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| Patient:  Girl, Mrs  AIGG.20951654 | Gender: | Female | Physician: | Dr. XXXX / Dr. XXX |
| DOB / Age: | 34 Yrs | Operator: | XXX N |
| Height: |  | Referring Physician: | Dr. XXXX |
| Procedure: | Esophageal HRM | Examination Date: | 03-21-2025 |

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| **Swallow Composite (mean of 25 swallows)** | **Resting Pressure Profile & Anatomy** | |
|  |  | **Basal Pressures\***  LES, respiratory min(mmHg) 9.6 (4.8-32.0)  LES, respiratory mean(mmHg) 17.3 (13-43)  UES mean(mmHg) 70.8 (34-104)  **Anatomy\***  LES mid (end-exp.)(cm) 40.0  LES proximal(cm) 39.0  LES distal(cm) 41.6  LES length(cm) **2.6** (2.7-4.8)  LES intraabdominal(cm) 0.7  PIP(cm) 40.8  UES (center)(cm) 17.0  Esophageal length(cm) 23.0  Hiatal hernia No |
| **Motility\***  LES percent relaxation(%) 69 (>40.0%)  Distal contr. integral(mmHg-cm-s) **288.5** (500-5000)  Distal contr. int. (highest)(mmHg-cm-s) 473.4  Number of hypercontractile swallows 0  Incomplete bolus clearance(%) 8  Bolus transit time(s) 2.1 | | **Residual Pressures\***  LES (mean)(mmHg) 6.1  LES (median)(mmHg) 6.2 (<15.0)  LES (highest)(mmHg) 9.6  UES (mean)(mmHg) 2.2 (<12.0) |

\*Notes. Motility values are mean among swallows; Normal values in (xxx.x): Simultaneous contractions: Velocity > 8.0 cm/s; eSlv: eSleeve; 3SN, IRP, DCI, IBP - See manual definitions

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| **Lower Esophageal Sphincter Region** |  | Normal | **Esophageal Motility** |  | Normal |
| Landmarks |  |  | Number of swallows evaluated | 25 |  |
| LES midpoint (from nares)(cm) | 40.0 |  | Chicago Classification |  |  |
| Proximal LES (from nares)(cm) | 39.0 |  | % failed | 12 |  |
| Distal LES (from nares)(cm) | 41.6 |  | % weak | 84 |  |
| LES length(cm) | **2.6** | 2.7-4.8 | % ineffective | 96 |  |
| Esophageal length (LES-UES centers)(cm) | 23.0 |  | % panesophageal pressurization | 0 |  |
| PIP (from nares)(cm) | 40.8 |  | % premature contraction | 8 |  |
| Intraabdominal LES length(cm) | 0.7 |  | % rapid contraction | 0 |  |
| Hiatal hernia? | No |  | % fragmented | 0 |  |
| LES Pressures |  |  | % intact | 4 |  |
| Pressure meas. method | eSleeve,IRP |  | Number of hypercontractile swallows | 0 |  |
| Basal (respiratory min.)(mmHg) | 9.6 | 4.8-32.0 | Additional High Resolution Parameters |  |  |
| Basal (respiratory mean)(mmHg) | 17.3 | 13-43 | Distal latency | 8.0 |  |
| Residual (mean)(mmHg) | 6.1 |  | Distal contractile integral(mean)(mmHg-cm-s) | **288.5** | 500-5000 |
| Residual (median)(mmHg) | 6.2 | <15.0 | Distal contractile integral(highest)(mmHg-cm-s) | 473.4 |  |
| Residual (highest)(mmHg) | 9.6 |  | Contractile front velocity(cm/s) | 2.4 | <9.0 |
| Percent relaxation(%) | 69 | >40.0% | Impedance analysis |  |  |
|  |  |  | Incomplete bolus clearance(%) | 8 |  |
|  |  |  | Bolus transit time (sec) | 2.1 |  |
|  |  |  |  |  |  |
| **Upper Esophageal Sphincter** |  | Normal | **Pharyngeal / UES Motility** |  | Normal |
| Location (center, fr. nares)(cm) | 17.0 |  | No. swallows evaluated | 25 |  |
| Mean basal pressure(mmHg) | 70.8 | 34-104 | Evaluated @ 2.0 & 3.0 above UES |  |  |
| Mean residual pressure(mmHg) | 2.2 | <12.0 | Mean peak pressure(mmHg) | 12.1 |  |
| Relaxation time-to-nadir(ms) | 100 | 74-365 | Onset velocity(cm/s) | 10.8 |  |
| Relaxation duration(ms) | 769 | 480-1020 | Peristaltic (velocity ≤ 25 cm/s)(%) | 100 |  |
| Recovery time(ms) | 668 | 259-760 | Peak pressure @ 3.0 above mid UES(mmHg) | 326.5 |  |
|  |  |  | Peak pressure @ 2.0 above mid UES(mmHg) | 317.9 |  |
|  |  |  | Upstroke @ 3.0 above mid UES(mmHg/s) | 1180.9 |  |
|  |  |  | Upstroke @ 2.0 above mid UES(mmHg/s) | 1094.2 |  |
|  |  |  | Rise time @ 3.0 above mid UES(ms) | 269 |  |
|  |  |  | Rise time @ 2.0 above mid UES(ms) | 278 |  |
|  |  |  | Contr. duration @ 3.0 above mid UES(ms) | 523 |  |
|  |  |  | Contr. duration @ 2.0 above mid UES(ms) | 1111 |  |
|  |  |  | Recovery time @ 3.0 above mid UES(ms) | 254 |  |
|  |  |  | Recovery time @ 2.0 above mid UES(ms) | 832 |  |
|  |  |  | Start @ 2.0 above mid UES to UES start(ms) | -547 |  |
|  |  |  | Start @ 2.0 above mid UES to UES nadir(ms) | -446 |  |
|  |  |  | Start @ 2.0 above mid UES to UES end(ms) | 222 |  |

**Chicago Classification Findings\***

EGJ: Normal Relaxation

Median IRP (6.2 mmHg) is less than 15 mmHg

Esophageal body: Ineffective swallows, Not all swallows have failed peristalsis

% ineffective swallows (96%) is greater than 50%

Finding: Ineffective Esophageal Motility (IEM)

\* Findings are based on published Chicago Classification scheme and are only intended to serve as a guide for patient diagnosis

**Procedure**

36 Channel solid state Esophageal High resolution Manometry

Study: Catheter was placed in fasting state , in supine position with run in period of 5 minutes.

Recording for 30 seconds were done at the baseline

10 wet swallows were evaluated, each of 5 ml water as bolus , with minimum gap of 30 seconds

between the swallows.

5 upright swallows were taken

RDC of 200ml 0.45 saline was done in sitting position.

10 ML 5 Wet swallows have been taken

5 Solid meal swallows have been taken

**Indications**

GERD

**Interpretation / Findings**

15 wet swallows performed. Resting LES pressures normal

More than 50% of swallows show a DCI < 450 suggestive of poor oesophageal contraction

LES relaxation is normal

**Impressions**

Ineffective Esophageal Motility

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| --- | --- |
| Landmark Id | Swallow #1 |
| Swallow #2 | Swallow #3 |
| Swallow #4 | Swallow #5 |
| Swallow #6 | Swallow #7 |
| Swallow #8 | Swallow #9 |
| Swallow #10 | Swallow #11 |
| Swallow #12 | Swallow #13 |
| Swallow #14 | Swallow #15 |
| Swallow #16 | Swallow #17 |
| Swallow #18 | Swallow #19 |
| Swallow #20 | Swallow #21 |
| Swallow #22 | Swallow #23 |
| Swallow #24 | Swallow #25 |