

## Gripping forceps “double action” for micro-neurosurgery

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**SUMMARY: Gripping forceps “double action” for micro-neurosurgery.**

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*We show a new microsurgical forceps.*

KEY WORDS: Gripping forceps - Micro-neurosurgery.

We have developed a new microsurgical tool: forceps in titanium alloy (Fig. 1).

The gripping end is made from micro-rings which are 1-2mm in diameter, while the distal end is characterized by an x-shaped joint. These forceps are designed to be very precise, have a firm grip and make it much easier to hold and handle microscopic structures. Only the minimum of pressure is needed to operate the handles. The x-shaped joint acts as a pressure-multiplier making this instrument a first class lever while ordinary forceps are generally a third class lever. They present a bayonet-like profile since it is imperative that during surgery the field of vision of the operating microscope is in no way blocked or restricted by the surgeon's hands.

The micro-rings allow for a firm but soft grip suitable for holding very delicate structures such as the arachnoid membrane. The titanium alloy makes the forceps very light and comfortable to use for extended lengths of time.

We have now utilized them several times during vascular, spinal and brain micro-surgery and we have found



Figure 1 - Forceps in titanium alloy.

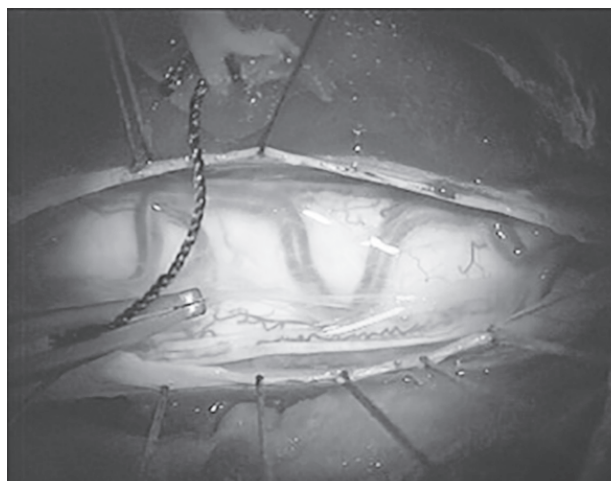


Figure 2 - Use of forceps in microsurgery.

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them very effective with regard to reducing microinvasiveness and preserving anatomical structures (Fig. 2). We are therefore certain that the tool we have developed would be an asset in any operating theatre today.