



Durable trans-oral fundoplication visible 3-months post MUSE procedure

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Patient Background

A 31 year old female suffered from heart burn since the age of 16. Under regular intake of proton pump inhibitor (PPI) twice daily, the patient achieved symptom relief for several years. Stopping medications resulted in a recurrence of symptoms. Even with strict diet adjustments including abstinence from hot, spicy and greasy food, intake of small meals and an upright sleeping position, the symptoms were not controlled.

A hiatal hernia, without signs of Barrett's-mucosa, was observed on initial gastroscopy and at the time of treatment (see Figure A). Medical history revealed no co-morbidities. As the patient wished to avoid long-term pharmacological treatment, surgical anti-reflux solutions were discussed.

Treatment

After signing the informed consent, a minimally invasive, trans-oral endoscopic anterior fundoplication was performed by Prof. Kiesslich during the April 2015 "Endoskopie Live" congress in Berlin, Germany.

The procedure involved a single shot of prophylactic antibiotics, general anesthesia, endotracheal intubation, positive end expiratory pressure (PEEP) to reduce the hiatal hernia, and muscle relaxation with Cisatacurium 10mg to ensure consistent ultrasound interpretation of tissue thickness. In addition, post anesthesia nausea and vomiting prophylaxis with two drugs was given to prevent retching upon arousal, which could put unnecessary stress on the staple line.

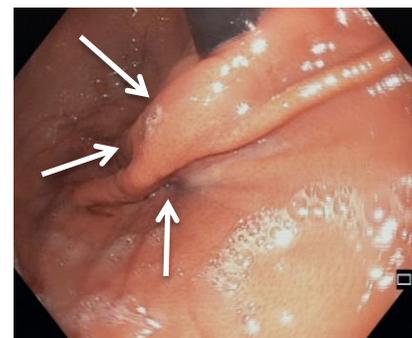
Three staplings, consisting of 5 staples each, were used to attach the fundus to the esophagus, 3 cm above the gastro-esophageal junction (see Figure B).



(A): Pre-procedure



(B) Post-Stapling



(C) 3 months post-procedure

Clinical Course

The patient reported moderate epigastric pain post-procedure which was easily managed with NSAIDs. PPI treatment was continued for three days post-procedures and then stopped. A gastroscopy on day three revealed a sleeved cardia similar to a surgical hemi-fundoplication. The patient was complaint-free.

Three-months post-procedure

Gastroscopy was repeated at 3 months, revealing a durable, stapled result in the cardia due to the MUSE treatment (see Figure C). The patient has had sustained symptom relief and PPI medication was rarely necessary.