Deal with rebleeding BEFORE it occurs

THE VTI ENDOSCOPIC DOPPLER SYSTEM*
A SOUND breakthrough in the management of acute peptic ulcer hemorrhage

- Easy and economical to use
- Does not require EUS equipment or training

"After endoscopic therapy, I use the Doppler probe to determine adequacy of hemostasis by assessing for the presence or absence of subsurface blood flow."

– Richard C.K. Wong, MD, Professor of Medicine, Case Western Reserve University, Cleveland, OH

References:
The VTI Endoscopic Doppler System® (E-DOP)

As an easy to use, economical tool, the VTI E-DOP allows endoscopists to identify vessels that cannot be located with visualization alone. No EUS equipment or training is needed. This compact system utilizes disposable Doppler probes which optimize patient safety and probe reliability. Available for upper GI or lower GI applications, the probes can be passed down a 2.8mm or larger channel.

In acute peptic ulcer hemorrhage, E-DOP allows the endoscopist to:
1. Map the arterial course within the ulcer base
2. Target hemostatic therapy appropriately
3. Identify patients at increased risk for rebleeding

Published studies show the benefit of Doppler guided therapy in the treatment of acute peptic ulcer hemorrhage

- Doppler-guided endoscopic hemostasis of acute peptic ulcer hemorrhage results in significantly lower rates of recurrent bleeding. 1,2
- Doppler positive ulcers have a significantly higher risk of recurrent bleeding than Doppler negative ulcers. 3,4
- Ulcers that remain Doppler positive immediately after endoscopic therapy are at significantly higher risk for recurrent bleeding. 3,4

Endoscopic examination reveals an ulcer with a pigmented region at the 9 o’clock position. Studies have shown that while some endoscopists may classify this lesion as an ulcer with a nonbleeding visible vessel, others may classify it as an ulcer with a flat spot (poor/moderate interobserver agreement in the classification of stigmata of recent hemorrhage). In the former case, the ulcer would be treated endoscopically; in the latter, no endoscopic treatment would be administered.

Doppler examination of the ulcer reveals a strong arterial signal within this lesion. Use of the Doppler probe allows the endoscopist to map out the course of the underlying artery. The vessel can be “heard” just above the pigmented region, following a 9 o’clock to 1 o’clock course within the ulcer base. This “acoustic map” allows the endoscopist to target therapy appropriately.

Combination therapy including epinephrine injection and thermal coagulation have been used to treat this ulcer, with therapy focused in the region of the Doppler identified arterial signal. Doppler examination of the ulcer post therapy reveals that the ulcer is now Doppler negative. Arterial flow within the ulcer base has been adequately occluded.

“I routinely use a Doppler probe to examine an ulcer where visual bleeding stigmata is uncertain; for instance, is it a NBVV requiring endoscopic therapy or a flat spot that does not? The Doppler probe provides an "acoustic map" of the subsurface artery that allows for targeted therapy.”

– Richard C.K. Wong, MD, Professor of Medicine, Case Western Reserve University, Cleveland, OH

Alternatively, the ulcer can be treated with the application of hemoclips. By using the “acoustic map” delineated by the Doppler probe, the endoscopist can accurately target the placement of the clips to insure that the artery is adequately occluded. Doppler examination of the ulcer post therapy reveals that the ulcer is in fact Doppler negative.

– Dennis M. Jensen, MD, Professor of Medicine, David Geffen School of Medicine at UCLA, Los Angeles, CA

*US Pat. No. 8,206,304

Doppler examination of this submucosal gastric lesion demonstrates a prominent venous flow signal, allowing the endoscopist to confirm the diagnosis of gastric varices and rule out other submucosal pathologies. 5

Preliminary studies have also demonstrated the utility of the Doppler probe in the treatment of gastric varices using cyanoacrylate injection. 6 Other promising indications for use of E-DOP include endoscopic submucosal dissection, lower GI hemorrhage and needle knife endotherapy. 7,8,9

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