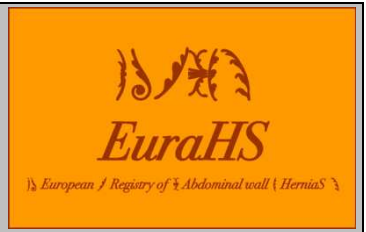


EuraHS II CRF 2

Hiatal Hernia Route

Date: ____/____/____



Name of Patient (not in EuraHS): _____ **EuraHS Case –ID:** _____

4 Indication data and preoperative assessment

Indication for hiatal hernia surgery Elective Emergency

Symptoms of the hiatal hernia

- Asymptomatic
- Heartburn
- Regurgitation
- Anaemia/Bleeding
- Retrosternal pain
- Extra-oesophageal symptoms (Laryngitis gastrica, clear throat, cough)
- Other; please specify _____

Hill's Classification of Reflux?

Hill's Classification of Reflux (Gastrointestinal Endoscopy 1996, 44 (5): 541-547):
 Grade I: endoscopic closed hiatus, prominent fold of tissue along the lesser curvature that was closely apposed to the endoscope. Grade II: fold was present but there would be periods of opening and rapid closing around the endoscope. Grade III: Fold was not prominent and the endoscope was not gripped tightly by the tissues, in part with hiatal hernia. Grade IV: the lumen of the oesophagus gaped open, allowing the squamous epithelium to be viewed from below.

- Grade I Grade II Grade III Grade IV

Endoscopic evaluation? Yes No

Define endoscopic findings according to Savary-Miller:

Savary M, Miller G. The esophagus – Handbook and atlas of endoscopy. Gassman AG, Switzerland, 1978, 135-142.

- Stage A Stage B Stage C Stage D

CT evaluation? Yes No

Barium oesophagogram? Yes, define No

- No pathologic findings
- Achalasia
- Hiatal Hernia
- Propulsion dysfunction
- Reflux under provocation
- Other; please specify _____

Oesophageal manometry? Yes No

Type of oesophageal manometry? Conventional manometry High resolution manometry

A Conventional manometry (CM)

LES pressure (CM): _____ mmHg

LES upper margin (CM): _____ cm

LES lower margin (CM): _____ cm

LES length (CM): _____ cm

LES relaxation (CM): _____ %

Oesophageal body dysmotility? Yes No

Chicago classification of motility disorder for CM?

Spechler SJ, Castell DO (2001) Classification of oesophageal motility abnormalities. Gut 49: 145–151

Inadequate LOS relaxation

Uncoordinated contraction

Hypercontraction

Hypocontraction

B High resolution manometry (HRM)

LES pressure (HRM): _____ mmHg

LES upper margin (HRM): _____ cm

LES lower margin (HRM): _____ cm

LES length (HRM): _____ cm

IBP (intra-bolus pressure): _____ mmHg

IRP (integrated relaxation pressure of LES): _____ mmHg

CFV (contractile front velocity): _____

DCI (distal contractile integral): _____

Double contour indicating hiatal hernia? Yes No

Hiatal hernia size according to double contour: _____ cm

Oesophageal motility disorder? Yes No

Chicago classification of motility disorders: Bredenoord AJ, et al.: International High Resolution Manometry Working Group. Chicago classification: criteria of oesophageal motility disorders defined in high resolution oesophageal pressure topography. Neurogastroenterol Motil. 2012 Mar;24 Suppl 1:57-65.

Cat I

Cat II

Cat III

Cat IV

Specify type of achalasia (Chicago cat I)

- Achalasia type I (classic achalasia)
- Achalasia type II (with panoesophageal pressurization)
- Achalasia type III (with spasmodic contractions)

Specify specific oesophageal motility disorders (Chicago cat III)

- Complete aperistalsis (100% failure of peristalsis)
- Distale oesophageal spasm (DES)
- Hypercontractile oesophagus (jackhammer-esophagus)
DCI max > 8000mmHg-cm-s

Define non-specific oesophageal motility disorders (Chicago cat IV)

- Weak oesophageal peristalsis with small peristaltic gaps (2 - 5 cm)
- Weak oesophageal peristalsis with large peristaltic gaps (2 - 5 cm)
- Frequent peristalsis failure (30 - 70%)
- Nutcracker-oesophagus (hypertensive peristalsis) - DCI mean
5000mmHg-cm-s to 8000mmHg-cm-s
Rapid contractions

4 Indication data	Results of reflux testing with 24-hour pH monitoring	<input type="checkbox"/> Not done
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Normal (no pathologic findings)

Pathologic reflux

Specify pathologic reflux

Acid exposure to pH <4 total >4,2%

Upright >6,3%

Recumbent >1,2%

DeMeester score >14,7

Specify exact DeMeester score: _____

Pathologic components of the DeMeester score: Johnson LF, Demeester TR (1974) Twenty-four-hour pH monitoring of the distal oesophagus. A quantitative measure of gastro-oesophageal reflux. Am J Gastroenterol 62: 325–332.

Percent total time pH < 4

Percent Upright time pH < 4

Percent Supine time pH < 4

Number of reflux episodes

Number of reflux episodes ≥ 5 min

Longest reflux episode (minutes)

4 Indication data	Previous hiatal hernia repair
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Has there been a previous hiatal hernia repair?

