

HIRSCHPRUNG'S DISEASE CASE



Diagnostic Anorectal Manometry

Patient:

Name:
Patient ID:
Gender:
DOB/Age: 11/04/2000

Physician:
Operator:
Referring Physician:
Examination Date:

Summary:

Resting

Anal mean (mmHg) 69
Anal max (mmHg) 80

Squeeze

Anal mean (mmHg) 108
Anal max (mmHg) 147
Squeeze Duration (sec) 3

Sensation

Rectal Capacity (cc)
RAIR (%) absent
RB Volume at RAIR Threshold (cc) absent

Expel Empty

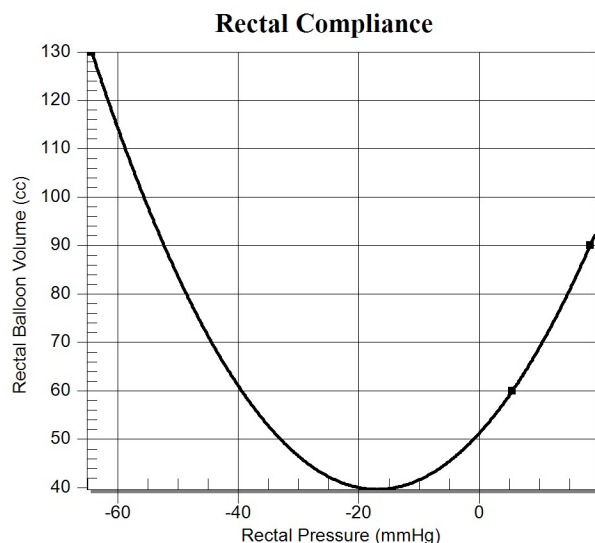
Rectal Pressure (Gradient) (mmHg) 28
Anal Pressure (Gradient) (mmHg) 63
Anorectal Gradient (mmHg) -35

Expel Full

Rectal Pressure (Gradient) (mmHg) 24
Anal Pressure (Gradient) (mmHg) 53
Anorectal Gradient (mmHg) -30

Exhale

Anal mean (mmHg) 99
Anal max (mmHg) 132



Indications:

Constipation

Patient ID:

Notes:

Test Description:

After patient completed pre-procedure enema a digital rectal exam was performed. The ARM system was calibrated and the catheter with balloon attached was inserted to zero station and resting pressures were obtained. A second series of resting pressures were obtained at station 1 and 2, and the highest of these pressures were used for baseline resting pressure. Three separate squeezing tests were performed each for 20 seconds followed by straining on an empty balloon and a 60cc balloon. Finally, we measured how much volume in the balloon was required for the patient to first feel the balloon, to have the desire and urge to defecate, and to feel uncomfortable with the balloon. RAIR was calculated. Medspira mcompass software was used to evaluate the data and the curve was reviewed.

Results of Studies:

Mean Resting Pressure: 69 mmHg
Mean Squeezing Pressure: 108 mmHg
Expel Empty Pressure Gradient: -35 mmHg
Expel Full Pressure Gradient: -30 mmHg
Rectoanal Inhibitory Reflex: absent
Balloon Sensation was first noted at: 60 cc
Desire Sensation: 90 cc
Urge Sensation: 130 cc
Exhale Pressures: 99 mmHg

