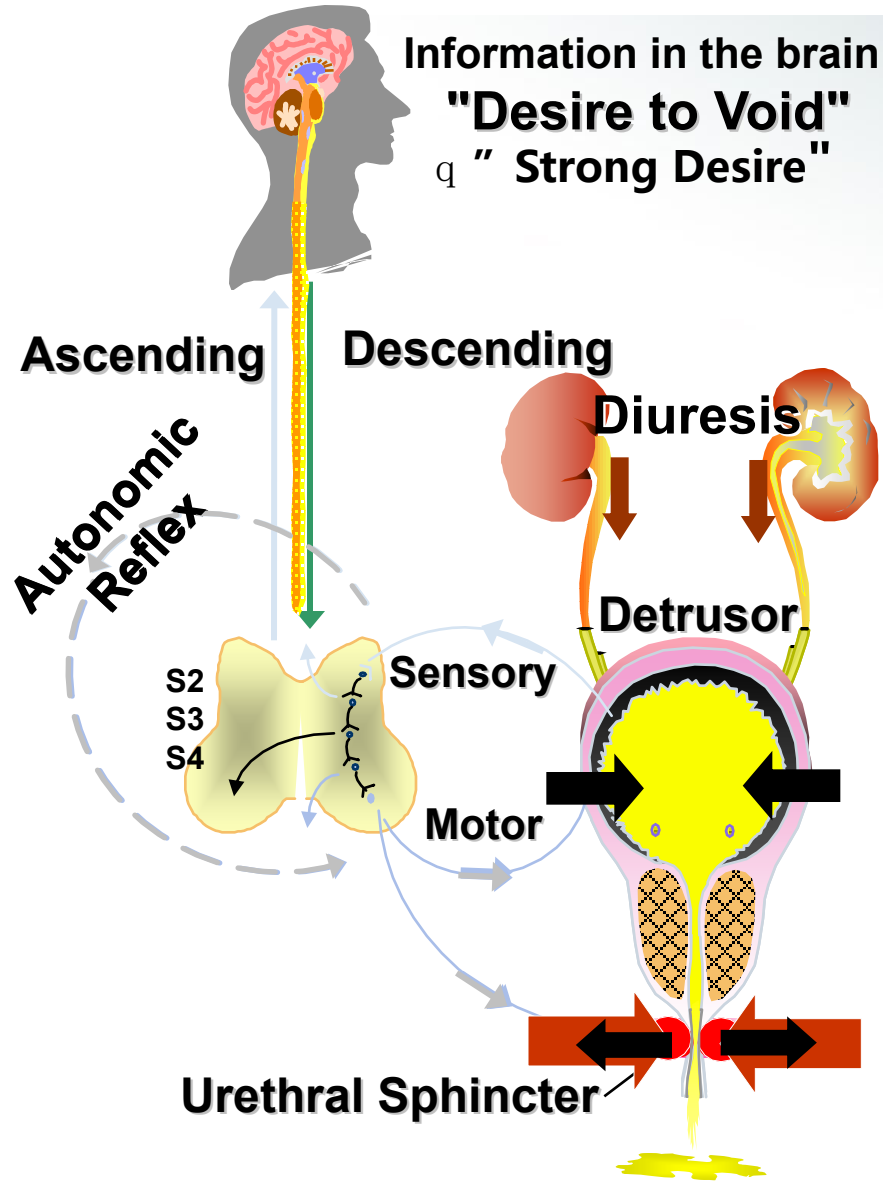


# 常用尿动力学检查方法及 结果判读

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# 下尿路排尿生理及神经调控



- q 肾输尿管输送尿液、充盈膀胱
- q 膀胱膨胀作为逼尿肌持续的刺激
- q 刺激通过感觉通路传送到大脑、产生尿意
- q 自主和躯体神经系统控制逼尿肌和尿道压
- q 产生强烈尿意后，括约肌随意收缩

## q 排尿期：

- 自主神经系统抑制
- 逼尿肌收缩 (副交感神经)
- 尿道括约肌松弛

# 什么是尿动力学

**尿动力学是通过医患之间一系列的互动检查，获得膀胱充盈以及排空过程中的各项功能参数，对患者下尿路功能障碍做出准确评估。**

## Reconstruction

SUI = stress urinary incontinence

UDS = urodynamics/urodynamic studies

UTI = urinary tract infection

UUI = urgency urinary incontinence

VLPP = valsalva leak point pressure

VUDS = videourodynamics/videourodynamic studies

The complete guideline is available at [http://www.auanet.org/content/media/adult\\_urodynamics\\_guideline.pdf](http://www.auanet.org/content/media/adult_urodynamics_guideline.pdf)

