Utility of the “bear claw”, or over-the-scope clip (OTSC) system, to provide endoscopic hemostasis for bleeding posterior duodenal ulcers

The “bear claw”, or over-the-scope clip (OTSC) system (Ovesco Endoscopy, Tübingen, Germany), is an innovative clipping device made of superelastic biocompatible nitinol [1–3]. This device was developed to close wall defects of the luminal gastrointestinal tract, such as perforations, anastomotic leaks, and fistulas [1, 2]. The use of the “bear claw” in humans is still limited, but due to the excellent capabilities of the “bear claw” to close large mucosal defects, more reports on its efficacy are being published [2,3]. Here we present the use of the “bear claw” to provide hemostasis of large ulcers of the posterior duodenal wall.

Four patients (three women and one man, ages 82–90, mean age 84.5) presented with massive gastrointestinal bleeding. All of the patients had hypotension upon presentation. The patients’ hemoglobin ranged from 6 to 12 g/dL, with a mean of 9 g/dL (normal 12–18 g/dL). All patients...
underwent emergent esophagastroduodenoscopy after initial fluid resuscitation. The ulcers were located in the posterior bulb and were actively oozing blood. All patients received initial therapy with injection of epinephrine–saline solution and clip placement. Despite therapy, all patients started bleeding again within 48 hours. Thus a decision was taken to place the OTSC.

The handle of the scope with the over-the-scope clip (OTSC) release system.

The OTSC system is an innovative clipping system that bears a particular advantage: the biodegradable nitinol, which allows for the entrapment of a large amount of tissue, allowing closure of fistula holes and, as shown in these cases, achieving hemostasis [1–3]. Second, we show that the OTSC is effective for obliterating ulcers with bleeding vessels located in a difficult position (in the posterior duodenum). It is well known that these ulcers are at a higher risk and also more difficult to treat because of their awkward position [4]. In a previous study, we demonstrated that using the colonoscope allowed for targeted endoscopic therapy of these lesions, as the working channel is on the right side. Most gastroscopes have working channels on the left side, making it difficult to apply endoscopic hemostasis [4]. In addition, standard clips often fall off these lesions and induce more bleeding by lacerating the vessel. Although using a heater probe is a proven method to treat lesions similar to those presented in this case, this modality is mainly available in the USA and some Asian countries, but not in most European countries. However, using a heater probe can result in perforation [5]. Finally, we show that the placement of such a clip is very easy, resulting in potentially life-saving hemostasis.

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References


Bibliography

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Corresponding author
K. Mönkemüller, MD, PhD
Department of Internal Medicine,
Gastroenterology and Infectious Diseases,
Marienhospital Bottrop
Josef-Albers-Straße 70
46236 Bottrop
Germany
Fax: +49-2041-1061019
moenkemueller@yahoo.com

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