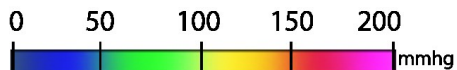
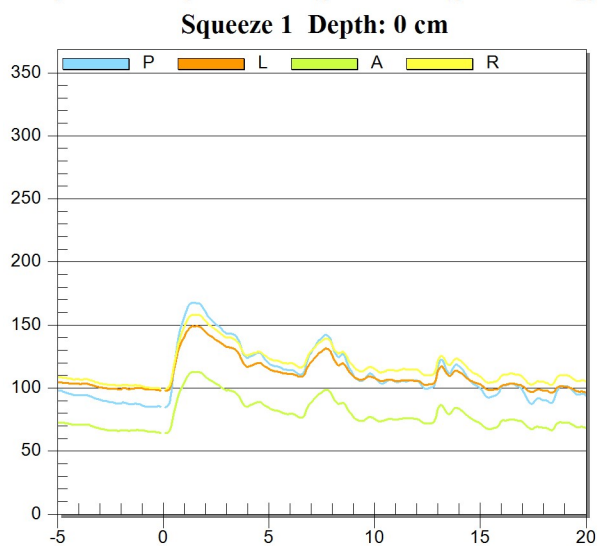
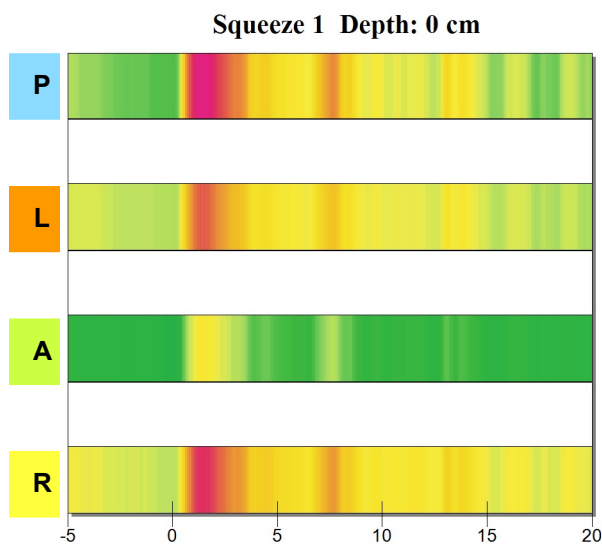
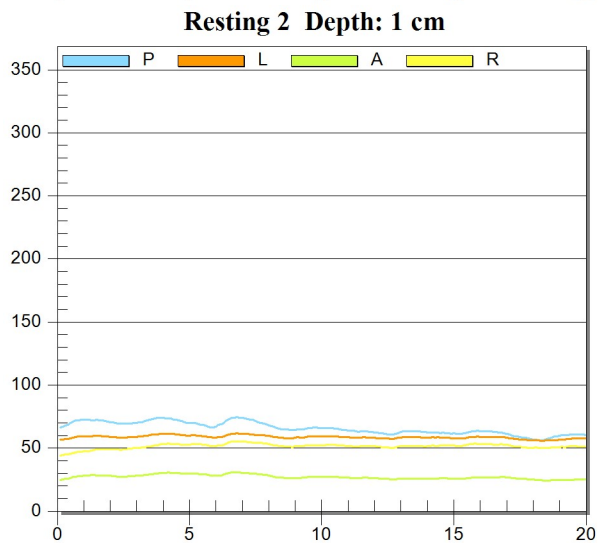
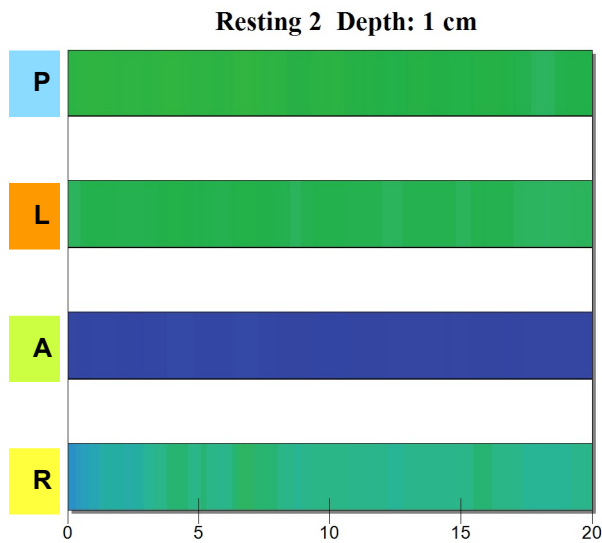
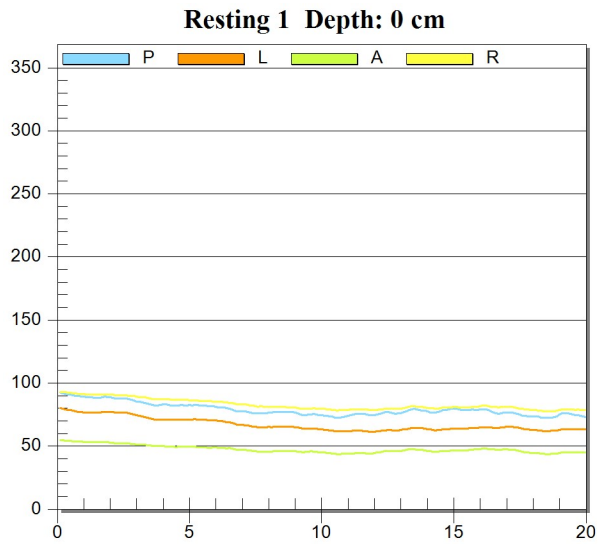
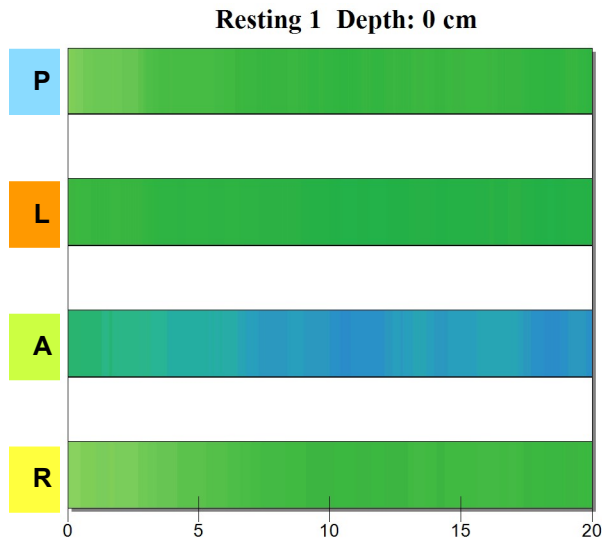
Summary:

1. Normal resting pressures.
2. Slightly decreased squeezing pressures.
3. Evidence of paradoxical activity during expulsion (straining) consistent with moderate dyssynergia.
4. RAIR was absent.
5. 1st Sensation, Desire and Urgency were perceived at 60, 90, 130 CCs, which are slightly delayed.
6. Slightly decreased exhale pressures.

Impression: Slightly decreased anal pressures, with moderate dyssynergia, RAIR absent. Slightly delayed volume perception. Exhale pressures not suggestive of FI. Features are consistent with late onset Hirschprung's disease given relevant clinical history.

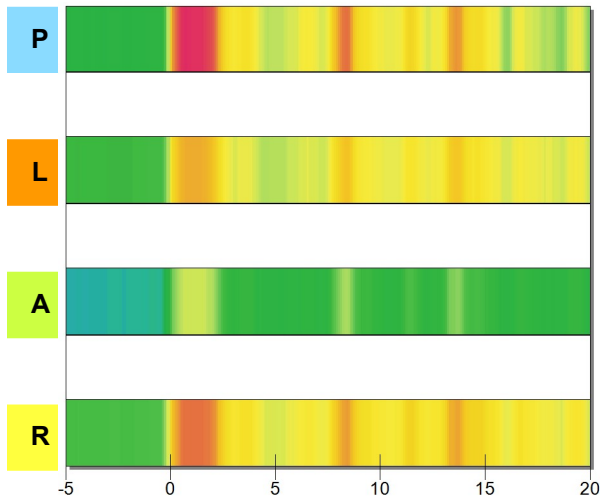
Recommendation: Patient will benefit from bowel regimen with fiber supplementations. Obtain EMG and biofeedback therapy.