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## INTRODUCTION

**URODYNAMICS is an interactive diagnostic study of the lower urinary tract composed of a number of tests that can be used to obtain functional information about bladder filling, urine storage and emptying.** Proper medical history taking, physical examination and other evaluations are integral in determining the etiology of complex lower urinary tract symptoms; however, urinary symptoms and physical

findings often do not adequately predict the pathophysiology. Following these assessments, *urodynamic questions (what is the information I need to obtain from UDS? and what is the most appropriate UDS technique to obtain these results?)* should be formulated. Subsequent completion of the most appropriate UDS test(s) often aids in diagnosis. The main goal of UDS is to reproduce the patient's symptoms, when present, and determine the cause

# 下尿路症状的评估

通过排尿日记对患者LUTS作出初步评估  
根据患者症状针对性进行尿动力学检查

排尿日记				
日期	时间	尿量	尿失禁	备注
2月3日	8:00	180		
	10:20	250		
	12:10	300		尿急
	14:15	120		
	19:20	160		
2月4日	7:00	290		
	11:30	250		
	14:10	300		

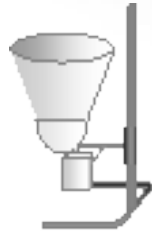


# 常用尿动力学检查设备

尿流率计

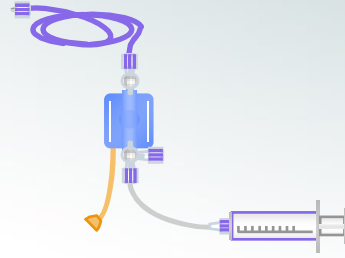


称重式

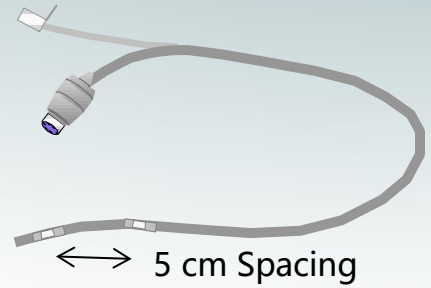


转盘式

压力传感器

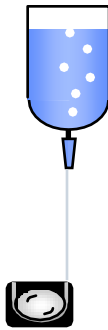


外置压力传感器



内置压力传感器

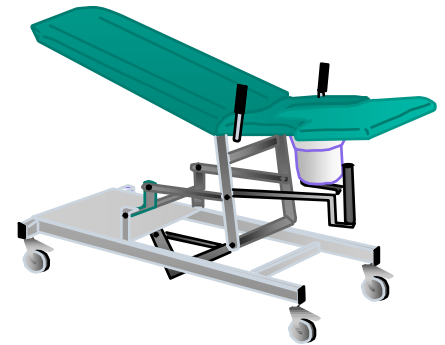
灌注泵



测压管



检查床



# 常用尿动力学检查设备

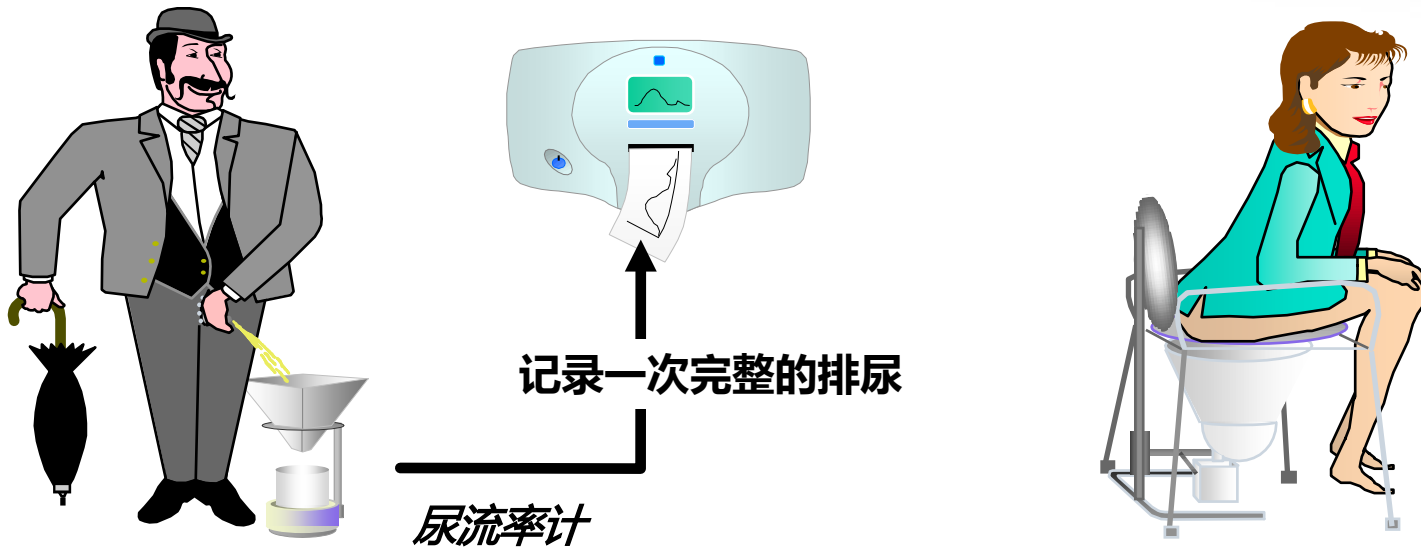


**Ellipse**  
The Modular Urodynamic System



# 常用检查--自由尿流率测定

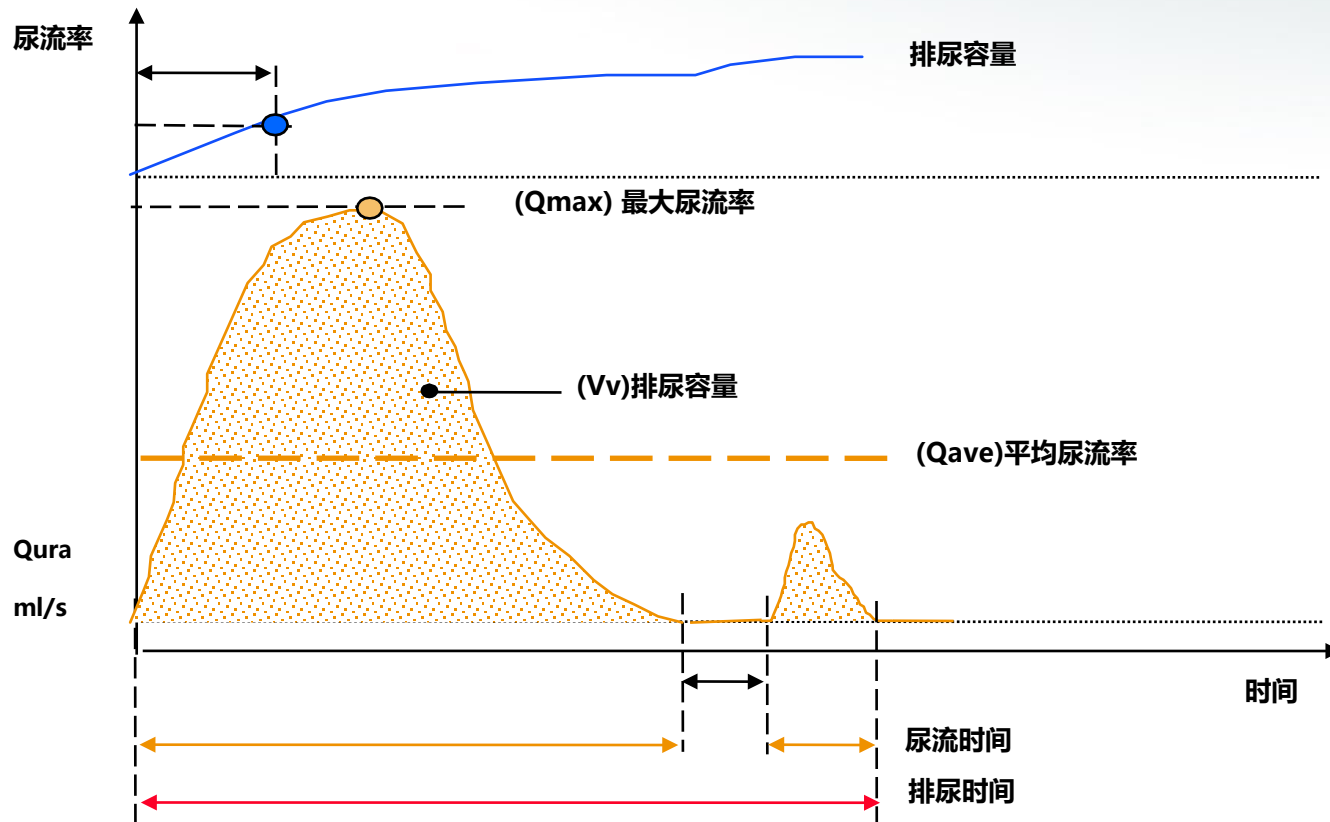
- 无创、价格低廉
- 是所有LUTS患者必不可少的一线筛查项目
- 检查应在安静、隐蔽的环境下进行



