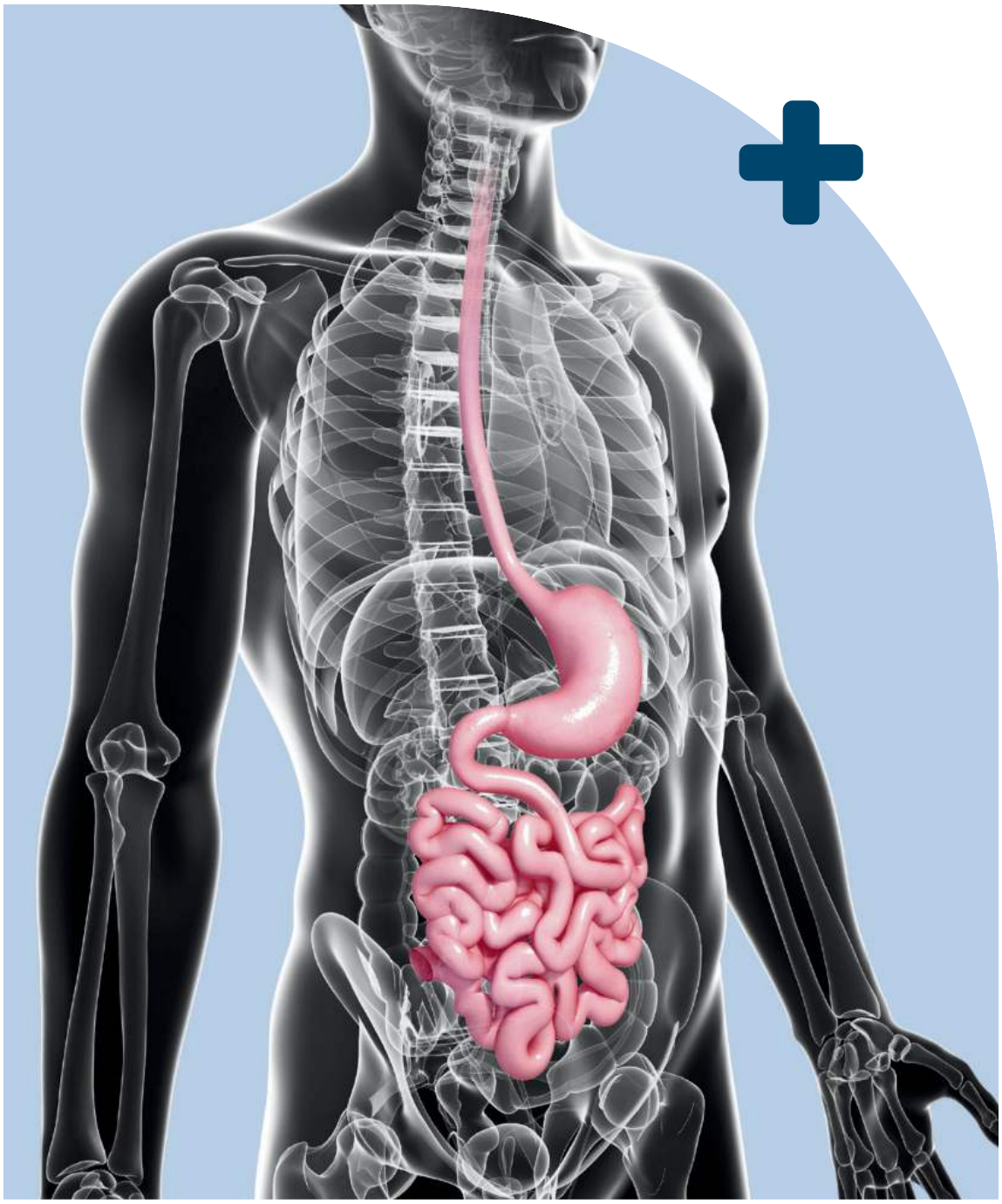
Wickland

Gastrointestinal
Mucosal Healing Gel



Esophageal

Gastric

Intestinal

PT. Wickland Medika Imantara
Medical, Aesthetics & Laboratory Supplier
Jl. Palem Sememi Raya No 12 – 12A Kel. Sememi,
Kec. Benowo Surabaya 60198 | 031-33100412

PRODUCT FEATURE

Acid-Sensitive Smart Biomaterials

(Available Size: 5 ml, 10 ml/Storage Condition: 0℃-40 ℃)

