



# Case discussion

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R4 謝孟倫

# Patient Profile

- Name : 梁OO
- ID : 1352072E
- Gender : Male
- Age : 52
- Smoking: denied
- Family history: Nil

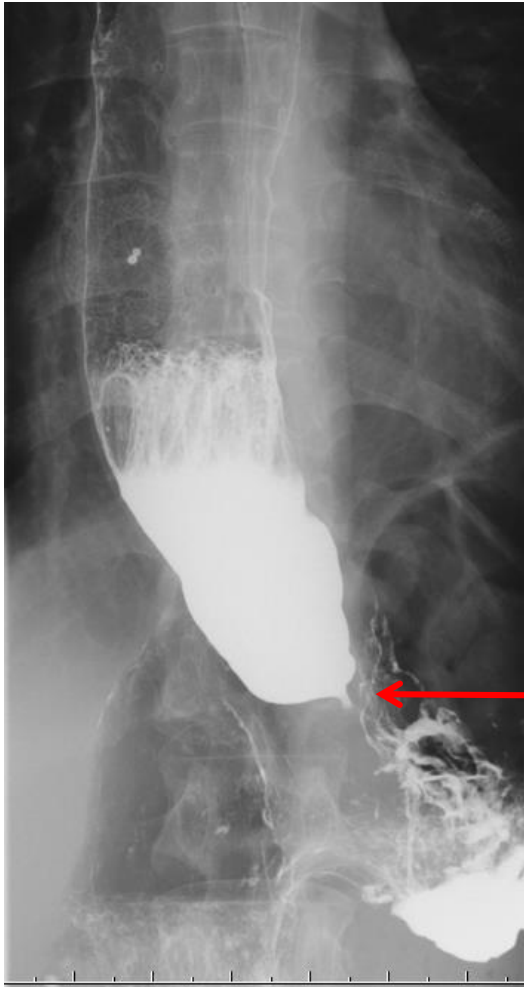
# Chief complaint

- Difficulty in swallowing for more than 10 years

# Past medical history

- Ulcerative colitis(UC), involvement up to transverse colon, with occasional tarry stool, under Basazyde and prednisolone use, Humira, Vedolizumab, under regular GI OPD follow
- Brain abscess, s/p operation in 2002, under phenytoin for epilepsy control
- CAD, s/p CAG with DESs at X hospital in 2013,2016, under DAPT
- Myeloproliferative neoplasm, favored ET, under Agrylin

# 2013/1/11 UGI series



Arranged due to dysphagia  
and hiccup over 1 year

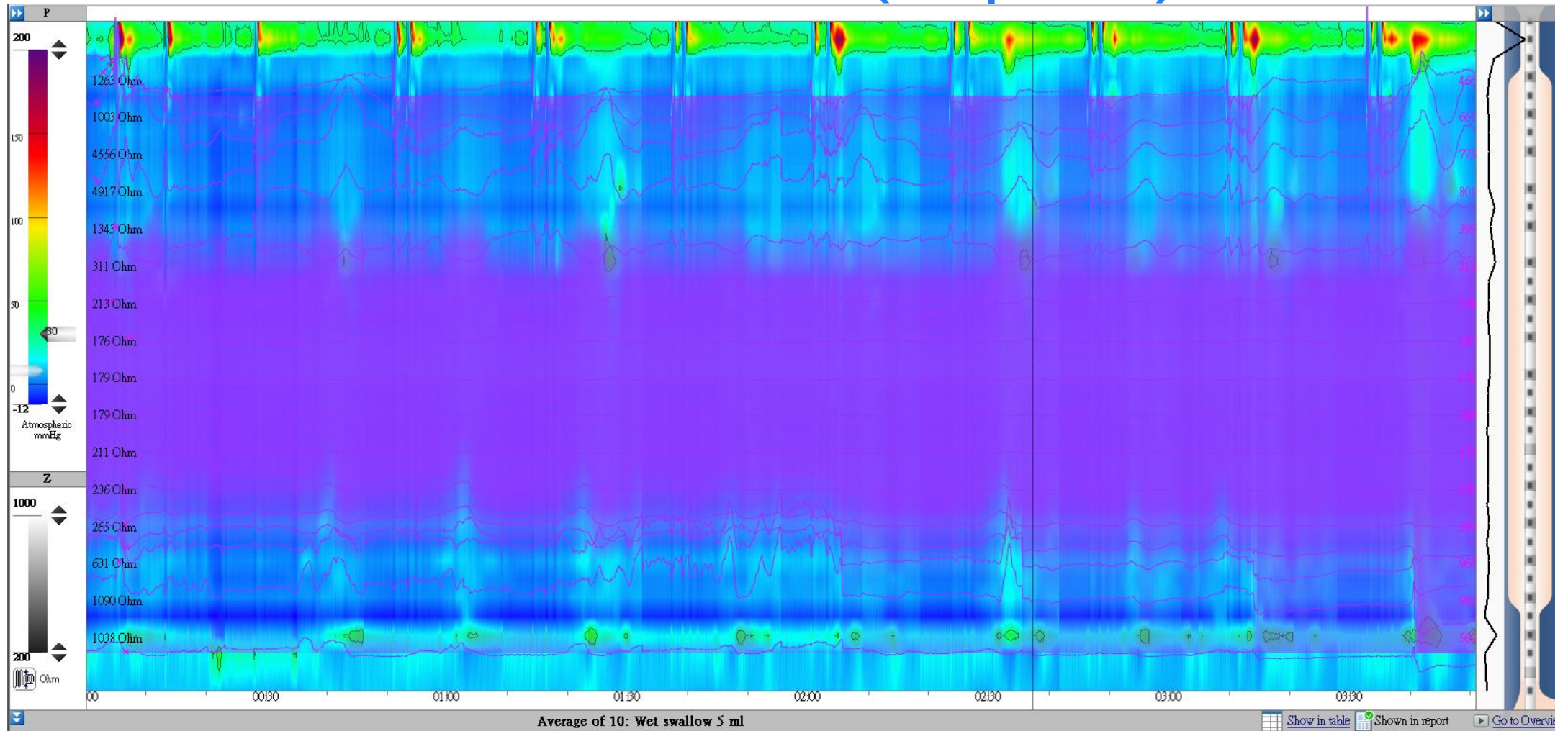
# 2021/12/25 GI OPD

- Referred to Chief Lien's clinic with the complaint of body weight loss from 75kg to 57kg in the last decade
- Dysphagia for over 10 years
- Arrange HRIM and Barium study

# 2021/12/28 GI OPD UGI series



# 2021/12/28 HRIM WS(supine)



**UES**  
 Upper border 19.0 cm  
 Lower border 21.2 cm  
 Length 2.2 cm  
 IRP 0.2 s 5 mmHg  
 IRP 0.4 s 8 mmHg

**LES**  
 Upper border 51.0 cm  
 Lower border 54.7 cm  
 Length 3.7 cm  
 Median IRP4 7.08 mmHg  
 IRP 4 s 7 mmHg

**Esophagus**  
 Peristaltic breaks 26.1 cm  
 Largest break 19.9 cm

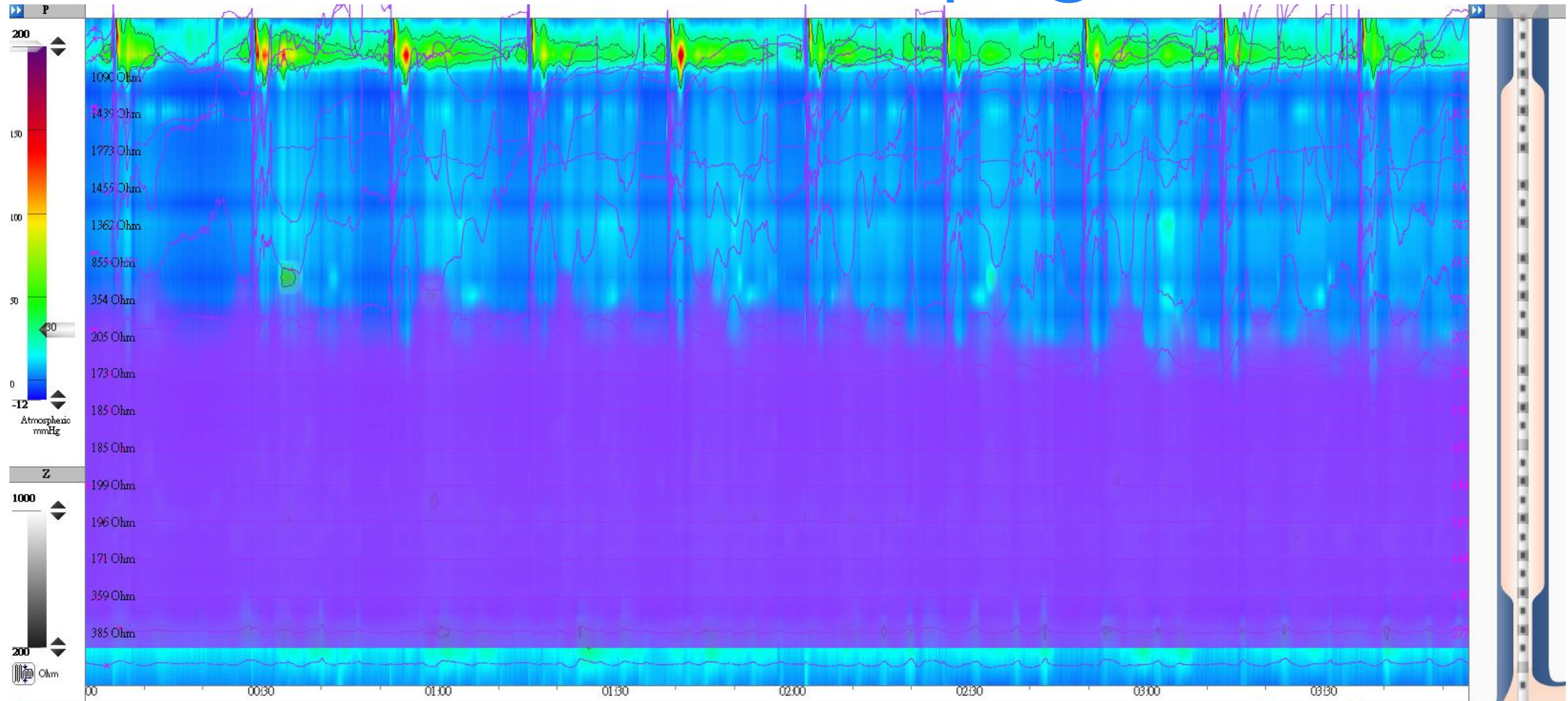
IRP-4:7

**阻抗**  
 Bolus transit Undefined

**Classification**  
 LES Obstruction3 否\*  
 Chicago classification3 否\*  
 LES Obstruction 否\*  
 Bolus transit Undefined



# 2021/12/28 HRIM WS(upright)



Average of 10: Wet swallow 5 ml

Show in table Show in report Go to Overview

### UES

Upper border	19.2	cm
Lower border	21.9	cm
Length	2.7	cm
IRP 0.2 s	3	mmHg
IRP 0.4 s	5	mmHg

### LES

Upper border	50.6	cm
Lower border	54.0	cm
Length	3.4	cm
Median IRP4	14.44	mmHg
IRP 4 s	14	mmHg