# 常用检查--自由尿流率测定

最大尿流率、排尿量、排尿时间、剩余尿是常用指标

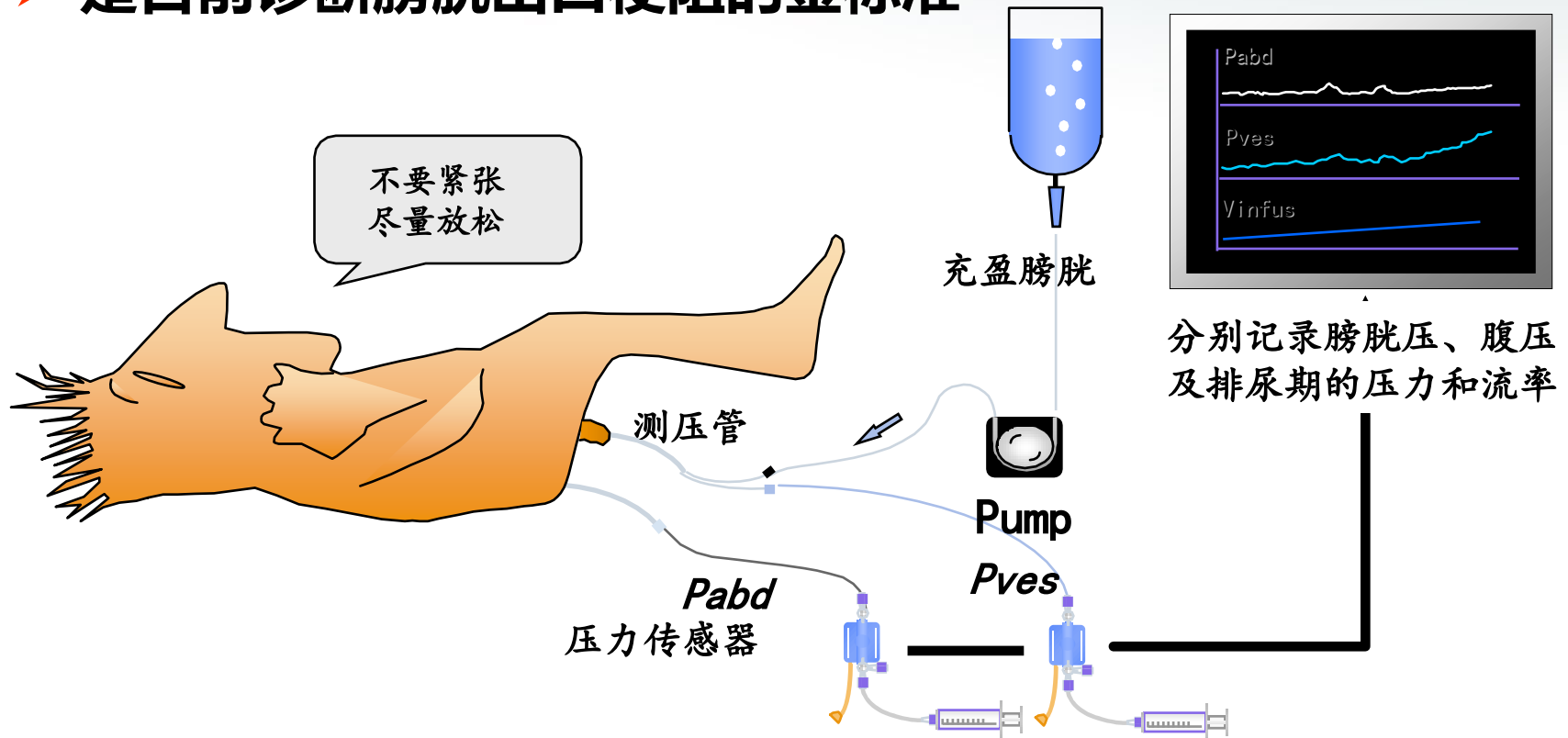
其中 $Q_{max}$ 参考范围：男性  $>15\text{ml/s}$ ；女性  $>20\text{ml/s}$





