Uncontrollable hemorrhage is a significant cause of preventable death on the battlefield. It is particularly difficult to stop bleeding in the abdomen and pelvis, with traditional treatments such as applying direct pressure or using tourniquets often rendered useless. One method that has been successful is known as REBOA, or resuscitative endovascular balloon occlusion of the aorta. A catheter is placed in the leg and snaked up through the aorta where a balloon is inflated to block blood flow and stop the bleeding. Unfortunately, this method is invasive and requires special training not widely available in the battlefield.

Similar to REBOA, MCIRCC researchers have developed GROA: gastroesophageal resuscitative occlusion of the aorta. As opposed to using a catheter to stop the bleeding, the GROA device non-invasively occludes the aorta by going into the mouth, down the esophagus, and into the stomach. This method utilizes the stomach’s position next to the abdominal aorta. By inflating a balloon and swelling the stomach, GROA is able to put enough pressure on the aorta to “pinch” it closed, stopping the hemorrhage while maintaining blood flow to the heart and brain.

GROA is a minimally invasive device that can be used to rapidly stabilize a patient by controlling severe non-compressible abdominal hemorrhage at the point of impact. The device allows partial to full mechanical occlusion. It is also easily implemented in austere environments, such as battlefields.

Easy to Implement  Minimally Invasive  Works Alongside Secondary Treatments

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