MONOPOLAR ELECTRIC SCALPEL

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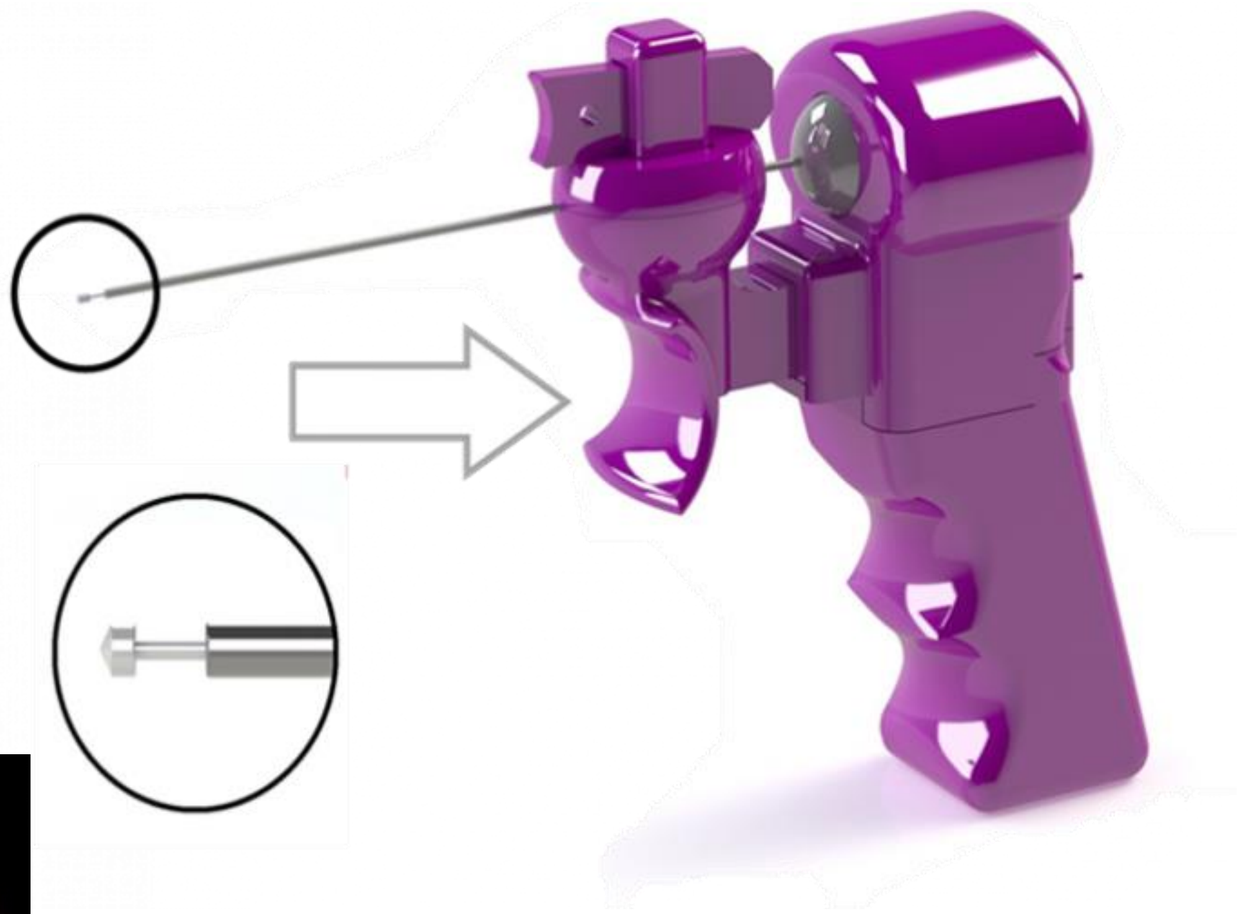
The invention

The invention allows the monopolar scalpel to be gripped and operated, favoring its use as a tweezer without interfering with its basic functions. During the operation the monopolar is used in its function of cutting cauterization and coagulation, at the moment in which the need arises, it can be converted into pliers with the use of the object designed ready for use in the surgeon’s hand.

Some patients with intracranial pathologies affecting the cerebral ventricles and the cranial base, due to the risk associated with the lack of physiological spaces that allow the correct packaging of traditional stapling, are destined to surgical approaches that are much more invasive and less likely to succeed than modern minimally invasive endoscopic procedures. The proposed invention consists of a new surgical instrument with a geometry designed to minimize the radial dimensions of the object and therefore the space necessary for its use. Thanks to the double function of scalpel and pliers it is also possible to operate without the need to change a surgical instrument that allows to grasp and operate the scalpel favoring its use in its secondary function of tweezer with a new mechanism much more compact without interfering with the its basic functionalities thus favoring the optimization of the procedure and the increase in the safety of the maneuvers.

Images



Industrial application

The patented technology is designed for the following applications, among others:

1. Excision of cysts;
2. Removal of tumors located in the brain ventricles;
3. Creation of transnasal accesses to the pituitary gland or skull base;
4. Endoscopic terzoventriculostomy.

The advantages of the patented technology are to decrease surgical time and the likelihood of complications associated with the procedure, to save and optimize the instrumentation needed for the procedure, and to expand the audience of patients operable with minimally invasive neurosurgical treatments.

Possible Developments

The patent is available for outright assignment, as well as for exclusive and non-exclusive licensing. Licenses are available for the remaining term of the patent titles.

The Research Group is available for new collaborative and third-party research activities, in-depth technical investigations, scientific advice, also aimed at raising the TRL of the technology.

The TRL of the invention is 3.

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