### Esophagus

Peristaltic breaks	25.4	cm
Largest break	18.1	cm

IRP-4:14

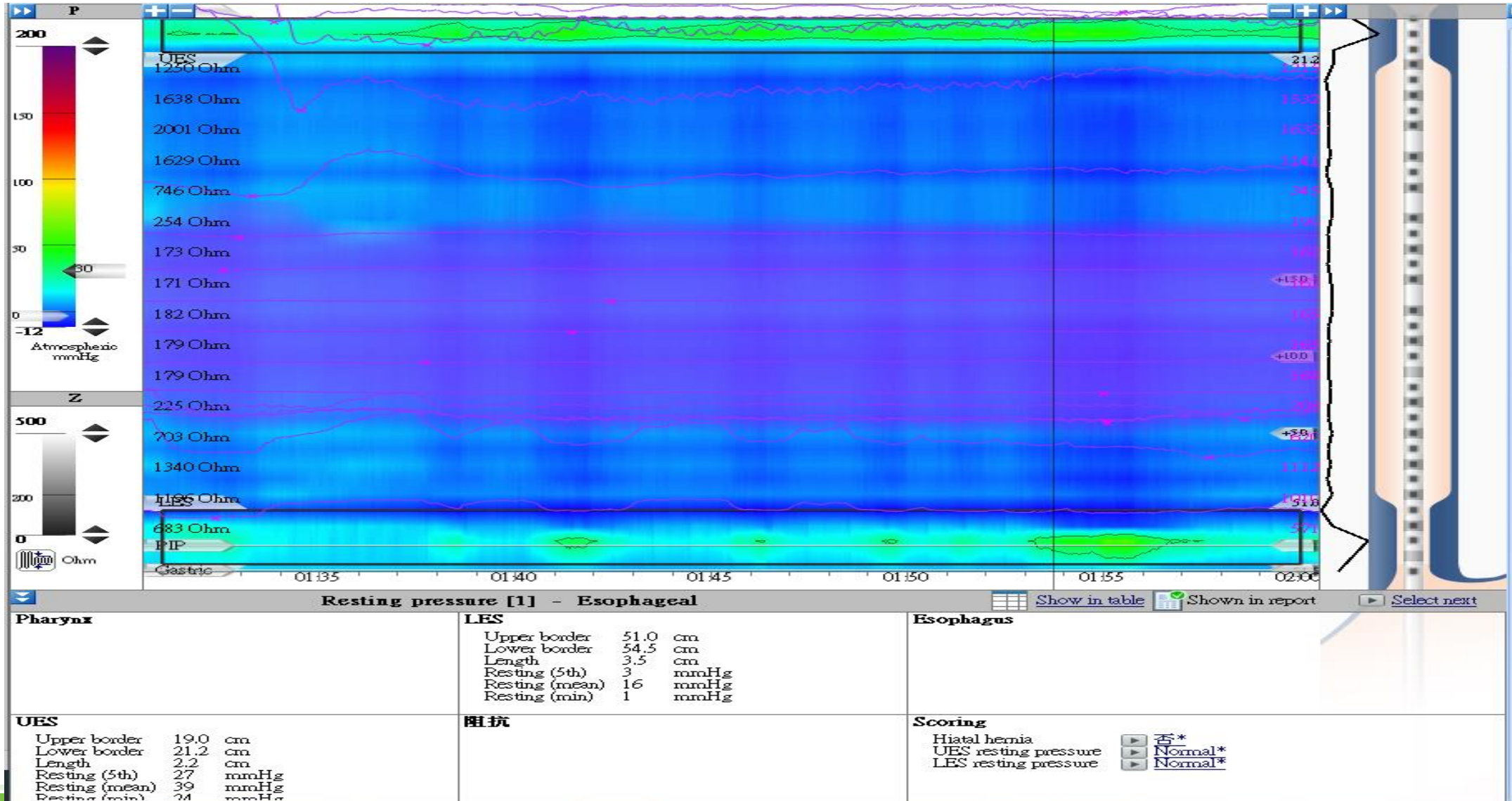
### 阻抗

Bolus transit	Undefined
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### Classification

LES Obstruction3	否*
Chicago classification3	Absent contractility*
LES Obstruction	否*
Bolus transit	Undefined

# 2021/12/28 HRIM resting



# 2021/12/28 HRIM

Incomplete relaxation of LES	<5	~90% or residual pressure>5
Amplitude	N/A	13cm: 70(+/-) 32mmHg
	N/A	8cm: 90(+/-) 41mmHg
	N/A	3cm:109(+/-) 45mmHg
Simultaneous peristalsis	N/A	<10%
Non-transmitted peristalsis	N/A	<20%
Ineffective esophageal motility (IEM)	N/A	>=50%
IRP	7.08	<21mmHg
DCI	N/A	450-8000mmHg.s.cm
DL	N/A	>4.5s

