

HemoPill® acute

Assessment of localisation of gastrointestinal bleeding

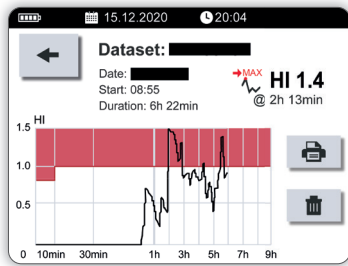


Fig. 1:
Detection of bleeding in
the upper small intestine

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Query

An 86-year-old patient with cardiac comorbidity was referred to us for small intestine diagnostics for suspected moderate GI bleeding on ASA therapy. Externally, an oesophago-gastro-duodenoscopy (OGD) and colonoscopy had already been performed without finding a source of bleeding; with a capsule endoscopy, the suspicion of lower small intestinal bleeding was established. When the patient was admitted to our clinic, they had melaena and haemorrhagic anaemia requiring transfusion with an Hb of 7.2 g/dl. In this case we want to evaluate whether the HemoPill acute can be used to assess the localisation of the source of bleeding, and whether the capsule can thus be helpful in selecting the endoscopic procedure.

Methodology

The HemoPill acute is a swallowable capsule with an optical sensor for the immediate detection of acute bleeding in the oesophagus, stomach and small intestine. Fasting or prior purging is not required. The capsule is ingested in an upright position with a glass of water. During the passage through the gastrointestinal tract, the blood sensor takes readings that are sent via radio to a portable receiver that the patient wears in a bag around the abdomen. Blood is detected by the sensor if the HI value exceeds 1.0. The doctor can evaluate the measured values via the receiver while the measured values are being recorded. In the case described, the HemoPill acute was used directly on the day of admission to detect acute bleeding and to determine the further endoscopic procedure. The reading was tracked for 8 hours.

Results

After only 2 hours 13 minutes, the HemoPill acute detected blood (^{MAX}HI 1.4; see Fig. 1), so that, contrary to the external findings, a haemorrhage in the upper small intestine could be assumed. Thus, we initially followed up with an OGD in which an active Forrest Ib haemorrhage was seen in the duodenum from an angiodysplasia and the haemorrhage was successfully stopped by applying 4 clips and APC treatment. Post-intervention, the patient showed no more bleeding signs during the further inpatient stay and the Hb remained stable in serial controls.

Case Study

HemoPill® acute



O V E S C O

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Conclusion

In our case, the HemoPill acute has proven to be an elegant tool to detect acute bleeding and, in unclear cases, to assess the localisation of the source of bleeding in a timely manner and without patient preparation (no fasting or prior bowel cleansing required) to determine the necessary endoscopic procedure (OGD, oral enteroscopy or anal enteroscopy). By using the HemoPill acute, unnecessary enteroscopy of the lower small intestine could be avoided in our patient. This would have been much more stressful for the patient due to the higher sedation risk of the more time-consuming enteroscopy and the necessary laxative measures.

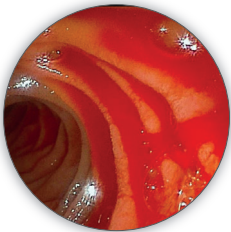


Fig. 2a:
Active Forrest Ib bleeding
in the duodenum

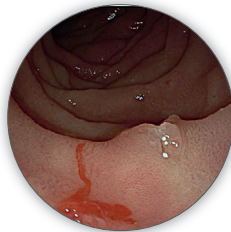


Fig. 2b:
Bleeding angiodysplasia
in the duodenum

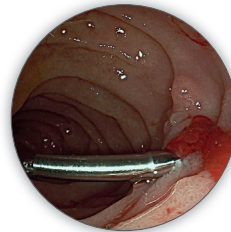


Fig. 2c:
Successful haemostasis
by application of 4 clips
and APC treatment

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