

Wearable Refeeding Pump for Enterocutaneous Fistula

Published date: April 5, 2019

Technology description

Brief Description

A wearable medical device collects gastrointestinal secretions before a fistula and pumps them into healthy intestine. This wearable refeeding pump simplifies enteroclysis, reduces treatment costs, increases patient autonomy and enables normal eating.

Technology

Enterocutaneous fistula (ECF) is an abnormal connection between the bowel and the skin. While the condition may heal on its own, definitive surgery to seal the gastrointestinal tract is often required. Enteroclysis, or collection of fistula effluent and distal refeeding, is currently used to treat ECF. Gastrointestinal contents are collected in a bag affixed to the skin, mixed with prepared nutrition, and pumped into the distal intestine. The lack of a reliable anchoring mechanism for collection and feeding tubes results in frequent tube dislodgement. As patients may wait years for definitive surgery, the complexity of this process requires continuous or frequent inpatient hospital admission. Researchers at the University of Pennsylvania have developed a medical device which is securely attached to the patient, collects fistula effluent and pumps it into the distal intestine. The device is comprised of a proximal collecting tube for collecting gastrointestinal secretions and ingested food, a portable pump, and a distal refeeding tube to deliver contents to the intestine beyond the fistula. Importantly, the device includes an anchoring mechanism to secure the tubing in place. This technology improves patient autonomy and will enable patients to eat normally and reduce hospital time while lowering treatment costs.

Application area

- Treatment of enterocutaneous fistula while patients await definitive surgery

Advantages

- Patients can eat normally
- Improves patient autonomy

- Reduces cost of care by enabling patients to spend less time in the hospital
- Wearable anchoring mechanism for pump

Institution

[University of Pennsylvania](#)

Inventors

[Daniel Holena](#)

联系我们



叶先生

电话 : 021-65679356

手机 : 13414935137

邮箱 : yeyingsheng@zf-ym.com