Yes

No

Was the previous hiatal hernia repair recorded in EuraHS? Yes No

EuraHS identification number of the previous repair? _____

Date of previous operation ____/____/____

Method of previous repair? Open Laparoscopic

Type of closure of the hiatus at previous repair None
 Hiatoplasty only with suture
 Hiatoplasty only with mesh
 Hiatoplasty with suture + mesh

Previous antireflux-procedure? Fundoplicatio according to Nissen (360°)
 Fundoplicatio according to Toupet (270°)
 Fundophrenicopexy
 Other; please specify _____

5 Operative data

Date of operation ____/____/____

Duration of the operation in minutes _____ min

Antibiotic prophylaxis None Single dose More than 1 dose
 Prolonged (therapeutic) Already antibiotic treatment for infection

Type of access open surgery
 Laparoscopic surgery Number of ports ? _____
 Laparoscopic with conversion to open

Reason(s) for conversion to open

- Trocar accident (Verress needle or trocar accident)
- Bleeding
- Transmural lesion of the oesophagus
- Lesion of the anterior vagal trunk
- Lesion of the posterior vagal trunk
- Lesion of the diaphragm
- Pneumothorax
- Lesion of the spleen
- Lesion of the stomach
- Lesion of the liver
- Lesion of bowel
- Other; please specify _____

Intestinal resection? Yes No

Intraoperative wound contamination Class of operation and wound contamination:

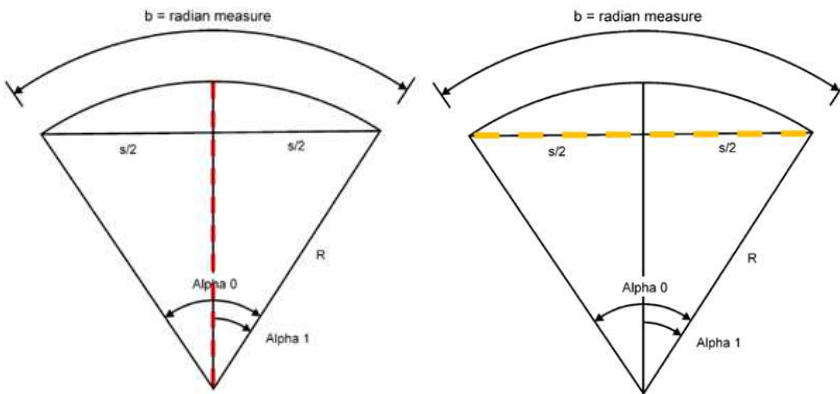
I = Clean; II = Clean-Contaminated; III Contaminated; IV = Dirty

Class I Class II Class III Class IV

Intraoperative classification to Kahrilas Kahrilas et al, Best Pract Res Clin Gastroenterol 2008, 22 (4): 601-616).

Type I Type II Type III Type IV

Size of the hiatal hernia?



Longitudinal size of the hiatal hernia (Radius): _____ cm

Transversal size of the hiatal hernia ('s'): _____ cm

Additional antireflux procedure to the hiatal hernia repair?

- Total fundoplication according to Nissen (360°)
- Posterior partial fundoplication according to Toupet (270°)
- Anterior partial fundoplication according to Dor (180°)
- Fundophrenicopexy
- Collis gastroplasty
- Other; please specify _____

Dissection of the greater curvature / short gastric vessels? Yes No

- Type of closure of the hiatus?
- None
 - 1 Hiato-plasty only with suture
 - 2 Hiato-plasty only with mesh
 - 3 Hiato-plasty with suture + mesh

5 Operative data

Use of sutures (1 and 3)

Number of stitches for hiatus closure: _____

Production company of the suture material _____

Name of the suture material _____

5 Operative data	Meshaugmentation (2 and 3)
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Type of mesh repair Use of synthetical mesh Use of biological mesh

Production company of the mesh _____

Name of the mesh _____

Lot number of the implanted mesh _____

Width of the implanted mesh _____ cm

Length of the implanted mesh _____ cm

Shape of the hiatal hernia mesh?



Circular mesh (slit right)

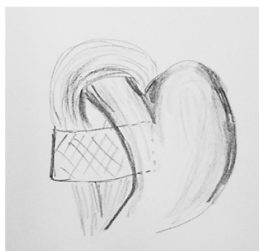
Circular mesh (slit left)

- Circular (slit right)
- Circular (slit left)
- Circular (slit ventral)

U-loop

Dorsal band

Ventral band



U-loop mesh

Dorsal band

Ventral band

Other; please specify _____

5 Operative data	Mesh fixation	<input type="checkbox"/> No fixation
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Suture Production company of the suture material _____

Name of the suture material _____

Fixation device Production company of the fixation device _____

Name of the fixation device _____

Glue Production company of the glue _____

Name of the glue _____

- Trocar accident (Verress needle or trocar accident)
- Bleeding
- Transmural lesion of the oesophagus
- Lesion of the anterior vagal trunk
- Lesion of the posterior vagal trunk
- Lesion of the diaphragm
- Pneumothorax
- Lesion of the spleen
- Lesion of the stomach
- Lesion of liver
- Lesion of bowel
- Death of the patient

Please specify the intraoperative cause of death _____

Other; please specify _____

Surgeon: _____

Transferred to EuraHS: ____/____/____