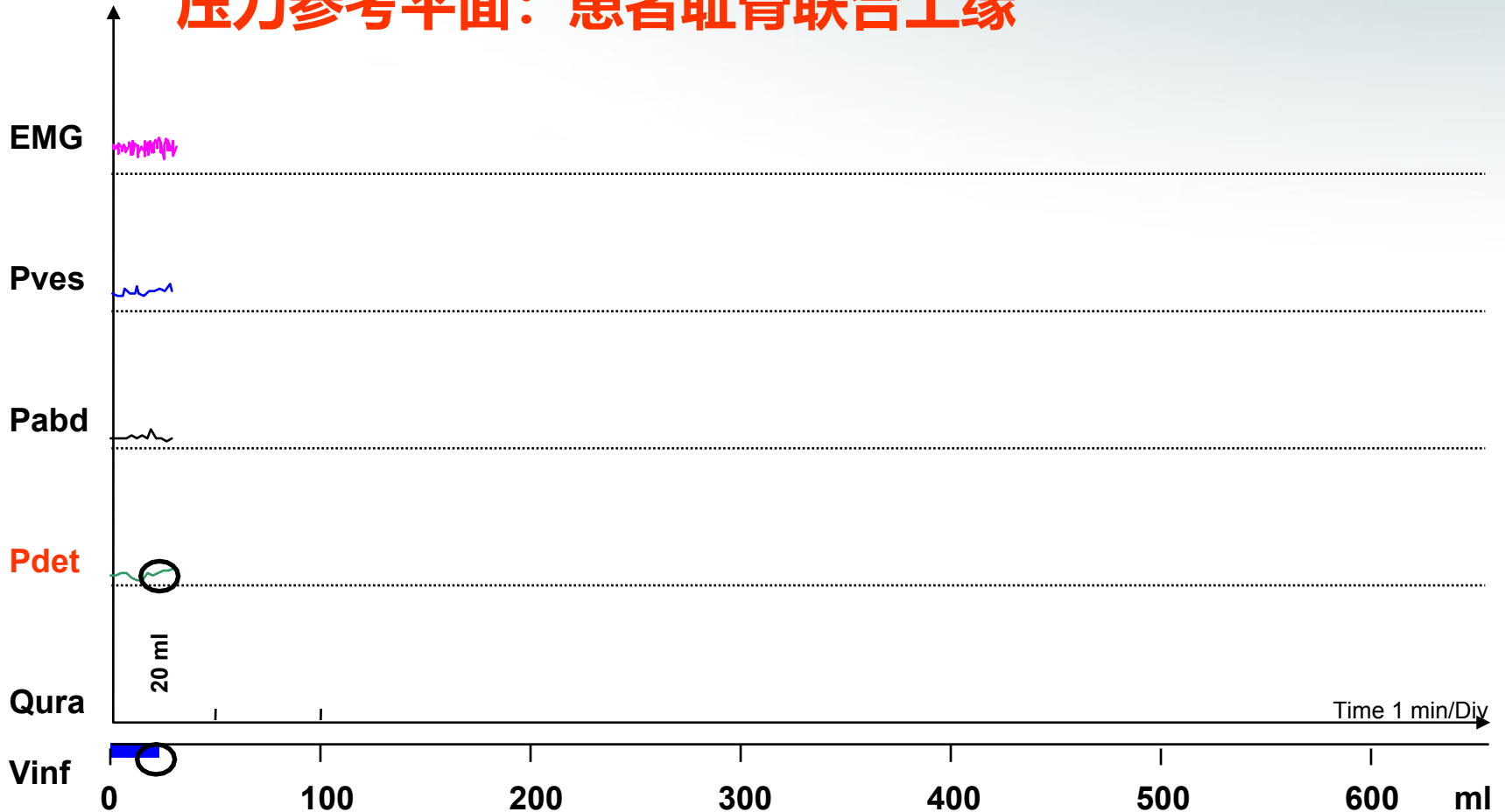
# 常用检查--压力流率(肌电图)同步测定

- 了解储尿期膀胱的感觉、顺应性、稳定性和容量
- 评估逼尿肌/尿道外括约肌协同情况
- 是目前诊断膀胱出口梗阻的金标准



