

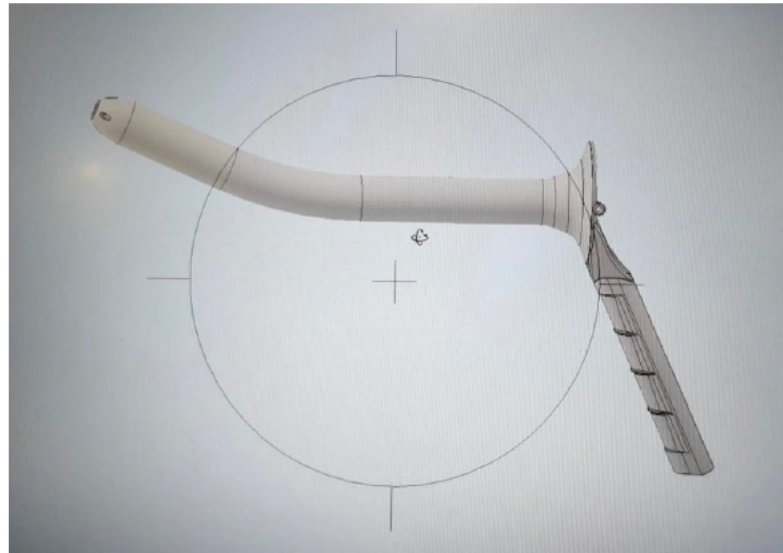
REVI PROCTOSCOPE

Description

Currently, after colorectal surgery, the integrity of rectal anastomoses is checked using indirect methods, such as air insufflation tests and/or Betadine. Direct visualization of the anastomosis requires a colonoscope.

Therefore, the Research Team of the General Surgery Department at the General University Hospital of Elche, belonging to the Foundation for the Promotion of Health and Biomedical Research of the Valencian Community, in collaboration with the General Surgery Department of Miguel Hernández University, has developed a rectoscope with high-resolution illumination and camera, sterilizable, that transmits real-time images via cable or Wi-Fi to any electronic device. This allows visualization of the anastomosis up to 15 cm from the anal margin, thanks to the anatomical curvature of its design, as well as other intraluminal lesions of the ano-rectal canal for diagnosis, treatment, intraoperative and/or outpatient purposes.

This visualization allows direct checking of the anastomosis integrity and also diagnosing anastomotic leaks during the postoperative period in the hospitalization ward, without the need for sedation, in patients with high clinical-analytical suspicion, potentially anticipating future major dehiscence complications.



REVI Proctoscope Design Drawing

Technical advantages

- Digital camera with LED lighting.
- Image transmission via Wi-Fi/cable.
- Anatomical curvature allowing analysis up to 15 cm of the ano-rectal canal, enabling visualization of high rectal anastomoses.
- Air insufflator with 4 orifices.
- Ergonomic and easy to handle with one hand.

Development state and Industrial Property rights

State of development:

The described technology has a developed prototype through the implementation of plans and 3D printers made with transparent medical resin that allows better illumination of the work area. It needs development for initial clinical validations and subsequent commercialization.

Industrial property rights:

Invention protected by patent application number P202330425 with priority date May 29, 2023.

Co-owner



Funding entities:

