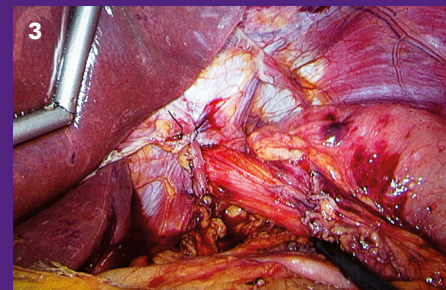
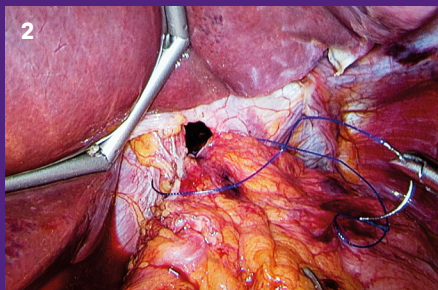
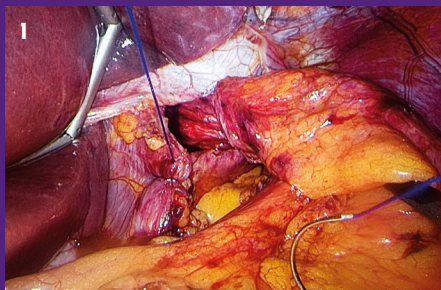


# Case example: Use of Quill® barbed suture in laparoscopic ventral and dorsal hiatorrhaphy

Intraoperative site showing the treatment of a hiatus hernia.



1-2: Continuous suturing of the diaphragmatic crura as dorsal/posterior (1) and ventral/anterior (2) hiatorrhaphy with Quill®.

3: Complete hiatorrhaphy prior to creation of the dorsal hemifundoplication.



4: Preoperative computer tomography (CT) of the thorax/abdomen in the frontal plane: The image shows that large parts of the stomach have been pushed through the hiatus into the thorax.

### Preliminary remarks:

- The most common type of hiatus hernia is an axial hiatus hernia with consecutive gastroesophageal reflux disease (GERD), which is a relative indication for surgery.<sup>1-3</sup>
- Higher-grade hiatus defects, such as a paraesophageal hernia, upside-down stomach (UDS) or enterothorax, are absolute indications for surgery.<sup>3</sup>
- Closing the hernia or narrowing the crura in conjunction with a fundoplication significantly improves the reflux disease.<sup>4</sup>
- The operation is usually performed as a laparoscopy.
- In addition to the risks of intraoperative injury to the oesophagus/stomach, bleeding and compromising the vagus nerve branches, postoperative dysphagia represents a specific major risk.<sup>3</sup>
- A hiatus hernia is closed during reflux surgery by suturing the diaphragmatic crura; for large hernias, a mesh can also be used.<sup>4</sup>
- Each year, around 50 hiatorrhaphies are performed in the Surgical University Hospital Rostock. Quill®, a self-retaining barbed suture, is regularly used for the procedure. The use of a running stitch makes it ideally suited to this area.

### Patient history:

- 72-year-old woman who has suffered symptoms of reflux oesophagitis and dysphagia for several years.
- Nicotine abuse.
- Diagnosed with a hiatus hernia and partial upside-down stomach.
- Laparoscopic repositioning and hiatorrhaphy with additional fundus cuff indicated.

## Case example:

### Use of Quill® barbed suture in laparoscopic ventral and dorsal hiatoplasty. Intraoperative site showing the treatment of a hiatus hernia.

#### Surgical procedure:

- Primary intervention as a laparoscopy, preferably with four trocars.
- Retract the left hepatic lobe using a multi-way clamp.
- Incise the flaccid portion of the lesser omentum, exposing the right crus of the diaphragm.
- Separate the short gastric vessels around the fundus along the greater curvature, detaching the superior pole of the spleen and exposing the left crus of the diaphragm.
- Continue in a circular fashion, exposing the gastroesophageal junction while protecting the vagus nerve branches.
- Measure the defect.
- Check the fundus cuff.
- Perform the hiatoplasty using Quill® 1 (VLO-1005: USP 1 (4.0 Metric), Undyed, SH-1 (1/2 Circle, 22 mm), 15 cm) with a running suture along the diaphragmatic crura.
- Secure the hiatoplasty with anterior hemifundoplication (Toupet).

#### Conclusion:

- The suture and needle were simple to handle.
- The use of a self-retaining suture makes the procedure much easier and considerably reduced surgery time by about 25 minutes, compared to a traditional suture.
- The use of non-absorbable sutures ensures the long-term outcome of the operation.
- Quill® enables the tension forces to be distributed in a continuous technique that could be gentle on the tissue.
- Quill® can be recommended for routine use.

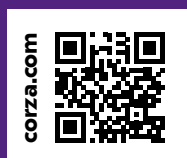
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Quill® is available through distribution or direct. For procedural videos, visit [youtube.com/CorzaMedical](https://youtube.com/CorzaMedical)

**Reference:** According to information and estimates from Dr M. Philipp, MD, Head of Minimally Invasive, Hernia, Endocrine and Bariatric Surgery, Surgical University Hospital Rostock.

1. Diermann J. [Internet]. Pschyrembel online. [cited 2023Jan27]. Available from: <https://www.pschyrembel.de/Hiatushernie/K09T8>;
2. Koop H, et al. S2k guideline: gastroesophageal reflux disease guided by the German Society of Gastroenterology: AWMF register no. 021-013. Z Gastroenterol. 2014 Nov;52(11):1299-346;
3. Schumpelick V et al. Allgemein- und Viszeralchirurgie up2date 2020; 14(03): 254-257; 4. Wolf S et al. Der Chirurg 2021; 92:377.

Quill® barbed sutures are indicated for soft tissue approximation. Absorbable barbed sutures shall be used where the use of absorbable suture is appropriate and non-absorbable barbed sutures are excluded from closure of the epidermis. Barbed sutures are not intended to be used by tying surgical knots. To avoid small bowel obstruction, care should be taken to not leave barbed suture ends adjacent to the peritoneum in extra-peritoneal tissue closure. As with all surgical sutures, adverse effects may include wound dehiscence, failure to provide adequate wound support, infection, minimal acute inflammatory tissue reaction at the wound site amongst others. For complete indications, contraindications, warnings, precautions, and adverse reactions, refer to the instructions for use (IFU).



Corza Medical, 247 Station Drive, Suite NE1, Westwood, MA 02090, U.S.A.

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