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Dieulafoy lesions are a rare but potentially fatal cause of Upper Gastrointestinal Bleeding (UGIB). They are commonly located within the stomach with only 15% of these lesions originating from the duodenum^[1] Endoscopic intervention for bleeding Dieulafoy lesions situated within a periampullary diverticulum DUH WHFKQLFDOO\ FKDOOHQJLQJ FKLHÀ\ DWWULEXWDEOH WR WKH VPDO of the lesion and its obscure location. Here, we report a case of successful hemoclip application to a Dieulafoy lesion located within a periampullary diverticulum.

& D V H 5 H S R U W

A 62 year old male presented to our centre with two episodes of melanic stool followed by a syncopal attack. He had a past PHGLFDO KLVWRU\ VLJQL; FDQW IRU)LDEHPWHVGOH\O'HLXWXR\ PHSHRQWHWQWKLH and Cerebrovascular accident for which he was on oral Aspirin 150 mg OD. On assessment in the Emergency Department he appeared pale. His pulse was 90/minute with a blood pressure of 125/86 mmHg. The haemoglobin level was 8.7 g/dL.

We performed an urgent Endoscopy using a forward-viewing endoscope (GIF-1TH 190; Olympus, Tokyo, Japan). Large clots and fresh blood were seen in the duodenum. Following removal of the clots, fresh blood was noted to extrude from a periampullary diverticulum. Decision was made to switch to a duodenoscope (TJF-Q180V J; Olympus, Tokyo, Japan) to improve visibility and access to the periampullary diverticulum >)LJXUH @ \$ 'LHXODIR\ OHVLRQ ZDV LGHQWL; HG DW WKH GRPH RI WKH diverticulum [Figure 2]. The area surrounding the lesion was injected with epinephrine [Figure 3]. In addition to aiding with

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hemostasis the submucosal bleb created by the epinephrine injection would enhance ease of clip deployment.

\$ PP 0HGQRYD KHPRFOLS =KHMLDQJ &R /WG =KHMLDQJ 3URYLQFH &KLQ duodenoscope working channel and using the elevator, the tip of the clip was brought en face with the bleeding lesion. We positioned the hemoclip device at a 45° angle to the tissue plane

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+RZ WR &^WH WK(PD\$QWHG OH HW DO (QGRVFR \$SSO^FDW^RQ WR D ^HXODIR\ /HV^RQ Z^WK^Q D 3

risk of perforation of the thin walled diverticulum with the latter modality. A preemptive sub mucosal bleb was created with an epinephrine injection to enhance ease of clip deployment and to produce a cushion that will reduce the risk of inadvertently clipping the CBD.^[6] The conventional technique for hemoclip deployment is to position the device at a tangential approach to the lesion to allow for adequate capture of mucosal tissue on either side of the prong. However we approached the lesion at a 45° angle to minimise the risk of CBD injury. The successful haemostasis achieved through this approach obviated the need

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to avoid inadvertently clipping the Common Bile Duct (CBD). Intermittent suction was performed to remove remnant blood and to allow an adequate amount of tissue to be captured during hemoclip deployment. The clip was successfully deployed and hemostasis was secured [Figure 4]. Three days later, a second look EGD was performed prior to recommencement of Aspirin.

We illustrate an approach of achieving successful hemostasis of a bleeding Dieulafoy lesion within a periampullary diverticulum using a combination of epinephrine injection and hemoclip deployment through the working channel of a duodenoscope. <https://drive.google.com/file/d/1qBPAA0R-UtghENyyJFoihtg8-dG0P80/view>

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The advent of novel endoscopic modalities in the treatment of Upper Gastrointestinal Bleeding (UGIB) has changed the landscape of its management. However achieving haemostasis in the rare occurrence of a bleeding periampullary diverticular Dieulafoy lesion has remained a technically demanding task.

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The patient had given verbal consent for publication of details of the case.

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and the application of a hodd improve visualisation when confronted with a periampullary diverticular bleed^[5] As illustrated in our case, to attain better access to the lesion, we switched to a duodenoscope and this revealed a Dieulafoy lesion situated at the dome of the diverticulum. It is noteworthy, however, that on the other side of the coin, improved visibility and access to the lesion comes at the expense of limited device maneuverability when employing the use of hemoclips. In addition, the hemoclip sheath may kink while traversing over the elevator of the duodenoscope, leading to failure of deployment.

< ÕOPB] .R]DQ 5 'XRGHQDO DQG M lesions: optimal management. Clin Exp Gastroenterol 2017;10: 275.

1. GHQRVFRSH \$UDQH] 0LOOHU - +XJKHV 0 'H&U novel, duodenoscope-friendly endoscopic clip for treating massive upper-GI bleeding secondary to a Dieulafoy lesion. VideoGIE. 2018;3: 205.

2. 1LVKL\DPDRUL + 5D¿T . .REDUD .RED\DVKL 0 HW DO \$FWLYH EOHF GXRGHQDO GLYHUWLFXOXP WKDW successfully treated using hemostatic forceps: a case report. - &OLQ 0HG &DVH 5HS

3. /HH6 &KR 6% 3DUN 6< 3DUN &+ HW DO 6XFFHVVIHO VLGH YLHZLQ for Dieulafoy-like lesion at the brim of a periampullary diverticulum. J Dig Dis 2017;10: 100.

,Q -RVH /XL] \$UDQH] HW DO UHSRUWHG D Dieulafoy lesion located at the rim of a periampullary diverticulum that was successfully managed with a novel duodenoscope-friendly endoscopic clip device (Dura Clip Repositional Haemostasis Device). *Gastrointest Endosc* 2018;88: 100-103. which, XQIRUWXQDWHO\ ZDV QRW DW RXU GLVSRVDO LV VSHFLILFDOO\ GHVLJQHG IRU PRUH HIIHFWLYH XVH. ZLWK D GXRGHQRVFRSH RZLOJ WR LWV XQLTXH UXEEHU FRDWHG VKHDWK. D GXRGHQRVFRSH RZLOJ WR GLVFRDQ improve performance over the elevator.

4. +XEEDU\$]]RX] 0 \$UDUH FDVH RI periampullary diverticulum diagnosed and treated with a novel endoscopic clip. *Gastrointest Endosc* 2018;88: 100-103. VLGH YLHZLQJ HQGRVFRSH \$P - *D 5DPDVN 35 HGID 3 (OGRVF ZLWK D GXRGHQRVFRSH RZLOJ WR change angiography complications: Techniques to reduce risk and management strategies. *Gastro Interv* 2017;6: 37-53.

We opted for the hemoclip device as opposed to diathermy in our attempt to secure the bleeding lesion due to the associated