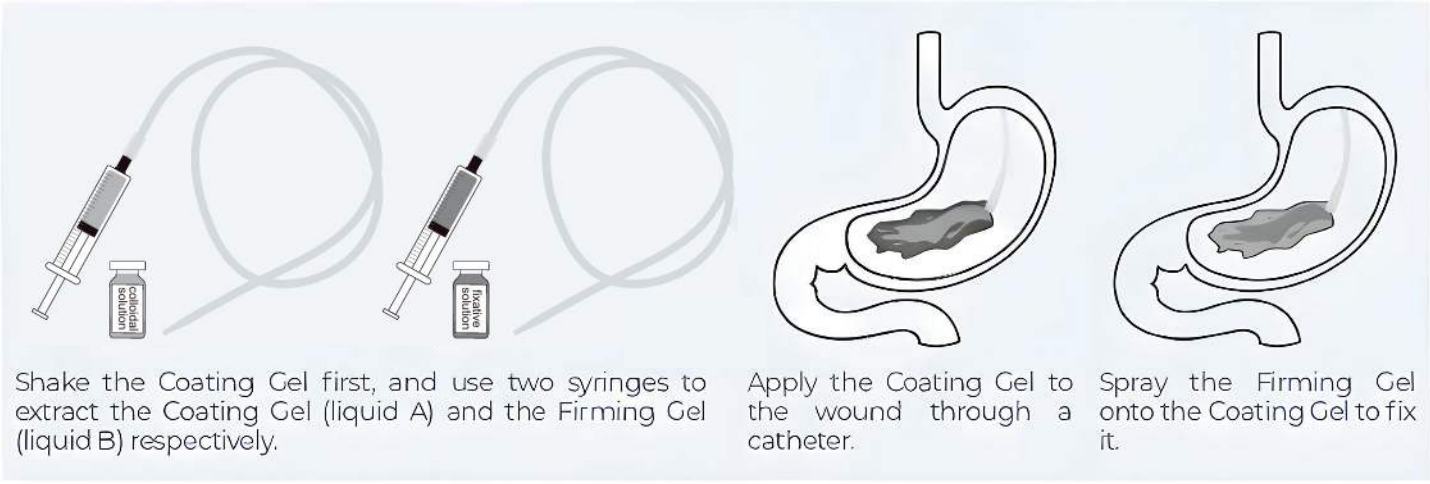
1/ Innovative materials

2/ Exclusive patent

3/ World's first

4/ Filling the gap in the field

EASY AND SAFE OPERATION



Shake the Coating Gel first, and use two syringes to extract the Coating Gel (liquid A) and the Firming Gel (liquid B) respectively.

Apply the Coating Gel to the wound through a catheter.

Spray the Firming Gel onto the Coating Gel to fix it.

COMPETITIVE ADVANTAGES

- The Mucosal Healing Gel is a highly innovative medical product that fills a significant gap in the gastrointestinal market.
- It effectively reduces the occurrence of postoperative complications such as bleeding and perforation after endoscopic surgery, leading to lower treatment costs and improved patient outcomes.
- By promoting wound healing, our product also helps to shortening hospitalization time and reduce hospital costs.
- Improved healing quality and reduced possibility of recurrence or reoperation result in reduced economic burden on patients and healthcare systems.
- By expanding the scope of gastroscope/colonoscopy/esophagoscope surgery, our product helps to improve the level of treatment and popularity of the hospital.
- Reduced physical and mental burden on patients leads to an improved quality of life and increased patient satisfaction.

