

TECHNOLOGY APPROACH

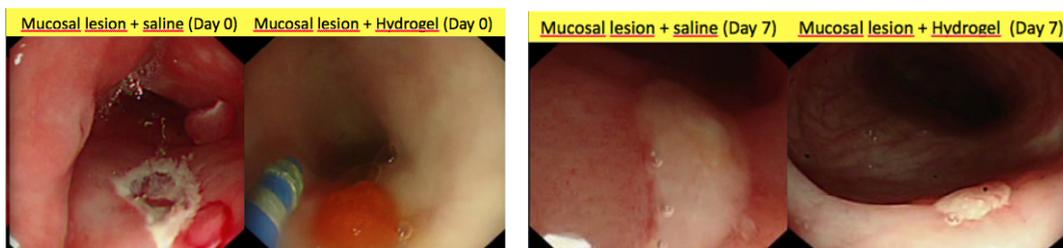
New developed hydrogel dressing shield, biocompatible, biodegradable and bioactive, with an appropriate viscosity and adhesion capacity, easy to apply with the endoscope, to treat mucosal lesions in the gastrointestinal tract.

BACKGROUND

Colonoscopic procedures have become massive in the last years since colorectal cancer (CRC) and inflammatory bowel disease (IBD) are becoming prevalent disorders. Endoscopic mucosal resection (EMR), endoscopic submucosal dissection (ESD) and polypectomy are endoscopic resection techniques that have now become standard practice worldwide. These techniques have true advantages over surgery, but can induce adverse events, including bleeding, perforation and coagulation syndrome (CS), than are likely to increase because of the widespread implementation of endoscopic screening programs. Several approaches for avoiding the post-operative complications after therapeutic endoscopy have been described, including clipping techniques. However, these procedures require special devices or are quite complex. In recent years various bio-absorbable materials have appeared mainly in maxillofacial and ocular surgeries as a sealants or haemostatic agents and reepitelizants. The use of such biomaterials to prevent and/or treat the complications of endoscopic procedures has been scarcely studied. Following this evidence is of particular importance to have a colon dressing designed specifically to prevent complications from thermal damage, and that can be applied directly to the mucosa through the working channel of the endoscope.

OUR RESULTS UP TO DAY

The proposed product is a hydrogel with bioactive, biodegradable, and bioadhesive properties that can be administered through the endoscope working channel, directly on the mucosal lesions. This composition can easily and rapidly be applied without requiring any special or complex devices with a simple technique that can be universally applied. Due to its viscosity and adhesion properties at body temperature, has the ability to remain adhered to the affected area for a long period of time, facilitating the physiological healing of the lesion. This hydrogel has been tested in preclinical studies of rat and porcine models of colon microperforation, showing strong healing properties and avoiding mortality and reducing the risk of peritonitis development. Mucosal healing rate (percentage of mucosal restoration) and physiological healing (absence of submucosal fibrosis) were significantly higher in animals treated with our hydrogel.



Complete results upon CDA signature.

ADVANTAGES

- This technique is easy to apply and cost/effective
- The use of this composition would minimize the morbidity and mortality associated with therapeutic endoscopy
- This composition promotes mucosal reepitelization instead of cicatrization

INTELLECTUAL PROPERTY STATUS

EU priority Patent

LOOKING FOR

- Licensing Out
- Investment
- Co-development

PRODUCT PROFILE

Category	Target Product Profile
Clinical Indication	To treat/prevent mucosal lesions or skin ulcers
	Thermal injury associated/caused by therapeutic endoscopy (Coagulation syndrome)
	Adjuvant therapy to mechanical treatments in gastrointestinal perforations.
	Sealant treatment in surgical anastomoses and leaks or fistulas in gastrointestinal tract.
Safety	Composition is biocompatible and biodegradable.
Physical Characteristics	Composition shows suitable viscosity and adhesion properties. At body temperature, it has the consistency of a gel, and has the ability to remain adhered to the affected area.

INVENTORS

Department of endoscopy and gastroenterology, IGTP and HUGTP:

- Dr. Vicente Lorenzo-Zúñiga
- Dr. Ramon Bartolí
- Dr. Jaume Boix

Núria Martí and Maria Ortega
Knowledge and Technology Transfer Office

nmarti@igtp.cat | mortega@igtp.cat | T.+34 934 978 664

Institut d'Investigació en Ciències de la Salut Germans Trias i Pujol
Ctra. de Can Ruti. Camí de les Escoles, s/n, 08916 Badalona, Spain