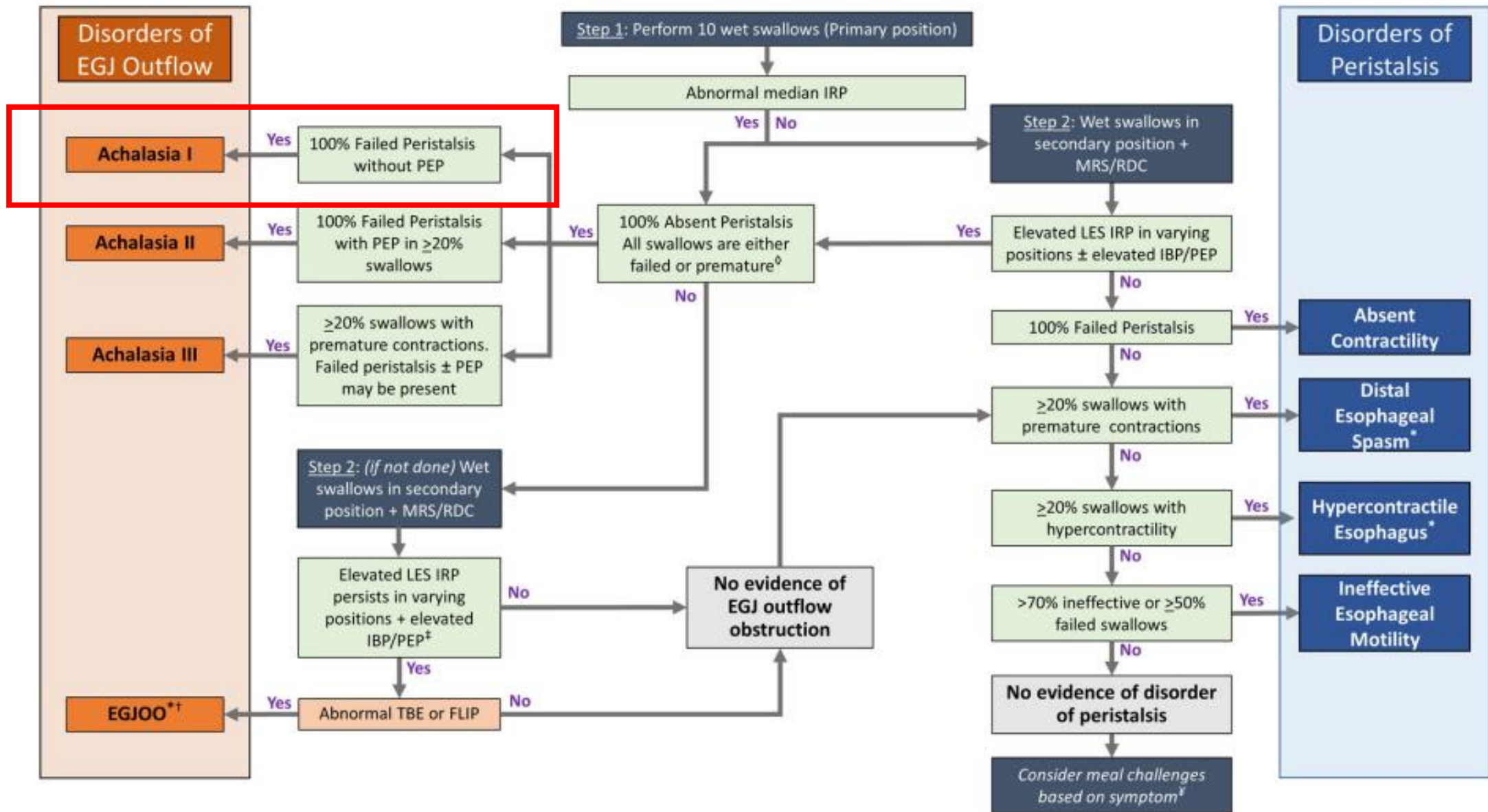
MRS: DCI ratio:N/A

RDC: IRP ratio:20/7.08 = 2.8 (Normal <1)

Supine 10 tims Wet swallows:100% Failed contraction.  
Upright 10 tims Wet swallows:100% Failed  
contraction.IRP:14.44,DCI:N/A,DL:N/A  
Aperistalsis,RDC:drinking 100ml of 0.9% Normal saline within  
30secs produce Panesophageal pressurization.  
Absent contractility.The test results do not match the clinical  
signs, it is possible that the test tube is not fully inserted  
into the stomach through the LES.

