Confocal fluorescence microscopy for detection of gastric angiodysplasia

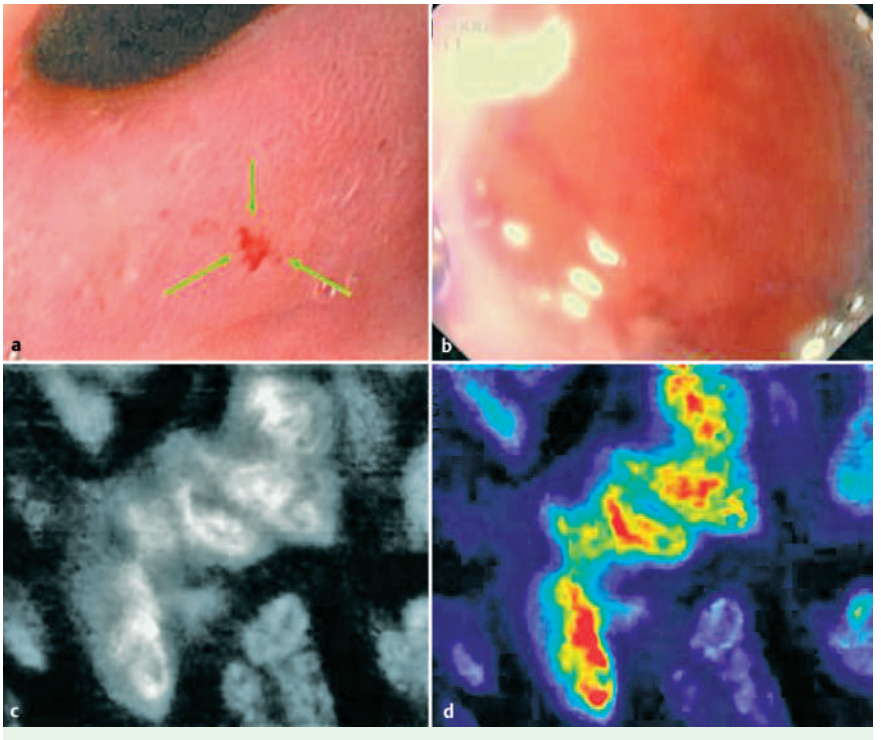

Figure **1** Endoscopical and lasermicroscopic images of angiodysplasia.

A 75-year-old female patient was submitted to our institution for further evaluation of chronic anemia. The patient took a vitamin K antagonist due to an aortic valve prosthesis. Hematemesis, melena or hematochezia were absent. For further evaluation, an upper gastrointestinal endoscopy was performed, which revealed five red spots in the antrum and duodenum (maximum size was 2 mm).

The video shows a 2 mm red spot in the prepyloric antrum (**Figure 1 a**). After intravenous injection of 5 ml fluorescein 1 %, a confocal miniprobe with a penetration depth of 100 microns (Mauna Kea Technologies, Paris, France) was introduced via the instrumentation channel of the endoscope (Olympus GIF 140), with the tip gently touching the lesion (**Figure 1 b**). The laser microscopic sequence shows a dilated sidled blood vessel with moving erythrocytes in real-time (12 images/second) (**Figure 1 c, d**).

After lasermicroscopy, the diagnosis of angiodysplasia as a possible cause of anemia was established, and argon-plasma-coagulation (APC) of the lesions was initiated. Our case shows that confocal fluorescence microscopy helps to establish a firm diagnosis of angiodysplastic lesions before treatment. In addition to the sometimes difficult differential diagnosis of small angiodysplasias, APC therapy bears a potential risk [1,2]. An accurate diagnosis is therefore preferable. Further studies will serve to show whether the portable system we applied (Cellvizio GI, Mauna Kea Technologies) has the potential to overcome these difficulties.

Competing interests: Yes. The cellvizio-system and laser probes were provided by Mauna Kea Technologies (Paris, France) on the basis of a clinical study agreement among the company and the investigators.

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