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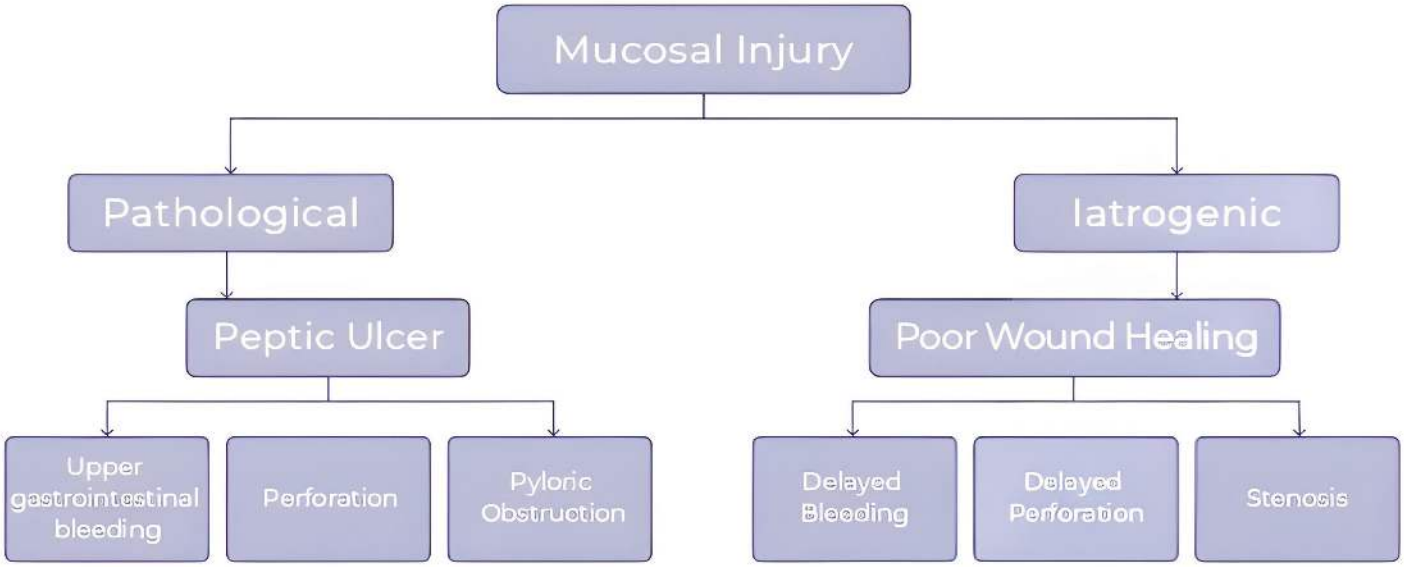
WHAT CAN HEALING GEL SOLVE?



PHYSICAL, CHEMICAL AND SAFETY CHARACTERISTICS OF MUCOSAL HEALING GEL

Four major physical and chemical characteristics

- Acid-sensitive, the material solidifies when exposed to acid
- Anti-enzymatic, the material is not digested
- Achieve coupling with the wound surface, not easy to fall off
- Convenient for injection and adapting to the wound surface

Three major safety characteristics

- Non-toxic
- Non-irritating
- Non-allergic

WOUND PROTECTION MECHANISM

Quadruple Recovery

- Protect the wound
- Promote tissue and cell regeneration
- Accelerate healing
- Promote gastrointestinal function recovery

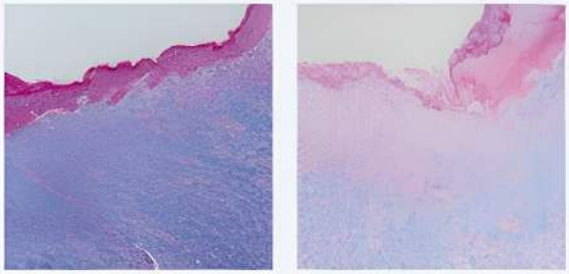
PRODUCT INGRIDIENTS

The Coating Gel is a viscous, sterile, stain free, odorless liquid containing sodium alginate.

The Firming Gel is a clear, sterile liquid containing polylysine and purified water.

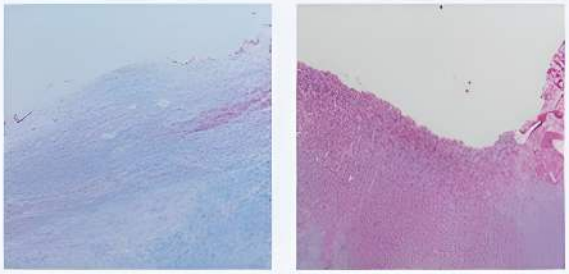
INHIBIT FIBROSIS AND REDUCE SCAR HYPERPLASIA

