LAPAROSCOPIC HARVESTING OF OMENTUM WITH TRANSPOSITION IN MOYAMOYA DISEASE USING A NEW SEALING TECHNOLOGY

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INTRODUCTION

Moyamoya disease results in cerebral ischemia from progressive bilateral stenosis of the internal carotid arteries. In patients who fail direct revascularization, both open and laparoscopic omental transposition has been described and can be used as an indirect revascularization approach. It is traditionally performed with full mobilization of the omentum on a right gastroepiploic arterial pedicle and the graft is tunneled subcutaneously to the cerebral cortex. This poster presents the laparoscopic technique with the use of a new sealing technology device.

TECHNOLOGY

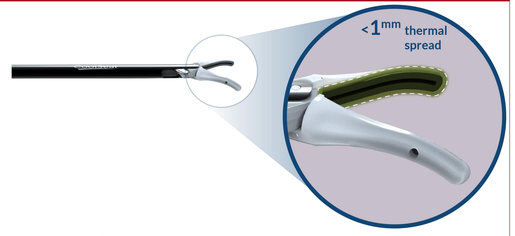
The ***CoolSeal™ Trinity*** is an advanced bipolar electrosurgical instrument intended for use in minimally invasive or open surgical procedures for ligation and division of vessels. The energy delivery is optimized so it is focused within slim, curved, Maryland-style jaws to the target tissue and delivered quickly with average seal times of less than 1.5s. The optimized power and quick sealing times leads to minimized thermal damage. The double-action jaws have been designed to dissect tissue, which includes separating tissue planes and widening openings as necessary for the surgical procedure.

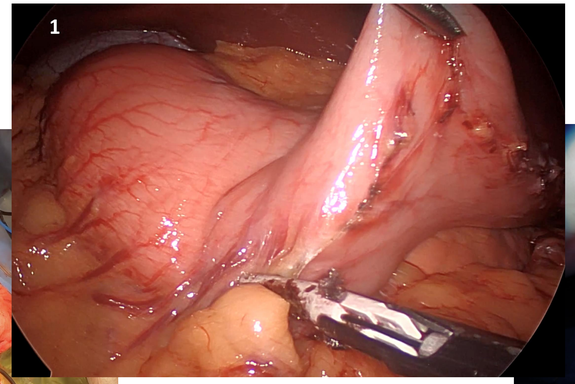
CASE DESCRIPTION

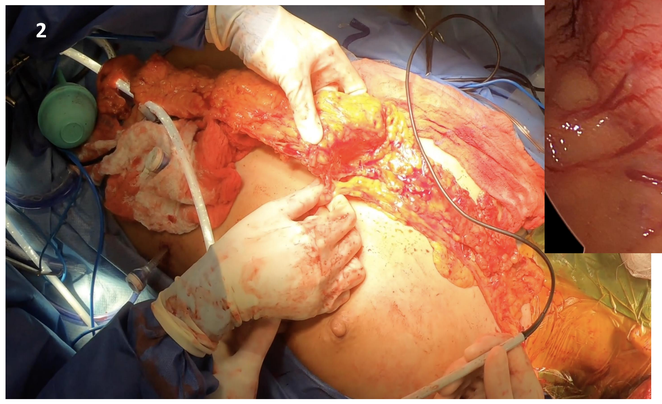
- ✓ A 40 year old male underwent laparoscopic omental-cerebral transposition for Moyamoya disease.
- ✓ The patient failed previous attempts at extracranial to intracranial revascularization, and suffered from chronic intermittent transient ischemic attacks.
- ✓ The new vessel sealing technology was used to mobilize the omentum by dissecting it off the transverse colon, spleen and stomach, preserving the right gastroepiploic artery as the only vascular pedicle.
- ✓ The patient underwent successful laparoscopic omental mobilization and subsequent subcutaneous transposition to the cerebral cortex.
- ✓ Intraoperative Doppler and fluorescein study showed appropriate perfusion of the graft. There were no intraoperative or immediate postoperative complications.
- ✓ The operative times were 90 minutes for the laparoscopic phase and 120 for the tunneling phase
- ✓ 3-month follow up showed no complications and significant improvement in the neurologic symptoms

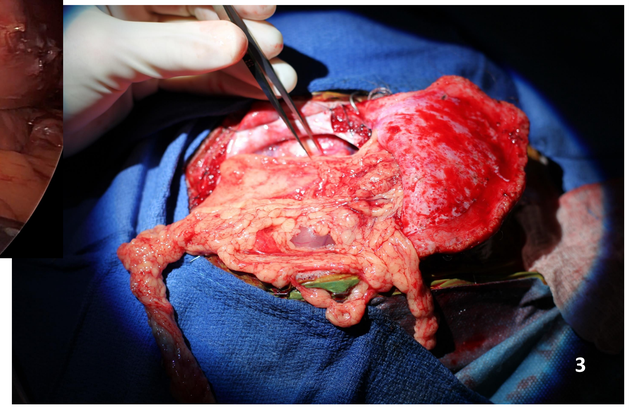
IMAGES











1. ***CoolSeal™ Trinity*** being used to mobilize the right gastroepiploic pedicle off the distal stomach.
2. Omental graft ready for transposition
3. Transposed omental graft onto the cerebral cortex

CONCLUSION

- ✓ The ***CoolSeal™ Trinity*** device allowed for a safe and efficient dissection during this complex case. There was no evidence of collateral thermal damage to the stomach or omental vessels.
- ✓ The double action jaw allowed for a faster and more accurate dissection.
- ✓ The surgical team was very pleased with its ergonomic design and no obvious hand/arm fatigue was observed.

ACKNOWLEDGEMENTS

✓ Bolder Surgical for their support during the case

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