

Operating Theater

## Enhancing surgical outcomes: the vital role of continuous support from surgical material suppliers

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The advancement of neurosurgery in recent decades has been propelled by the surgeon's ability to recognize challenges during access to anatomical structures or tumor removal and to think creatively, leading to innovation in the production of instruments that facilitate surgical procedures (1-3). This innovation aims to increase surgical speed, reduce the risk of inadvertent patient injuries, and enable the surgical removal of tumors or treatment of conditions without increasing the chance of permanent functional damage. With the progress of advanced technological possibilities and greater interdisciplinary exchange, many new surgical instruments are entering the market, and the hands of surgeons are eager for new options that facilitate their patient care duties.

One of the surgical procedures that has greatly benefited from technological advances is endoscopic surgery for intra-sellar tumors and intraventricular neuroendoscopic surgery. Surgeons typically use an endonasal transsphenoidal approach to reach the base of the sella turcica, located just a few millimeters between the internal carotid arteries. Or coagulation of the choroidal plexus during treatment of hydrocephalus. For instance, specialized surgical instruments like the PB SafeBlend 450 are crucial for accessing structures deep within the body, several centimeters away from the body surface. With its bipolar coagulation mechanism, it can effectively coagulate bleeding foci without causing damage to neighboring structures, resulting in minimal thermal damage. There are two models, one for transsphenoidal use and another bayonet type (angled shaft) for microsurgery use with a microscope (Figures 1 and 2). Note that the tip has a grasping movement and is silver-coated to prevent adherence to the coagulation tissue.

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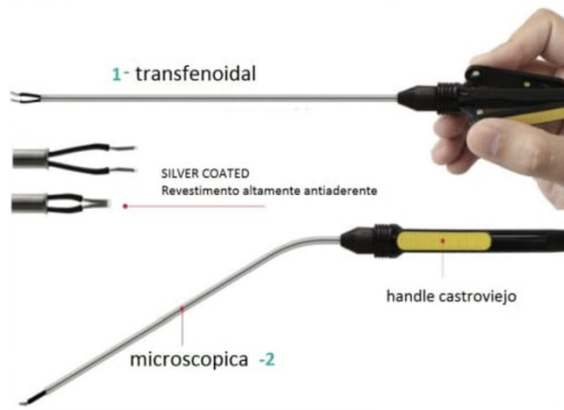


Figure 1. Illustration of two models PB SafeBlend - one designed for transsohenoidal (1) use and another featuring a bayonet-style (angled shaft) for microsurgical procedures under a microscope (2). The tip exhibits a grasping movement and is silver-coated to prevent tissue adherence during coagulation.

Therefore, we conclude that ongoing support from surgical material suppliers is fundamentally important to ensure safe surgery, with a lower chance of complications, fewer hospitalization days, and a minimal reoperation rate. This leads to lower mortality rates and higher patient satisfaction, ultimately resulting in lower costs for the patient, hospital, and health insurance plan in the long term.

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Figure 2. Illustration depicting the use of instrumentation during an intraventricular procedure within the cerebrospinal fluid in a patient with hydrocephalus, aimed at coagulating the choroid plexus (observe the use of the forceps PB SafeBlend 450 to coagulate the vessel between the pinching movement). The tip exhibits a grasping movement and is silver-coated to prevent tissue adherence during coagulation.

## References

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