Patient ID:

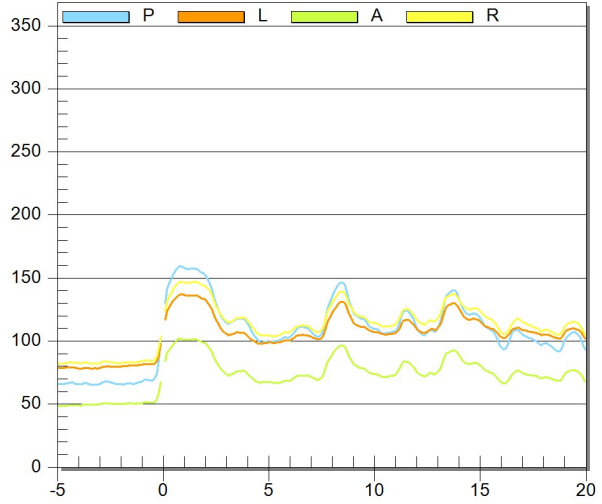


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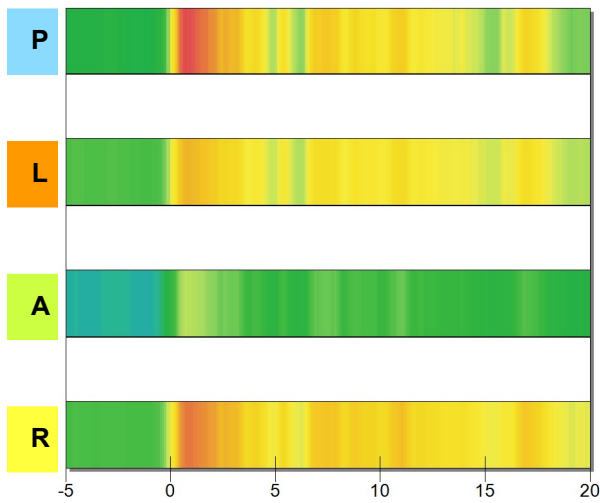
Squeeze 2 Depth: 0 cm