Esophageal



Control Group Experimental Group

Intestinal



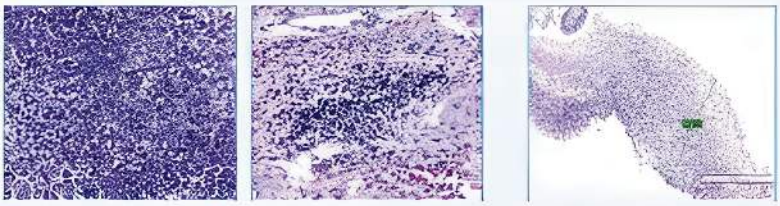
Control Group Experimental Group

Blue staining represents collagen fibers

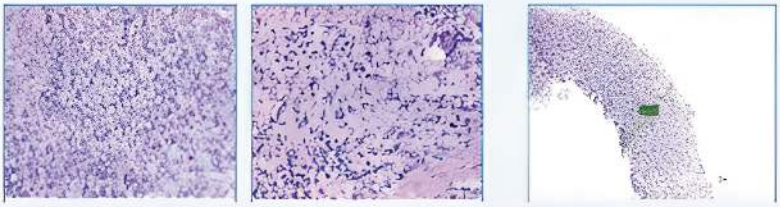
REDUCE THE INFLAMMATORY RESPONE AND PROMOTES REGENERATION OF NEW TISSUE

Inflammatory response of ulcer surface

Control Group



Experimental Group

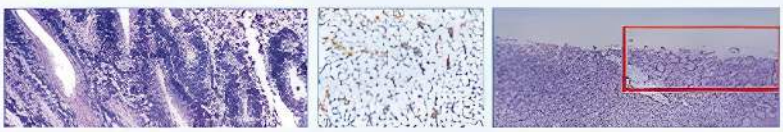


The experimental group showed a mild inflammatory response, while the control group showed necrosis, basal hemorrhage, fibrosis, and aggregation of marginal basal lymphocytes, and the depth of inflammatory infiltration was more in the control group than in the experimental group.

Promotion of epithelial cell and capillary formation

Control Group

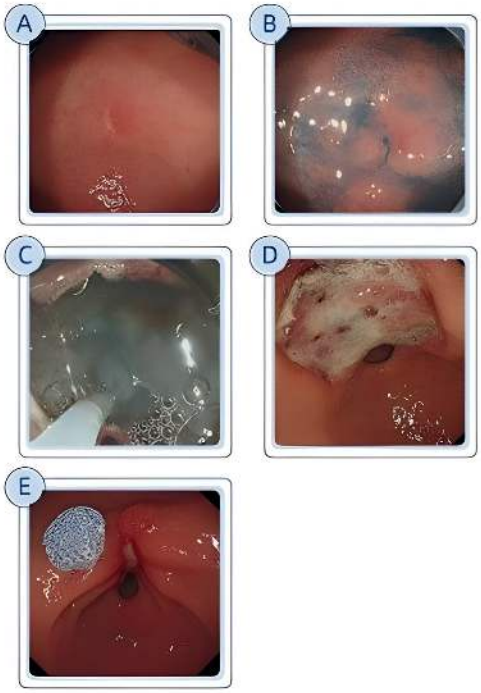
Experimental Group

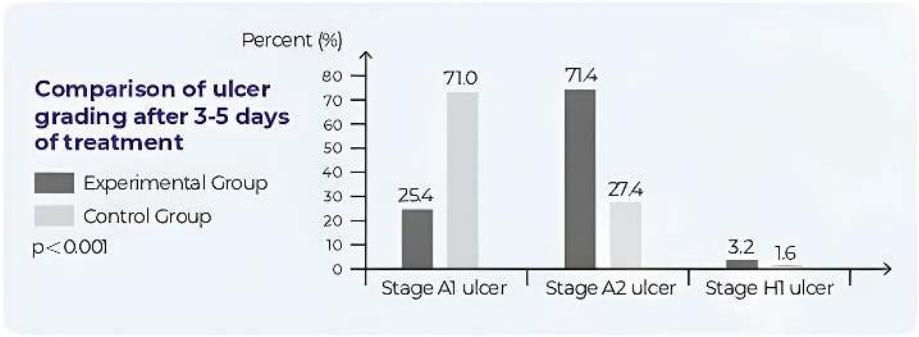


There was no marginal mucosal hyperplasia, lymphocyte aggregation, necrosis or hemorrhage in the experimental group compared to the control group.

The experimental group had neatly arranged glandular cells and more CD34(+)-perfused vessels.

