

TITLE: Anti-reflux ostomy device

FIELD OF INTEREST

Ostomy devices

CLINICAL NEED

A colostomy or an ileostomy may be done as part of treatment for: cancer of the colon, rectum or anus, an inflammatory bowel disease, such as ulcerative colitis or Crohn's disease, Familial Adenomatous Polyposis (FAP), a bowel obstruction, an injury that damages the intestine, diverticulitis or birth defects of the intestines.

Colorectal cancer is the main reason of this type of procedures accounting for the 80% of all ostomies performed in Spain. It is estimated that 1.5 out of every 1000 Spanish citizens has an ostomy. This number equates to 70,000 people, with over 13,000 new cases every year. According to the International Agency for Research in Cancer (IARC), colorectal cancer is the fourth most prevalent cancer in the worldwide with an incidence in 2020 of 19.5%. According to NCBI, colorectal cancer is the fourth most common cancer and the second main cause of cancer-related deaths in the US. The risk of colorectal cancer increases with age as it is commonly diagnosed in people aged from 65 to 74. Moreover, the prevalence of colorectal cancer is increasing in Asian countries such as India, China, and Japan. As per estimates by the American Cancer Society, in 2020, the number of new cases of colon and rectal cancer in the U.S. were 104,610 and 43,340, respectively.

All ostomy surgeries (colostomies, ileostomies and urostomies) require life-long utility of a pouching system (i.e., stoma appliances) to store body waste (e.g., urine and/or feces). This fact derives in several implications among those people who need to use for their rest of their life these kinds of systems, which may include physical, psychological and economical functional effects.

DESCRIPTION OF THE INVENTION

The device consists of a stoma plug for controlling the output of biological fluids through a stoma created by a colostomy, ileostomy or urostomy and to a system comprising such stoma plug and an element for managing the outputted biological fluids.

The stoma plug comprises: a tube (10) comprising an opening (12) in a proximal portion and at least one opening (14) in a distal portion, a two-way valve system (20) comprising at least one opening (21) and a plug (24) configured to close the at least one opening (21), the two-way valve system (20) connected to the tube (10) through its proximal portion, and a cap (30) configured to cover the two-way valve system (20) and the stoma (45), the cap (30) comprising an opening (32) to directly access the two-way valve system (20) from the outside. The tube (10) is configured to be inserted into

Contact details:

Innovation Unit
e-mail: beatriz.palomo@quironsalud.es

the colon, ileum and/or ureter(45) through its distal portion, and the two-way valve system (20) is configured to passively remain closed and to be opened when the plug (24) is displaced from the at least one opening (21).

The vacuum device is a syringe. Advantageously, the user can use the syringe to extract in a short period of time the biological fluids of the colon, ileum and/or ureter⁵⁰ through the stoma plug.

ADVANTAGES

Allows for the stoma plug to be configured to prevent the flow of the biological fluids when in use.

Provide an additional security measure against biological fluids.

Painless insertion of the device.

TECHNOLOGY KEYWORDS

Colon, ostomy, stoma plug, devices.

IPR STATUS

Patent application number: EP22382591.0

Applicants: Ownmed Innovation SL, FIBHGM, UC3M, FIIS-FJD.

TYPE AND ROLE OF PARTNER

Looking for financing to develop the technology

Contact details:

Innovation Unit
e-mail: beatriz.palomo@quironsalud.es