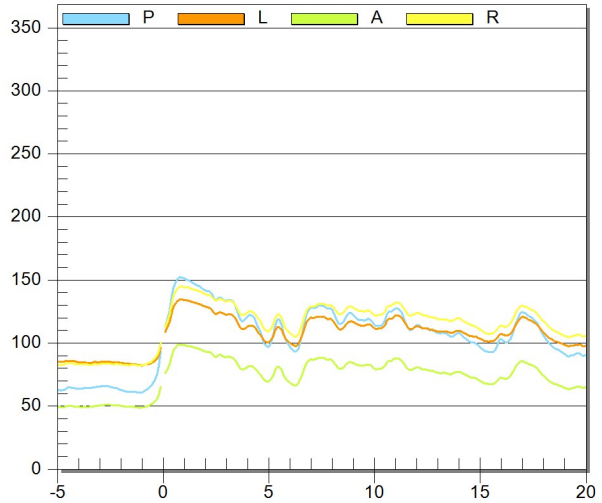
Squeeze 2 Depth: 0 cm



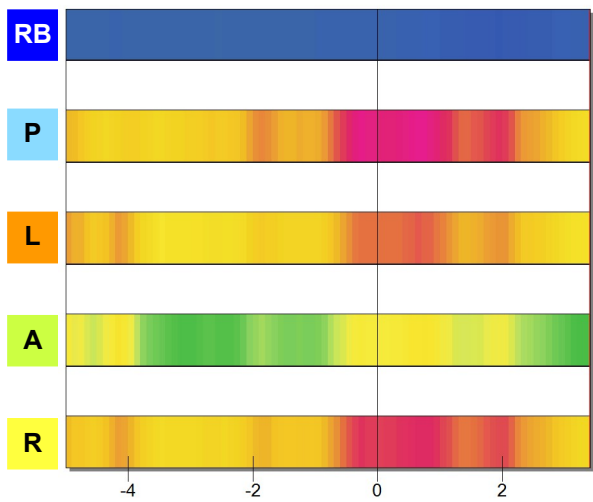
Squeeze 3 Depth: 0 cm



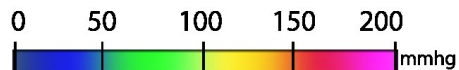
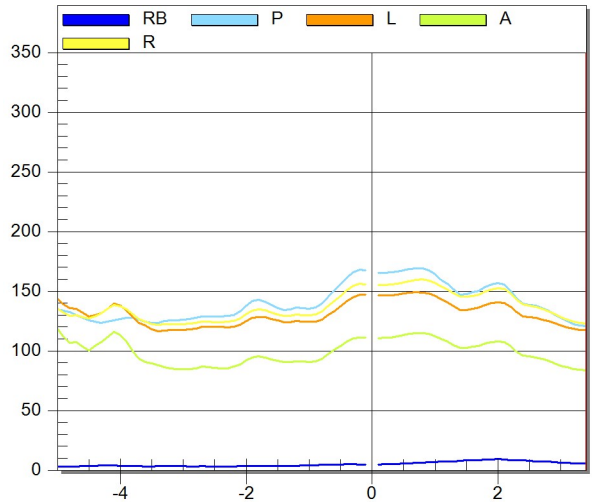
Squeeze 3 Depth: 0 cm



Expel Empty 1 Depth: 0 cm

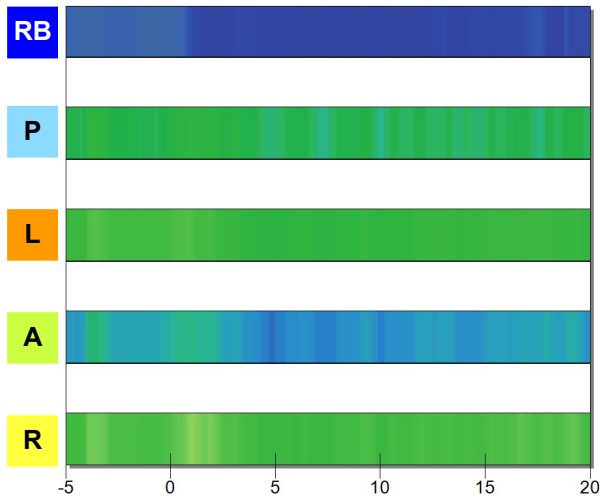


Expel Empty 1 Depth: 0 cm

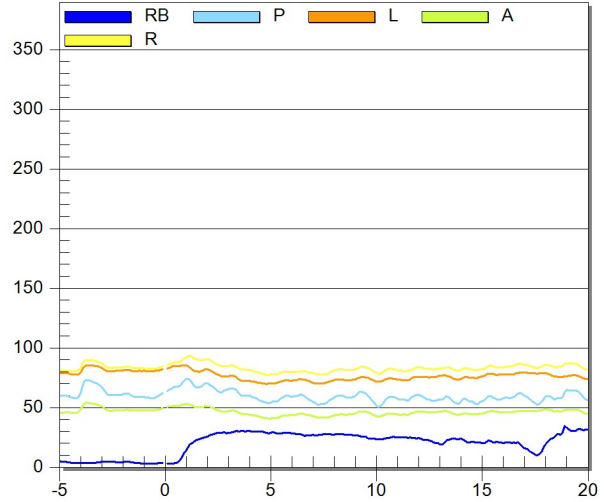


Patient ID:

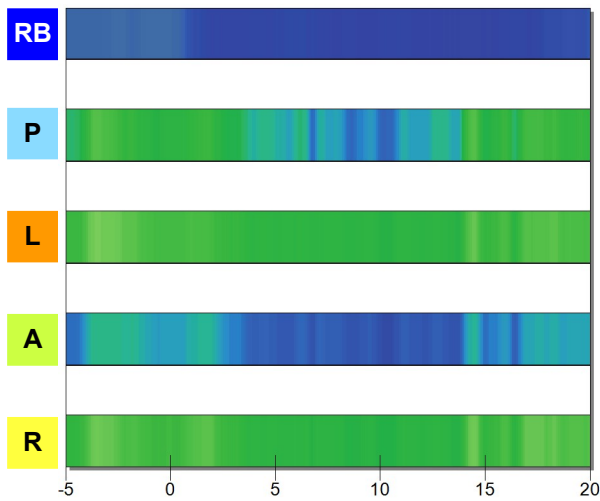
Expel Empty 2 Depth: 0 cm



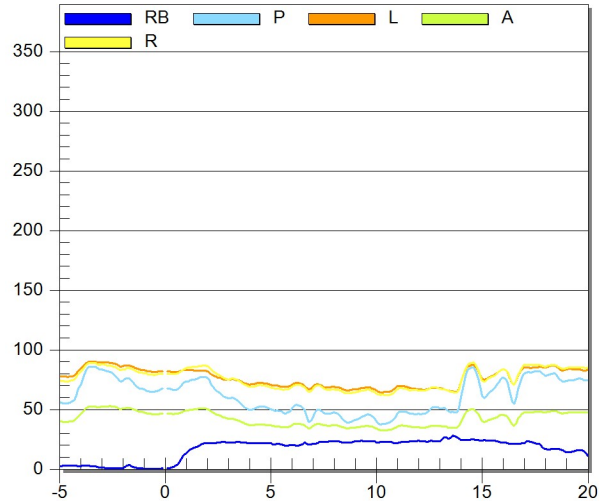
Expel Empty 2 Depth: 0 cm



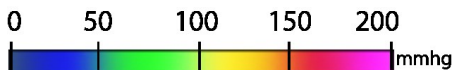
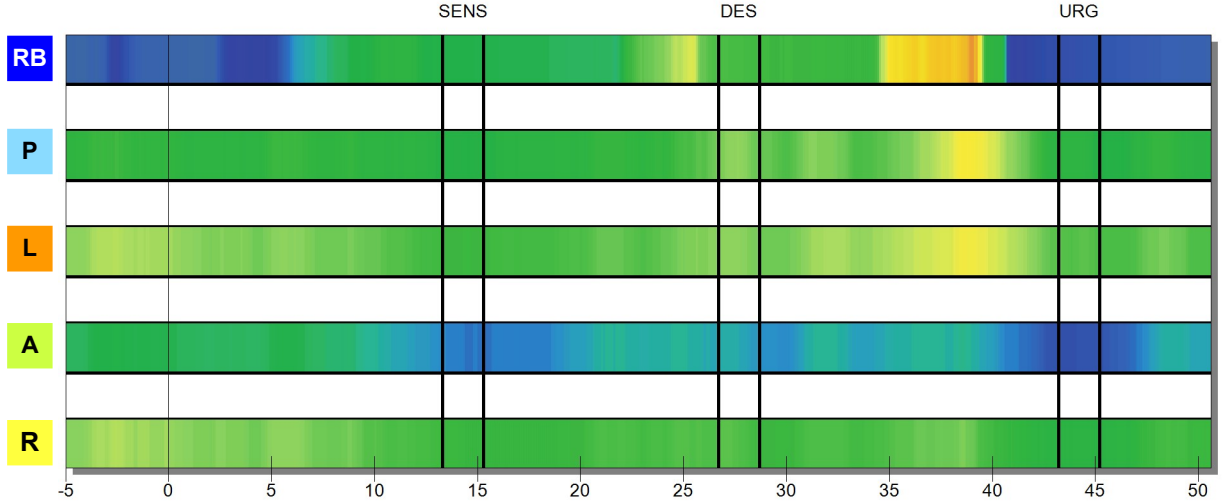
Expel Full Depth: 0 cm