THE ULCER STAGE AT 3-5 DAYS AFTER ESD SURGERY

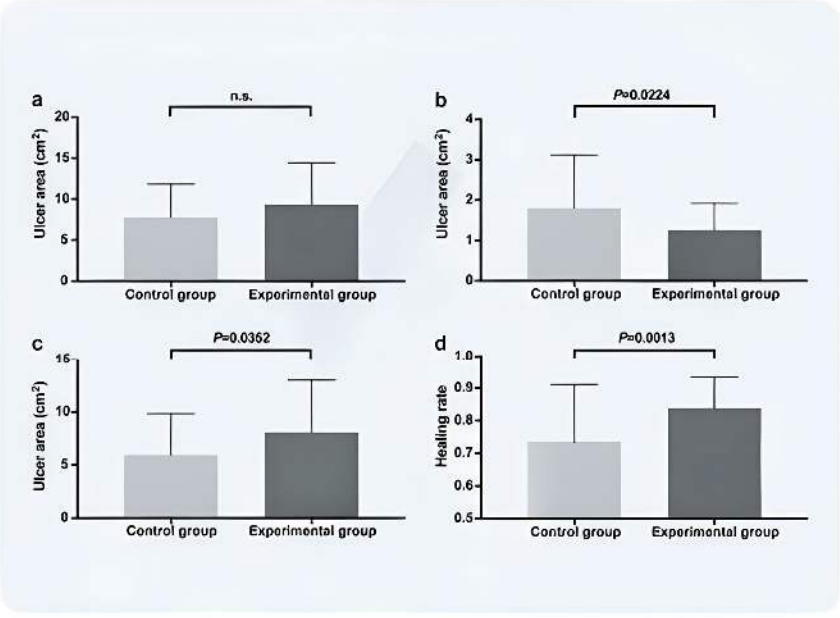


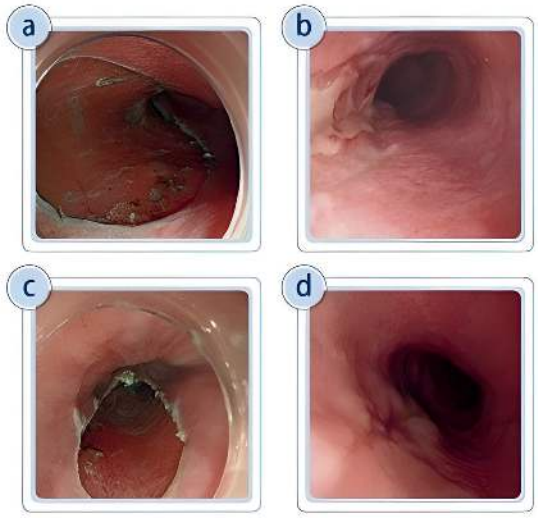


Changes in a gastric antral ulcer induced by ESD with Mucosal Healing Gel.

(A) An early-stage cancer on the lesser curvature of the antrum.
(B) Endoscopic image after spraying with indigo-carmine dye.
(C) Application of gel to the ulcer immediately after ESD.
(D) The ulcer was in the active stage according to the Sakita and Fukutomi classification at 3 days after ESD.
(E) The healing stage was observed at 28 days after ESD.

EFFECTIVENESS OF HEALING GEL IN PROMOTING WOUND HEALING



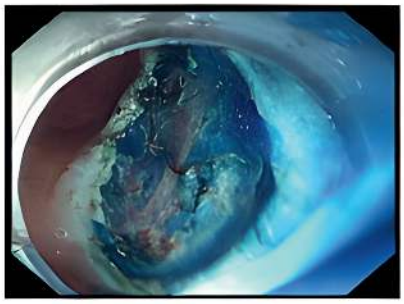


(a) Artificial ulcers left by ESD in the control group.
(b) Ulcer conditions in the control group 2 weeks later.
(c) Artificial ulcers left by ESD in the experimental group.
(d) Ulcer conditions in the experimental group 2 weeks later.

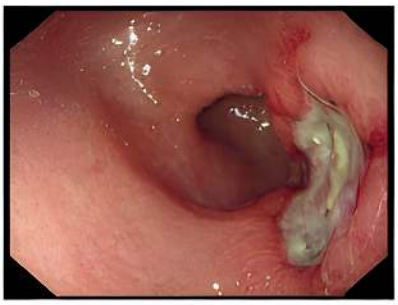
The healing rates were signifcantly higher in the experimental group than in the control group (83.89±9.51% vs. 73.28±17.81%, respectively, P=0.0013).

GASTRIC CLINICAL TRIALS

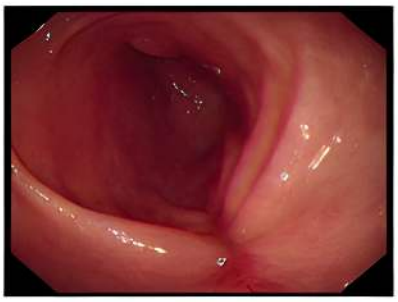
Experimental Group



During Surgery
(4cm*3.5cm)