IMPRESSION: R/O Achalasia, Type I,



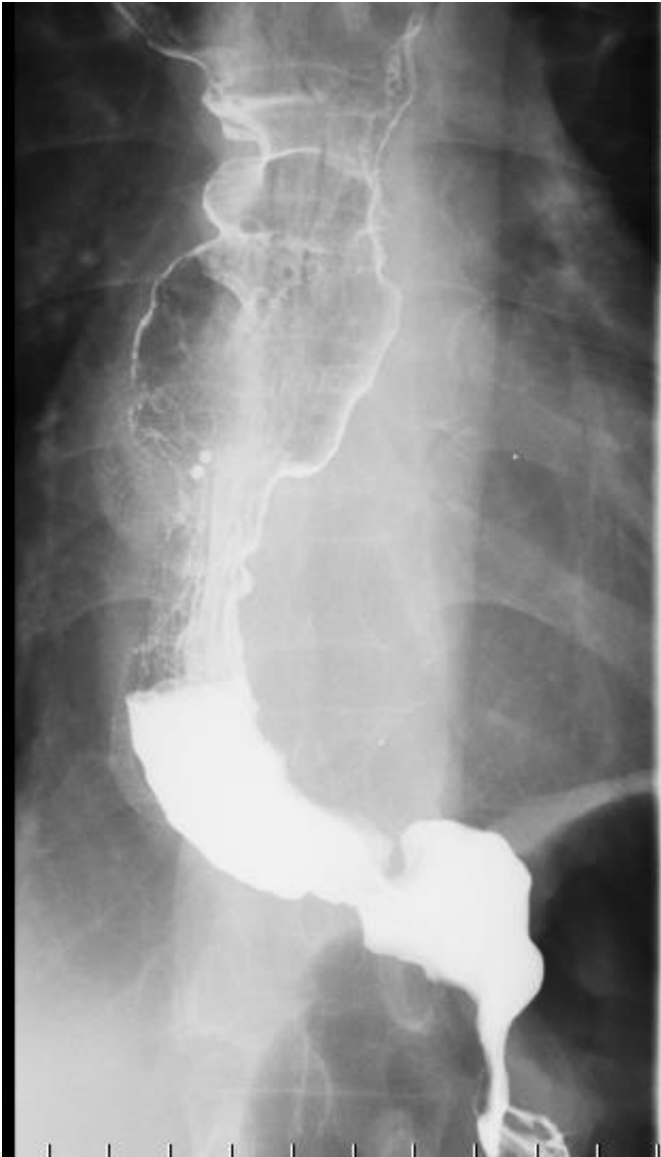




# Management

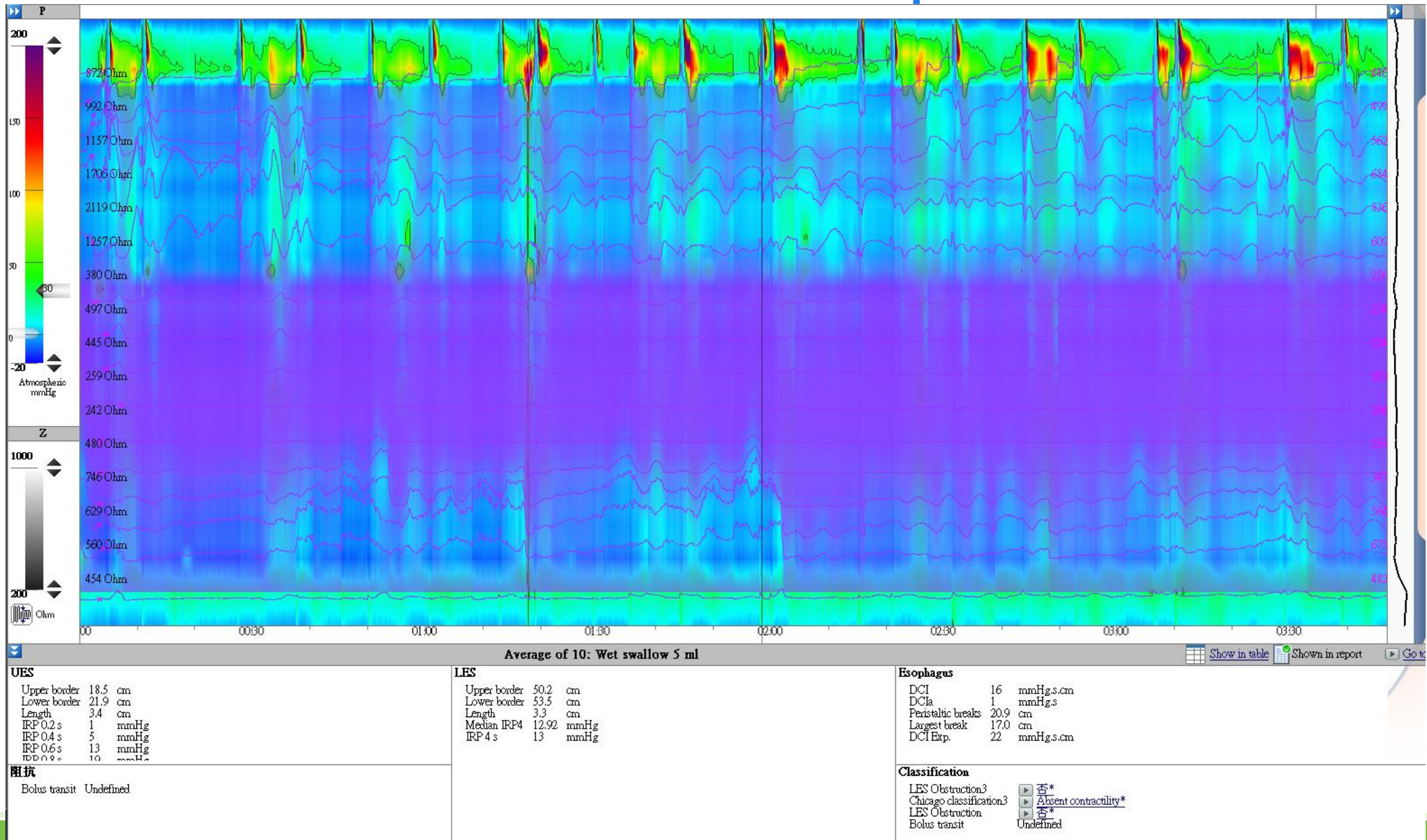
- Referred to CS and received laparoscopic Heller myotomy with Dor fundoplication on 2022.04.18

