



Medical devices.

## Laparoscopic instrument to perform fundoplication in esophageal reflux surgery.

A researcher from the Public Health System of Andalusia (SSPA) has designed a new laparoscopic device intended for gastroesophageal reflux surgery with two possible alternatives to effectively improve the current maneuver.

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### Description

**Gastroesophageal reflux disease** occurs when the lower esophageal sphincter (LES), the valve that controls the passage of contents from esophagus into the stomach, is altered or inappropriately relaxed, allowing the content to revert to the esophagus, irritating its mucous membrane.

The surgical treatment of this disease is performed laparoscopically using a specific technique named as Nissen, which involves passing the fundoplication behind the esophagus, facilitating the function of closing the lower esophageal sphincter (LES) and making it difficult for the stomach's contents to return to the esophagus.

The biggest difficulty in this type of intervention is to pass the gastric fundus (GF) through the retroesophageal tunnel. Also, the use of straight tweezers is complicated to reach the gastric fundus (GF), and it also makes it difficult to grasp with tweezers, which are not firm enough to perform the traction.

All these facts above mentioned force to start the operation again. **To improve this maneuver, a new laparoscopic device has been designed by this researcher, which fixes the aforementioned problems.**

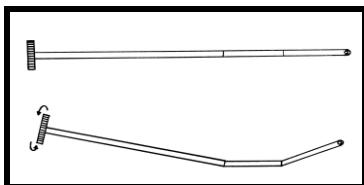


Figura 1. Device recreation.

The mentioned instrument has been designed with two variants, one rigid and one flexible, in which the same maneuver is performed. Both are comprised of a rod with a drive mechanism at the proximal end of the instrument for the purpose of bending a portion at two points. So, it is possible to alternate between a straight or curved configuration to improve with confidence the maneuver of moving the gastric fundus (GF) through the retroesophageal tunnel.



### Advantages

- It consists in an **improved device with great utility**, providing **greater effectiveness, low economic cost, easy handling and low technical difficulty**.
- At the moment there are no alternative products that allow to perform the maneuver in an easier way**, thus avoiding possible related problems, especially in certain surgeries with singular complexity.



### Industrial Property

This technology is protected by national utility model.



### Aims

The researcher is looking for partnership and/or license agreement.



### Classification

**Area:** Medical devices.

**Pathology:** Digestive system.