

#### What is EndoClot® PHS?

EndoClot<sup>®</sup> PHS (Polysaccharide Hemostatic System) is a single-use medical device composed of absorbable modified polymer (AMP<sup>®</sup> particles) and an applicator with a tube connecting to a clean external air source (preferably EndoClot<sup>®</sup> Air Compressor) to spray the plant-based absorbable hemostatic powder onto the bleeding site in both upper and lower GI tract. AMP<sup>®</sup> particles have been used in over 400,000 open surgery cases, and it is proven to be safe and effective.

#### How does it work?

AMP<sup>®</sup> particles have a molecular structure that rapidly absorbs water from blood. This dehydration process causes a high concentration of platelets, red blood cells, and coagulation proteins (thrombin, fibrinogen, etc.), which accelerates the normal, physiologic clotting cascade. When in contact with blood, AMP<sup>®</sup> particles support the formation of a gelled, adhesive matrix which provides a mechanical barrier to further bleeding.

#### How long will the EndoClot® powder stay in the GI tract?

AMP<sup>®</sup> particles are degraded within a few hours depending on the amount of material applied and the site where it is used within the GI tract. AMP<sup>®</sup> particles are degraded by amylase and glucoamylase.

#### When should I use EndoClot® PHS?

EndoClot® PHS works particularly well in controlling oozing bleeding over large areas, indications such as:

- Ulcerative bleeding
- Post polypectomy
- Tumor bleeding
- Post EMR, ESD
- In-stent bleeding
- Mallory-Weiss tear etc.

EndoClot® PHS is also a good complimentary method to use in combination



with other conventional techniques. EndoClot<sup>®</sup> PHS is not recommended as a monotherapy for controlling Forrest Ia bleeding or variceal bleeding.

# What are the technology advantages of the EndoClot® application system?

- The unique anti-reflux design prevents occlusion
- The powder is sprayed directly to the designated area without stress to the lesion
- Works for both gastroscopy and colonoscopy
- Enables gradual and precise powder delivery to avoid a "white out" effect
- Easy to deploy

#### What are the advantages of AMP® powder?

- Contains no human or animal components
- Effective hemostat
- 100% biodegradable
- Can be used in combination with other established techniques in any sequence
- Can be easily irrigated and re-applied if necessary

### Is Endoclot® PHS effective for patients with impaired coagulation?

A Clinical study suggested that sufficient hemostasis can be achieved by using EndoClot<sup>®</sup> PHS for patients receiving anticoagulant medication or other coagulation impairment.

#### Does the gelled matrix need to be removed?

It is not necessary to irrigate the powder or clot away after hemostasis is achieved. The AMP<sup>®</sup> particles are plant-starch derived polysaccharide; it will be digested and absorbed naturally.

#### How can I prevent the catheter from becoming occluded?

• If you believe the accessory channel is very wet, use an empty

5201 Great America Parkway, Suite 526, Santa Clara, CA 95054, USA Phone: +1 (408) 980-9125 E-mail: info@endoclot.com



syringe to pump air in prior to the insertion of the catheter.

- Make sure the air compressor is switched on and in the "H" mode before inserting the catheter into the accessory channel.
- Avoid direct contact with the lesion or surface of the mucosa.
- Keep the tip of catheter at least 1cm away from the lesion during the spray application.

#### Are there any side-effects of EndoClot® PHS?

No, there have been no reported side-effects.

#### Can I use EndoClot® PHS if the patient is allergic to starch?

Though it is very rare, if the patient is known to be allergic to starch, EndoClot<sup>®</sup> PHS should not be used.

#### How can I use EndoClot® PHS with clips?

EndoClot® PHS can be used in any sequence with clips.

- It can be used as a diagnostic tool to identify the exact bleeding spots for clipping.
- It can be used as an add-on therapy to clipping to achieve complete hemostasis.

### What data/publications are currently available for EndoClot® PHS?

- Early Clinical Experience of EndoClot™ in the Treatment of Acute Gastrointestinal Bleeding. Halkerston K, Evans J, Ismail D, et al. Gut. 2013; 62(Suppl 1): A149.
- Hemostasis with Powder-Experience with EndoClot<sup>™</sup> in Difficult UGI Bleedings. Müller-Cerbes D, Beeck A, Dormann A, et al. Endoskopie heute. 2013; (26(4)): 254-8.
- Improved Techniques for Endoscopic Mucosal Resection (EMR) in Colorectal Adenoma. Sold M, Kahler G. Viszeralmedizin. 2014; 30:000-000.
- Polysaccharide hemostatic system for hemostasis management in



colorectal endoscopic mucosal resection. Huang R, Pan LY, Hui N, et al. Digestive Endoscopy. 2014; 63-68.

- Single Center Experience with EndoClot<sup>™</sup> Powder Spray for Upper Gastrointestinal Bleed. Kasimanickam M, Vinnamale S, Andrew MR, et al. Gut. 2014; 63(Suppl 1): A53-54
- The use of EndoClot™ Therapy in the Endoscopic Management of Gastrointestinal Bleeding. Patel J, Bhuva M, Al-Bakir I, et al. Gut. 2014; 63: A55-A51.