



Clinical Case Study

Submucosal Dissection in Barrett's Early Cancer using Speedboat UltraSlim

Improving histological evaluation of the R0 resection margin

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Introduction

Endoscopic R0 resection via ESD procedures is an evolving approach in the treatment of early GI cancer. Advanced Bipolar resection devices, such as the Speedboat™, are designed to create a deeper resection margin at the muscle layer, reduce charring, and enhance safety due to the device's protective hull. In this clinical case, we present a resection specimen of a T1 sm1 Barrett's cancer with clear R0 resection margins, allowing for improved histological evaluation.



Patient History

A 52-year-old male patient presented with reflux disease and a suspected C0M1 Barrett's oesophagus with high-grade dysplasia in random biopsies. Further evaluation revealed a localized 1x1 cm area at the 8:00 position, suspected for dysplasia (Fig.1 & 2).

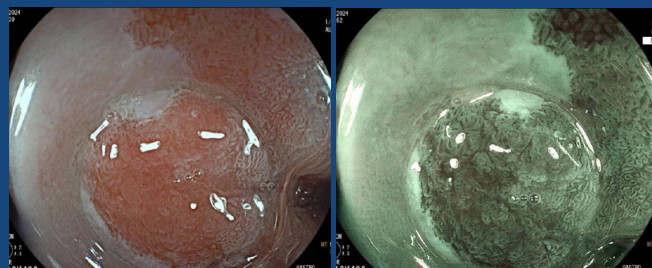


Figure 1 & 2: suspected dysplasia

Procedure



Using the bipolar Speedboat UltraSlim™ device, an ESD was performed under deep sedation, yielding a resected specimen of 1.5 x 2 cm, including safety margins. Minor bleeding was successfully treated using the microwave effect, and no late perforation occurred (Fig. 3-7).

The product design (protective hull) provided increased protection of the muscle layer allowing deeper dissection and the advanced energy by lowering the voltage provided safe, controlled clean margins with desired tissue effect (reduced charring and perforation risks)

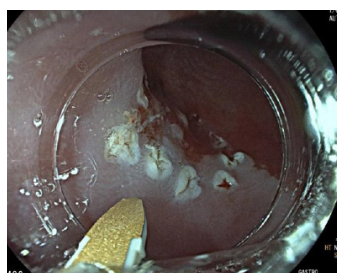


Figure 3: Marking

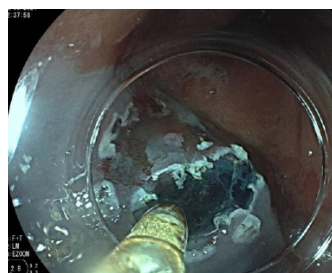


Figure 4: Advanced bipolar dissection

Outcome

Histological analysis confirmed a pT1sm1 cancer (Fig. 8), with R0 resection margins exhibiting only negligible heat effects (Fig.9 & 10) compared to monopolar resection (Fig. 11 & 12), showing a previous case of Barrett's T1 cancer resected by EMR, with reddish and blurred resection margins. By lowering the voltage, histology samples can be improved with cleaner margins and in turn reduce undesired tissue effects such as charring which could occur with an monopolar alternative.

A three-month follow-up showed no residual dysplasia, and RFA of the remaining Barrett's epithelium completed the treatment.



Figure 5: SHF microwave coagulation

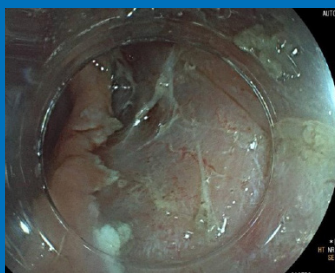


Figure 6: Clean muscle bed

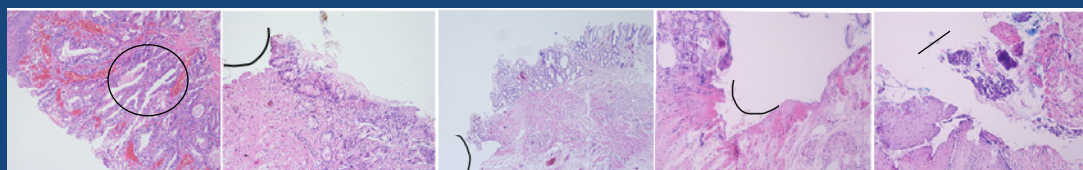


Figure 7: Clean margins with minimal thermal spread

Conclusion

Bipolar ESD with the new Speedboat UltraSlim™ device is a safe and effective treatment for dysplastic Barrett's oesophagus and early cancer, enhancing histological evaluation and reducing the need for surgical overtreatment.

* Figures 8-12 courtesy of MVZ Institut für Pathologie Würselen-Aachen, Prof. Handt, Dres.Breuer, Naami. First published at ESGE Days 2025 (eP130)



Figures 8: pT1sm1 Cancer

Figures 9 & 10: Advanced bipolar negligible heat effect

Figures 11 & 12: Monopolar heat effect

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