fine needle puncture with a standard 22-gauge needle targeting the vessel or lesion responsible for the bleeding was performed. Polidocanol or 99% ethanol was used for injection under EUS guidance. Refractory bleeding was defined as those episodes that were not controlled after two conventional endoscopies. Therapeutic success was defined as the absence of re-bleeding after EUS treatment.

Fourteen patients with an NVGB refractory to standard endoscopic therapy were included: 9 with DL and 5 with bleeding submucosal tumors refractory to standard therapy. We obtained a global therapeutic success of 78% without adverse effects. One of the submucosal tumors required an endoscopic

resection and one DL was not identified. Two patients suffered recurrence of bleeding after a mean time of 15.3 ± 8.3 days. The mean follow-up time of the series was 1515.4 ± 1311.2 days. Figure 1 shows the flow diagram of patients and etiology of NVGB.

This is a prospective study reflecting daily clinical practice. EUS has been described as a useful tool both for diagnosing the etiology of gastrointestinal bleeding of obscure or recurrent origin and for localizing the vessel responsible for bleeding for interventional vascular radiology-directed hemostatic therapy.^[4] Our main limitations lie in that it is a single-center study including a low number of patients, so we also accept that therapeutic efficacy is strongly related to the available local experience, which may bias the results. Still, larger studies, possibly including randomized controlled trials, are needed to confirm these results.

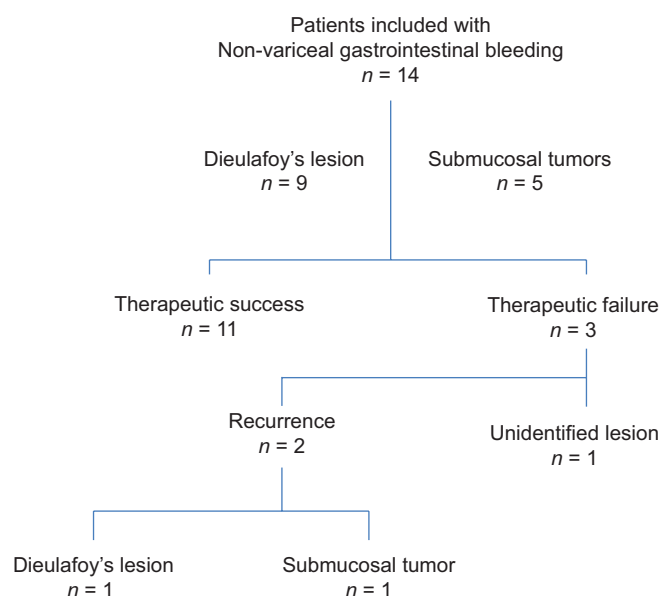


Figure 1. Flowchart of patients evaluated for the study

In conclusion, EUS-guided therapy should be considered in NVGB refractory to endoscopic treatment before surgical therapy.^[5] This has been described before; however, to our knowledge, there are no prospective studies available nowadays. In this setting, EUS allowed accurate identification of the source of bleeding and precise delivery of the thrombotic agent into the target vessel or lesion origin of bleeding. This treatment seems useful, safe, and less invasive than surgery, free of adverse events with a therapeutic success rate of 78%.

Financial support and sponsorship

Nil.

Conflicts of interest

Juan J. Vila is an Editorial Board Member of the journal. This article was subject to the journal's standard procedures, with peer review handled independently of this editor and his research group.

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Received: 2021-07-14; **Accepted:** 2022-03-01;

Published online: 2022-06-08

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10.4103/EUS-D-21-00169

How to cite this article: Uribarri-González L, Pérez-Aguado G, Arrubla Gamboa A, Vila JJ. EUS-guided therapy of nonvariceal refractory bleeding: A prospective observational study. *Endosc Ultrasound* 2022;11:336-7.

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