Expel Full Depth: 0 cm



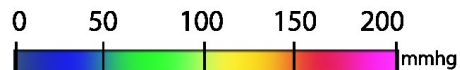
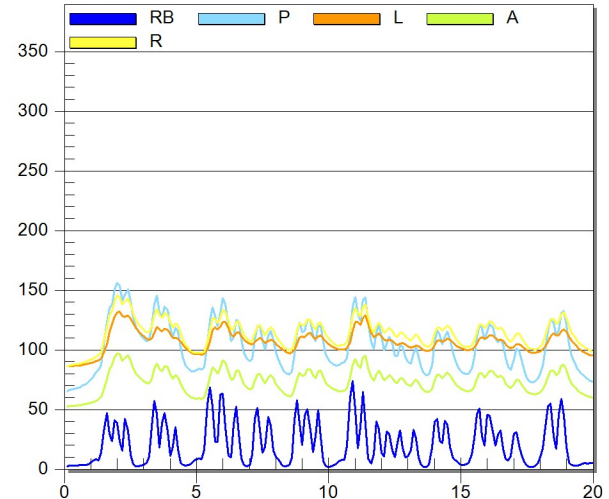
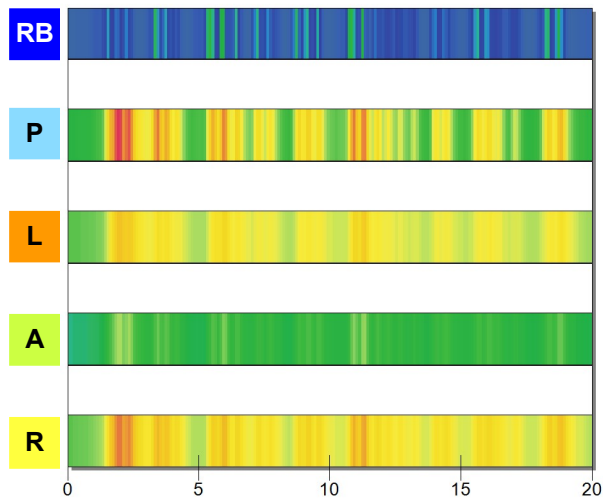
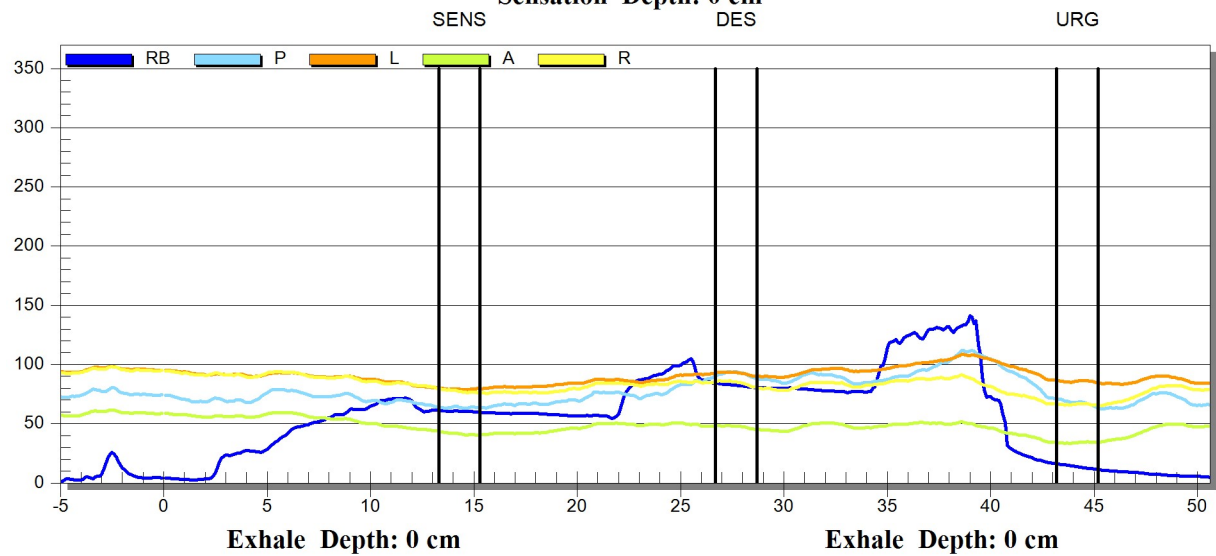
Sensation Depth: 0 cm