# 2022/07/26 UGI series



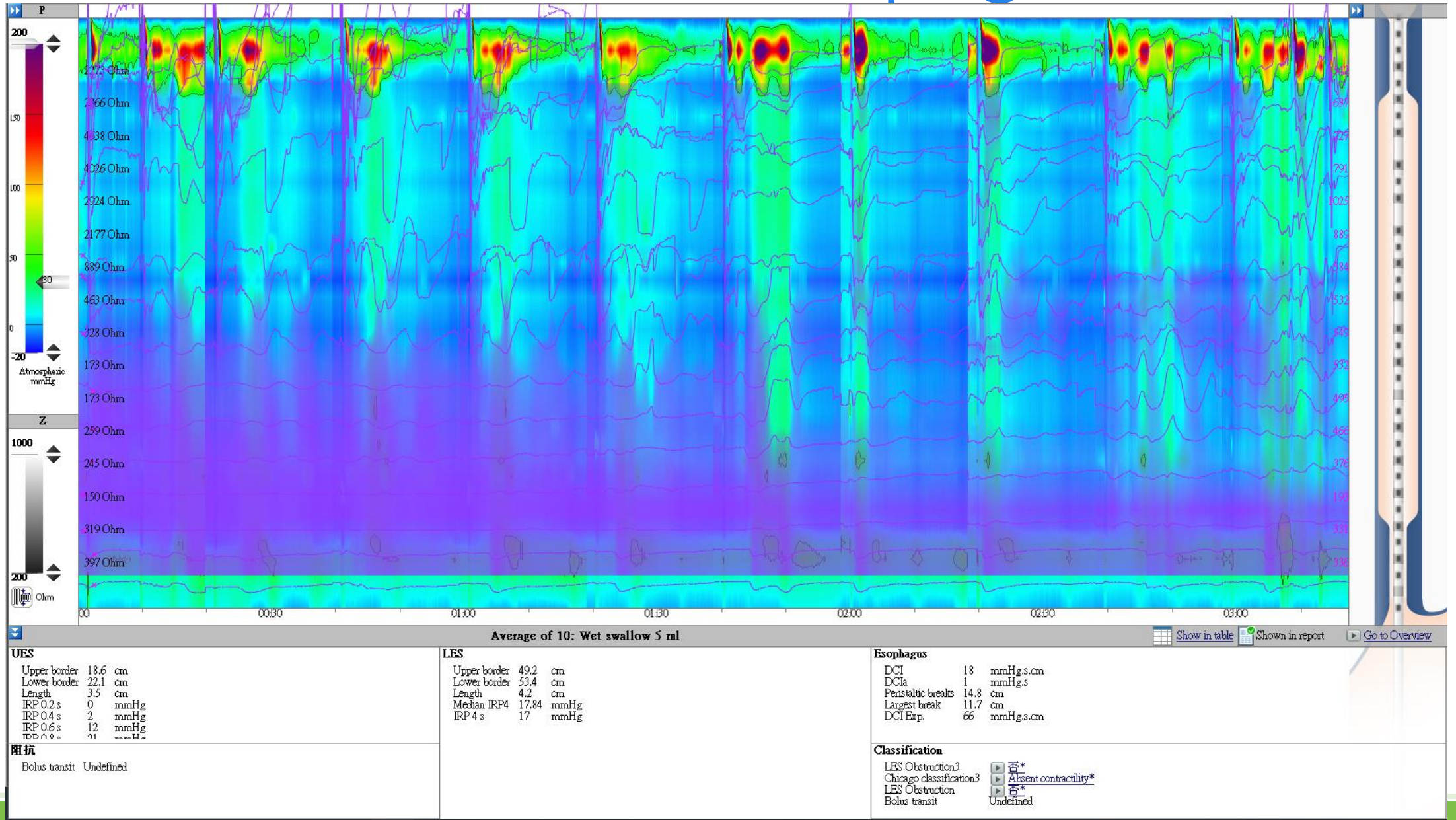


# 2022/08/30 HRIM WS(supine)





# 2022/08/30 HRIM WS(upright)



# 2022/08/30 HRIM

## [RESULTS]

### 1. Resting measurements

#### ■ Resting pressure

Lower esophageal sphincter: ( 23 ) 10-45mmHg

Upper esophageal sphincter: ( 13 ) 33-180mmHg

#### ■ Location of upper margin

Lower esophageal sphincter: ( 49.2 )

Upper esophageal sphincter: ( 18.5 )

#### ■ Length

Lower esophageal sphincter: ( 4.3 ) 2.4-5.5cm

Upper esophageal sphincter: ( 3.4 )

### 2. Esophagogastric junction (EGJ) outflow & peristalsis during wet swallows

#### ■ Integrated relaxation pressure (IRP) (median)

Supine: ( 12.92 ) <21mmHg (by MMS HRIM)

Upright: ( 17.84 ) <15mmHg (by MMS HRIM)

#### ■ Distal contractile integral (DCI) (mean)

Supine: ( N/A ) 450-8000mmHg.s.cm

Upright: ( N/A ) 450-8000mmHg.s.cm

#### ■ Distal latency (mean)

Supine: ( N/A ) >4.5s

Upright: ( N/A ) >4.5s

#### ■ Multiple rapid swallows (MRS) (DCI ratio)

Supine: ( N/A ) MRS DCI/( N/A ) Baseline DCI=( N/A )(Normal>1)

#### ■ Rapid drink challenge (RDC) (IRP ratio)

Upright: ( 18 ) RDC IRP/( 12.9 ) Baseline IRP=( 1.39 )(Normal <1)

### 3. Esophagogastric junction (EGJ) competence

#### ■ EGJ morphology (supine)

■ Type I (superimposed of LES and crural diaphragm)

#### ■ EGJ contractile integral

( 40 ) mm Hg.cm (supine) Normal range: 65 (47-95, 127) (median (IQR, 95%))

( 11 ) mm Hg.cm (upright)

## [CONCLUSIONS]

### ■ Absent contractility

#### Note:

The test tube is brought into the stomach by endoscope

Supine 10 tims Wet swallows:100% Failed contraction

Upright 10 tims Wet swallows:100% Failed contraction

S/P myotomy

# Eckardt score

		1 <sup>st</sup> HRIM ↓	OP ↓	2 <sup>nd</sup> HRIM ↓
		110/ 12/28	111/ 3/8	111/ 7/26
1	體重減輕	3	3	0
2	吞嚥困難	3	3	0
3	胸口疼痛	0	0	0
4	逆流	1	0	0
	<b>Total</b>	<b>7</b>	<b>6</b>	<b>0</b>

