Tohoku Univ. Technology

Endoscope Assembly

Chopstick-Type surgical instrument for enhancing operability of doctor while securing visual field

Overview

Endoscopic surgery in otology has been rapidly developing in recent years. However, otologic surgical procedures—such as suction, grasping, traction, dissection, cutting, facial nerve stimulation, and electrocautery for hemostasis to remove lesions and reconstruct the tympanic membrane or ossicular chain—are not easy to perform single-handedly. Conventionally, there is a two-handed operation using an endoscope fixing device, but the endoscope cannot be moved freely, and the patient's field of view becomes blurred when he moves. Another conventional method is three-hand surgery, in which an assistant holds the endoscope and the operator performs twohanded operation, but it is difficult to learn and cannot be applied to all procedures because of hand interference in the stenotic region.

The endoscope assembly of the present invention enables the endoscope and surgical instrument to be stably held with one hand and freely operated. The endoscope and surgical instrument are connected by a movable connection, and the position of the endoscope can be easily adjusted with the fingers of the same hand while holding the surgical instrument. In addition, it is possible to operate the surgical instrument with one hand and simultaneously perform operations such as suction, grasping, pulling, peeling, and cutting with the other hand while securing the field of view.

Product Application

- Transcanal endoscopic ear surgery
- Endoscopic sinus surgery
- Endoscopic pharynx and larynx surgery (Applicable to various operations using endoscopes)

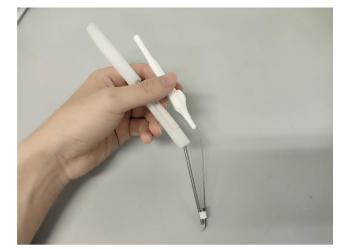
IP Data

IP No. JP2024-510004, US18/850,324, CN202380035188.0 Inventor

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Features · Outstandings







Sliding along the endoscope



Rotation around the endoscope

- Improved operability and reduced operation time confirmed with prototype
- Prototyping chopstick type surgical instruments for rhinology

Contact

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