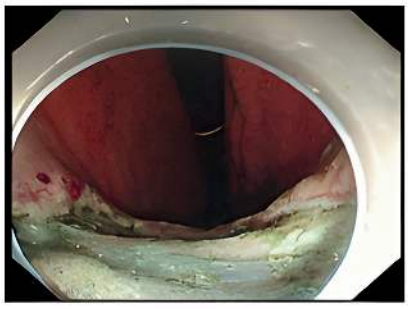


3 Days after Surgery
(2.5cm*2cm)

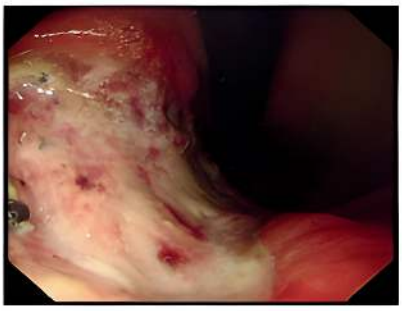


28 Days after Surgery
(Basic Healing)

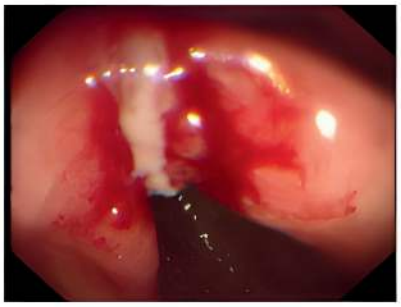
Control Group



During Surgery
(4cm*3.5cm)



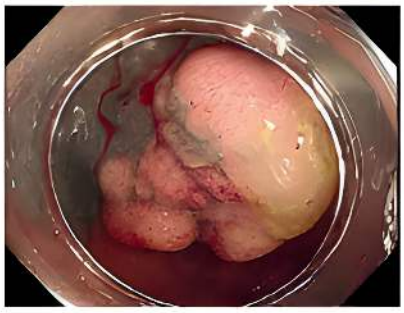
3 Days after Surgery
(4cm*3.5cm)



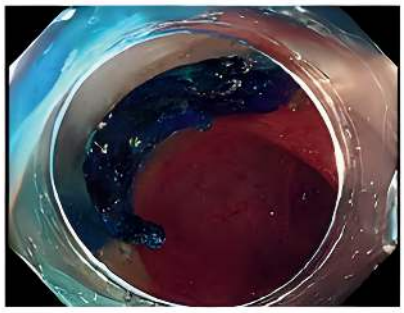
28 Days after Surgery
(3cm*2cm)

INTESTINAL CLINICAL TRIALS

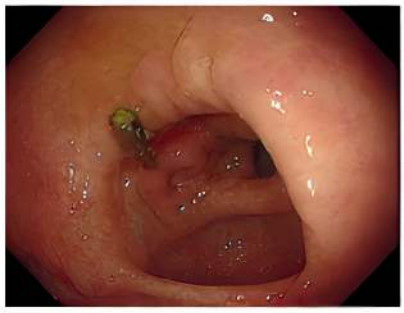
Experimental Group



Before Surgery

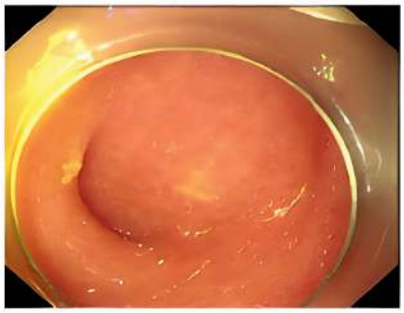


During Surgery
(4.0cm * 2.2cm)

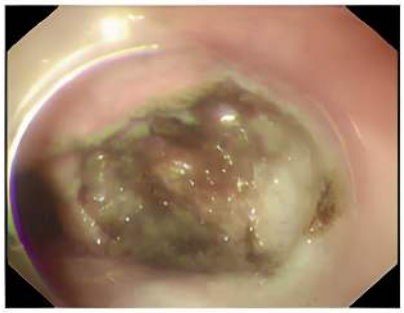


14 days after surgery
(0.8cm * 0.2cm)

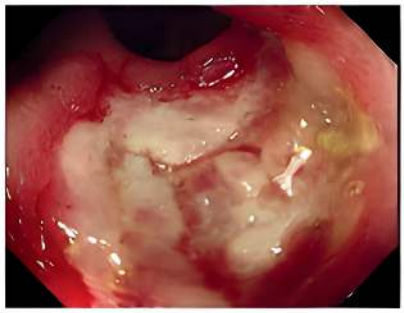
Control Group



Before Surgery



During Surgery
(2.8cm * 2.5cm)



14 days after surgery
(2.2cm * 2.2cm)