Scores of 0-1: stage 0, 2-3 to stage I, 4-6 to stage II, score >6 to stage III

# The Reflux Symptom Index (RSI)

		1 <sup>st</sup> HRIM ↓	OP ↓	2 <sup>nd</sup> HRIM ↓
在過去一個月內，以下問題是否影響你？(0-不會，5-重度)		110/ 12/28	111/ 3/8	111/ 7/26
1	沙啞或聲音的問題	0	0	0
2	清喉嚨	0	0	0
3	過多喉嚨黏液或鼻涕倒流	0	0	0
4	吞嚥食物，液體或藥丸困難	4	2	0
5	進食或躺下後咳嗽	4	0	0
6	呼吸困難或嗆到事件	0	0	0
7	令人討厭或惱人的咳嗽	4	0	0
8	有東西黏在喉嚨或有塊狀物在喉嚨的感覺	0	0	0
9	心灼熱，胸痛，消化不良或胃酸跑上來	0	1	0
<b>Total</b>		<b>12</b>	<b>3</b>	<b>0</b>

Score range: 0-45 (normal  $\leq 13$ ),  
the higher the score, the more severe the symptom.

Belafsky PC, 2002 J Voice.  
Lien HC, 2015 Value Health

# Reflux Disease Questionnaire (RDQ)

回想過去一個月， 您認為以下症狀出現時的如何？		1 <sup>st</sup> HRIM		OP	2 <sup>nd</sup> HRIM		
		↓	↓	↓	↓	↓	
		110/1 2/28		111/ 3/8	111/7 /26		
程度：0-不會，5-重度 頻率：0-不會，5-每天		程 度	頻 率	程 度	頻 率	程 度	頻 率
1	胸骨後方感到灼熱-----	0	0	0	0	0	0
2	胸骨後方感到疼痛-----	0	0	0	0	0	0
3	上腹中間感到灼熱-----	0	0	0	0	0	0
4	上腹中間感到疼痛-----	0	0	0	0	0	0
5	口腔內有酸味-----	0	0	0	0	0	0
6	有東西從胃部向上移動而感到不適	0	0	1	1	0	0
<b>Total</b>		<b>0</b>		<b>2</b>	<b>0</b>		

Score range: 0-40 (normal <12)

Shaw MJ, 2001 Am J Gastroenterol CHINESE  
GERD STUDY GROUP, 2004 Chin J Dig Dis

# The GERDyzer

		1 <sup>st</sup> HRIM ↓	OP ↓	2 <sup>nd</sup> HRIM ↓
過去7天來，生病(指逆流相關症狀)對您生活品質的影響。(0-完全沒有；10-很嚴重)		110/ 12/28	111/ 3/8	111/ 7/26
1	整體來說，過去7天您覺得如何？	4.0	3.0	0.5
2	過去7天，生病所帶來的痛苦/不適對您造成的影響有多大？	2.0	3.0	1.5
3	過去7天，生病對您身體健康造成的影響有多大？	2.0	3.0	1.5
4	過去7天，生病對您精神活力造成的影響有多大？	2.0	3.0	2.5
5	過去7天，生病對您日常活動造成的干擾有多大？	2.0	3.0	1.5
6	過去7天，生病對您休閒活動造成的干擾有多大？	2.0	2.0	1.5
7	過去7天，生病對您社交生活造成的干擾有多大？	2.0	2.0	2.5
8	過去7天，生病對您飲食習慣造成的干擾有多大？	3.0	3.0	1.5
9	過去7天，生病對您心情造成的影響有多大？	4.0	5.0	2.5
10	過去7天，生病對您睡眠造成的影響有多大？	1.0	2.0	0.5
<b>Total</b>		<b>18.5</b>	<b>20.5</b>	<b>10.5</b>

Score range: 0-70,  
the higher the score, the worse the QoL.