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Patient ID:
Sensation Depth: 0 cm



Patient ID:

Resting

Maneuver #	1	2
Catheter Depth (cm)	0	1
P Max (mmHg)	93	74
L Max (mmHg)	81	62
A Max (mmHg)	55	31
R Max (mmHg)	93	55
P Mean (mmHg)	79	66
L Mean (mmHg)	67	59
A Mean (mmHg)	48	27
R Mean (mmHg)	83	51
Anal Max (mmHg)	80	56
Anal Mean (mmHg)	69	51

Squeeze

Maneuver #	1	2	3
Catheter Depth (cm)	0	0	0
P Max (mmHg)	168	159	152
L Max (mmHg)	149	137	135
A Max (mmHg)	113	102	99
R Max (mmHg)	158	147	145
P Mean (mmHg)	115	117	115
L Mean (mmHg)	113	112	113
A Mean (mmHg)	81	78	80
R Mean (mmHg)	121	119	122
Anal Max (mmHg)	147	136	133
Anal Mean (mmHg)	108	107	107
Squeeze Duration (sec)	3	3	7

Patient ID:

Expel Empty

Maneuver #	1	2
Catheter Depth (cm)	0	0
RB Volume (cc)	10	10
P Min (mmHg)	121	50
L Min (mmHg)	117	70
A Min (mmHg)	84	41
R Min (mmHg)	123	77
P Mean (mmHg)	150	59
L Mean (mmHg)	136	76
A Mean (mmHg)	103	46
R Mean (mmHg)	146	83
Anal Min (mmHg)	111	60
Anal Mean (mmHg)	134	66
RB Max Pressure (mmHg)	9	35
RB Mean Pressure (mmHg)	7	24
Anal Relaxation (%)	-9	4
Rectal Pressure Change (%)	92	525
Rectal Pressure (Gradient) (mmHg)	NONE	28
Anal Pressure (Gradient) (mmHg)	NONE	63
Anorectal Gradient (mmHg)	NONE	-35

Expel Full

Maneuver #	1
Catheter Depth (cm)	0
RB Volume (cc)	50
RB Diameter (mm)	48
P Min (mmHg)	38
L Min (mmHg)	64
A Min (mmHg)	33
R Min (mmHg)	62
P Mean (mmHg)	59
L Mean (mmHg)	75
A Mean (mmHg)	41
R Mean (mmHg)	74
Anal Min (mmHg)	49
Anal Mean (mmHg)	62
RB Max Pressure (mmHg)	28
RB Mean Pressure (mmHg)	21
Anal Relaxation (%)	13
Rectal Pressure Change (%)	1208
Rectal Pressure (Gradient) (mmHg)	24
Anal Pressure (Gradient) (mmHg)	53
Anorectal Gradient (mmHg)	-30

Patient ID:

Sensation

Maneuver #	1		
Catheter Depth (cm)	0		
Rectal Capacity (cc)			
RAIR (%)	absent		
RB Volume at RAIR Threshold (cc)	absent		
Type	SENS	DES	URG
P Max (mmHg)	65	94	71
L Max (mmHg)	80	94	87
A Max (mmHg)	43	48	35
R Max (mmHg)	80	86	67
P Mean (mmHg)	64	92	68
L Mean (mmHg)	79	92	86
A Mean (mmHg)	42	47	34
R Mean (mmHg)	78	84	66
Anal Max (mmHg)	67	80	64
Anal Mean (mmHg)	66	79	63
RB Volume (cc)	60	90	130
RB Diameter (mm)	51	57	64
RB Mean Pressure (mmHg)	5	18	-64

Exhale

Maneuver #	1
Catheter Depth (cm)	0
RB Volume (cc)	10
P Max (mmHg)	156
L Max (mmHg)	132
A Max (mmHg)	97
R Max (mmHg)	145
P Mean (mmHg)	104
L Mean (mmHg)	107
A Mean (mmHg)	73
R Mean (mmHg)	114
Anal Max (mmHg)	132
Anal Mean (mmHg)	99