

Instrument suitable for the removal of tumours and disease-causing organs

Laparoscopic surgical instrument particularly suitable for the removal of tumours and disease-causing organs, such as uterine myomas (fibroids) but without ruling out additional endogenous surgery.

Description and essential characteristics

Laparoscopic surgical instrument comprised of a base body, to which is fixed a surgical gripping tool in the shape of a corkscrew with a retractable metal cover over the tip. At the other end of the instrument there is a handle for manipulation.

The cover or cap protecting the gripping tool can move longitudinally along the outer surface of the body between a protection position, in which the protective cap covers the gripping tool, and a working position wherein the protective cap exposes the gripping tool.

Thus, while the body is inserted into the patient, the protective cap remains in protection position—under the tension effect of a resilient element—covering the gripping tool and preventing it from damaging the patient's healthy tissues. When the end of the instrument makes contact with the tumour or organ to be removed, the surgeon pushes the instrument and the gripping tool penetrates the tumour or organ while the protective cap is maintained in position, with the result that the protective cap moves towards the working position, allowing penetration of the gripping tool. As soon as the tool is extracted from the tumour or organ, the elastic element pushes the protective cap back to the protective position, thus covering the gripping tool and facilitating the safe removal of the body from inside the patient.

The device is particularly suitable for the removal of tumours and disease-causing organs, although it can be used in other types of endogenous surgery. It could also be used to perform laparoscopic hysterectomies, because it can be anchored into the uterus, favouring traction for better mobilisation.

Competitive advantages

Unlike other devices currently available on the market, this instrument provides safety for the surgeon. While performing surgery, the sharp end of the gripping tool is covered in resting conditions, avoiding unnecessary and inconvenient tearing. Similar currently available instruments have the sharp corkscrew-shaped gripping tool exposed.

In short, the device:

- Provides security to the surgeon during surgery
- Protects adjacent structures by avoiding blood vessel breakage or damage
- Provides better mobilisation in current hysterectomies as it can be anchored into the uterus and retrieved, while favouring such mobilisation.

Type of collaboration sought

Cooperation is sought with any Party interested in partnering, licensing or investing in the technology, whether it be an investor to fund the project, a partner interested in getting involved in any of the various phases until its placement on the market, a patent licensee, etc. Organisations potentially interested in this technology are those devoted to the manufacture, commercialisation and/or distribution of healthcare products, particularly medical devices; as well as hospitals, gynaecological clinics, etc.

Current stage of development

A hand-made prototype has already been developed.

Current state of intellectual property

Spanish patent P201230950, granted in January 2015.
International patent application PCT/ES2013/000139.



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