Holtmann G, 2009 Aliment Pharmacol Ther  
Wu CP & Lien HC, 2016 Medicine



# 食道過度警覺及焦慮量表 (EHAS)

1<sup>st</sup> HRIM

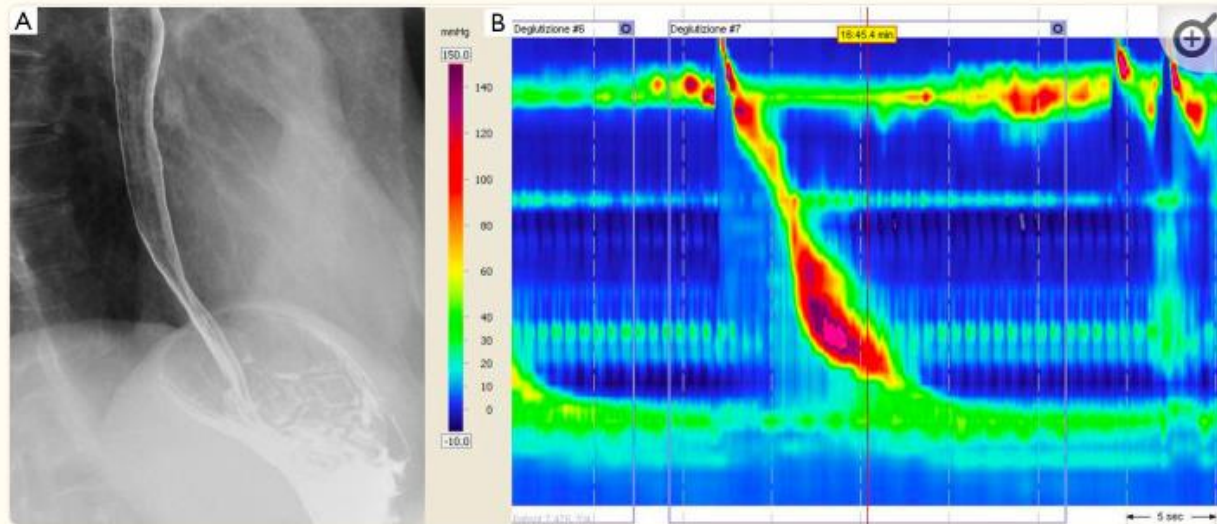
OP

2<sup>nd</sup> HRIM

在過去一個月內，以下問題是否影響你？ (0-非常不同意，4-非常同意)		110/ 12/28	111/ 3/8	111/7 /26
1	我似乎無法忘記我的症狀	4	4	4
2	我很難享受生活，因為我無法擺脫喉嚨/胸部/食道的不適	3	4	0
3	這些症狀很可怕，我覺得它們讓我不知所措	3	4	1
4	只要一醒來，我就會一整天擔心我的喉嚨/胸部/食道會感到不適	2	2	0
5	我經常會擔心喉嚨/胸部/食道的問題	3	4	0
6	這些症狀很可怕，我認為它們永遠不會改善	4	4	1
7	關於減輕症狀，我毫無辦法	4	4	1
8	當我喉嚨/胸部/食道不適時，我會感到害怕	3	3	0
9	我焦急地希望這些症狀消失	4	4	1
<b>Symptom-specific anxiety total score, Score range: 0-36</b>		<b>30</b>	<b>33</b>	<b>8</b>
10	我很快就會注意到我的食道症狀的位置或範圍的變化	4	4	2
11	我會意識到我的食道有突然或暫時的變化	4	4	2
12	即使我忙於另一件事，我也會注意到我的症狀	4	4	1
13	我會專注於食道的感覺	2	4	1
14	我對心灼熱或胸痛等食道的感覺非常敏感	1	4	1
15	我會一直追蹤我症狀的程度	2	4	1
<b>Esophageal hypervigilance. . Score range: 0-24</b>		<b>16</b>	<b>24</b>	<b>8</b>

# Case report

- Presented with GERD symptoms



median IRP 15.3 mmHg

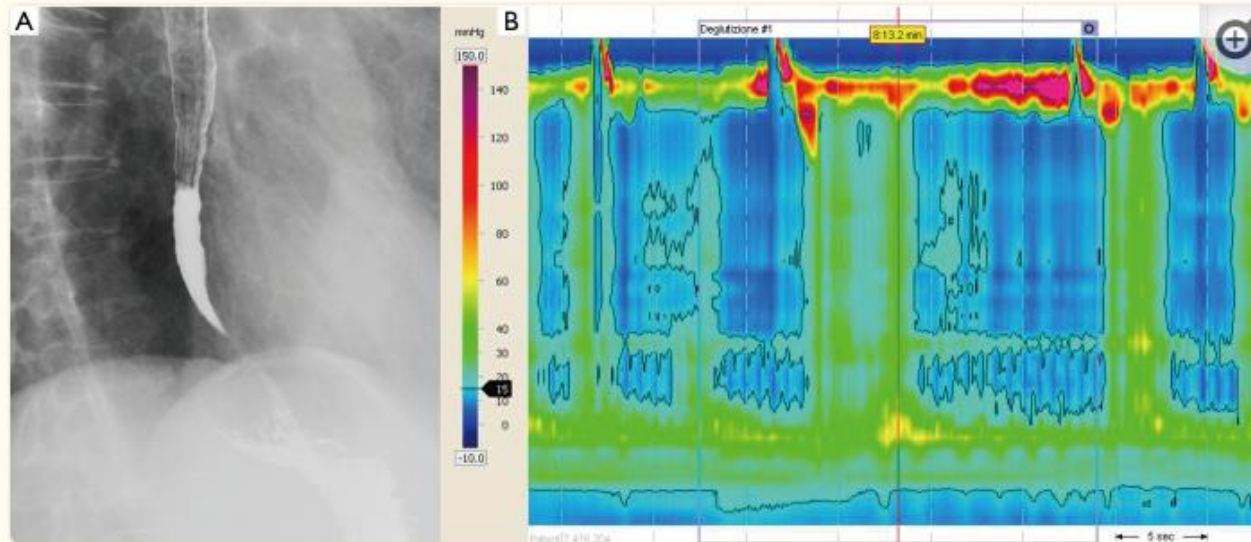
Figure 3

Case#2. (A) First barium swallow showing no dilation of the esophagus and a normal transit through the cardia; (B) the HRM study showed an Outflow obstruction with normal peristalsis. HRM, high-resolution manometry.



# Case report

- 2.5 years later



IRP: 29.8 mmHg

**Figure 4**

Case #2. (A) Second barium swallow (3 years later) showing a slow transit of the barium to the cardia (“bird beak” sign); (B) the HRM picture revealed a pattern II achalasia. HRM, high-resolution manometry.

> s/p laparoscopic Heller myotomy with a Dor fundoplication

# 討論：

- 連漢仲主任：提出這個個案，主要是想提醒當病人有“吞嚥困難”的症狀時，要想到會不會是“食道遲緩不能(achalasia)”的問題。這位病人“吞嚥困難”10幾年，表示病人症狀沒有很嚴重，幸好沒有進展到end stage。
- 莊政諺主任：請問病人術後還要服用藥物，如PPI或蠕動的藥嗎？
- 連漢仲主任：通常術後如果沒有症狀，不會給藥；另外，術後三個月會請病人再做一次HRIM，了解手術的效果。通常效果都不錯，大部分都會回復，除了IRP會下降，有些本來完全不會蠕動，變得會有點蠕動，或是變成Spasm。Achalasia大部分都是delay診斷，胃鏡常常都看不到，醫師做完胃鏡後就會跟病人說沒有問題，因為沒有想到這個病。現在有HRIM非常方便，管子放進去就知道是不是achalasia。所以就是要提醒大家有achalasia這個病。
- 莊政諺主任：每一次會議都會學到很多。

Thank You