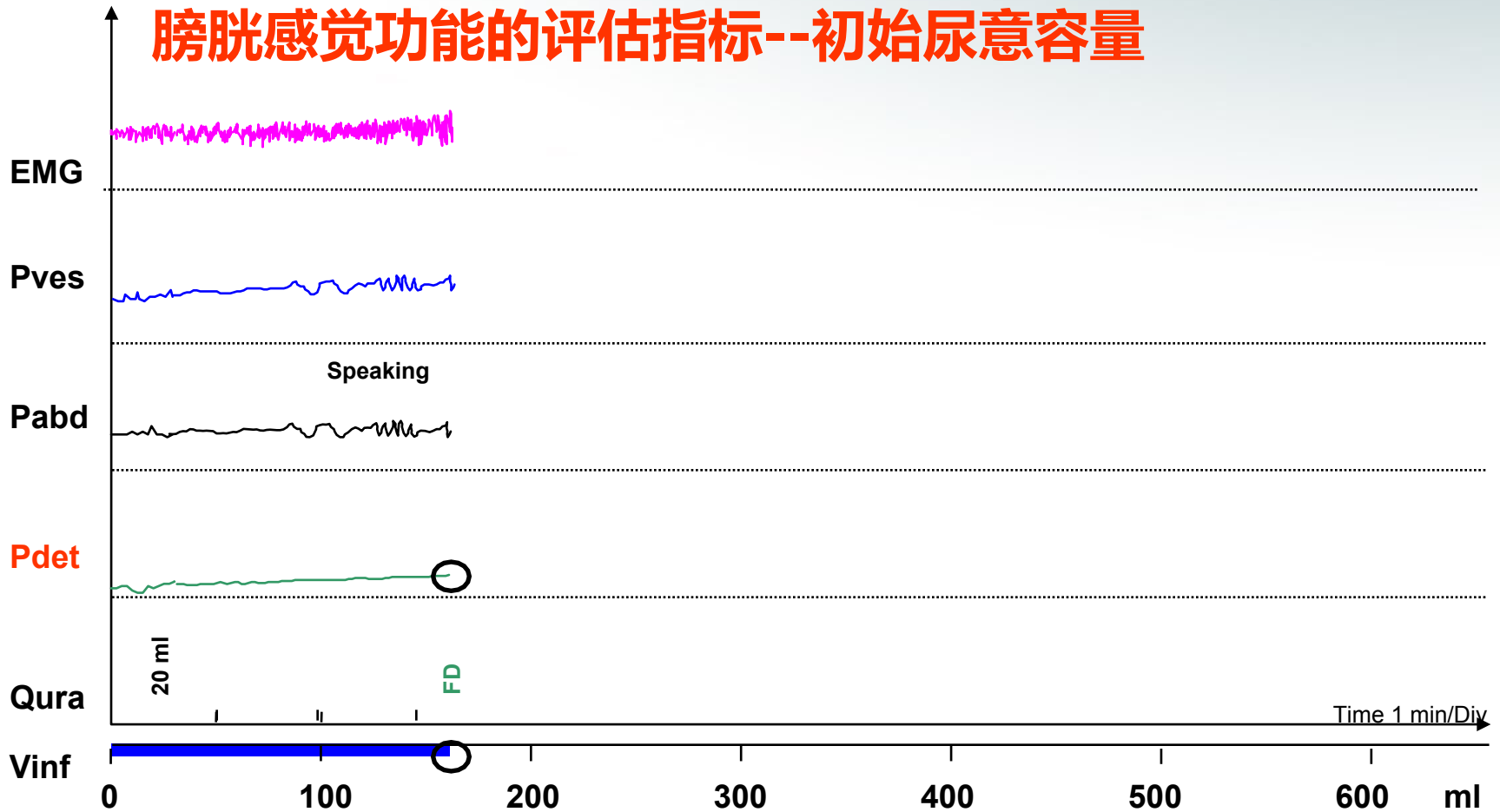
# 常用检查--压力流率(肌电图)同步测定

**零点压力：尿动力仪所处位置的大气压**  
**压力参考平面：患者耻骨联合上缘**



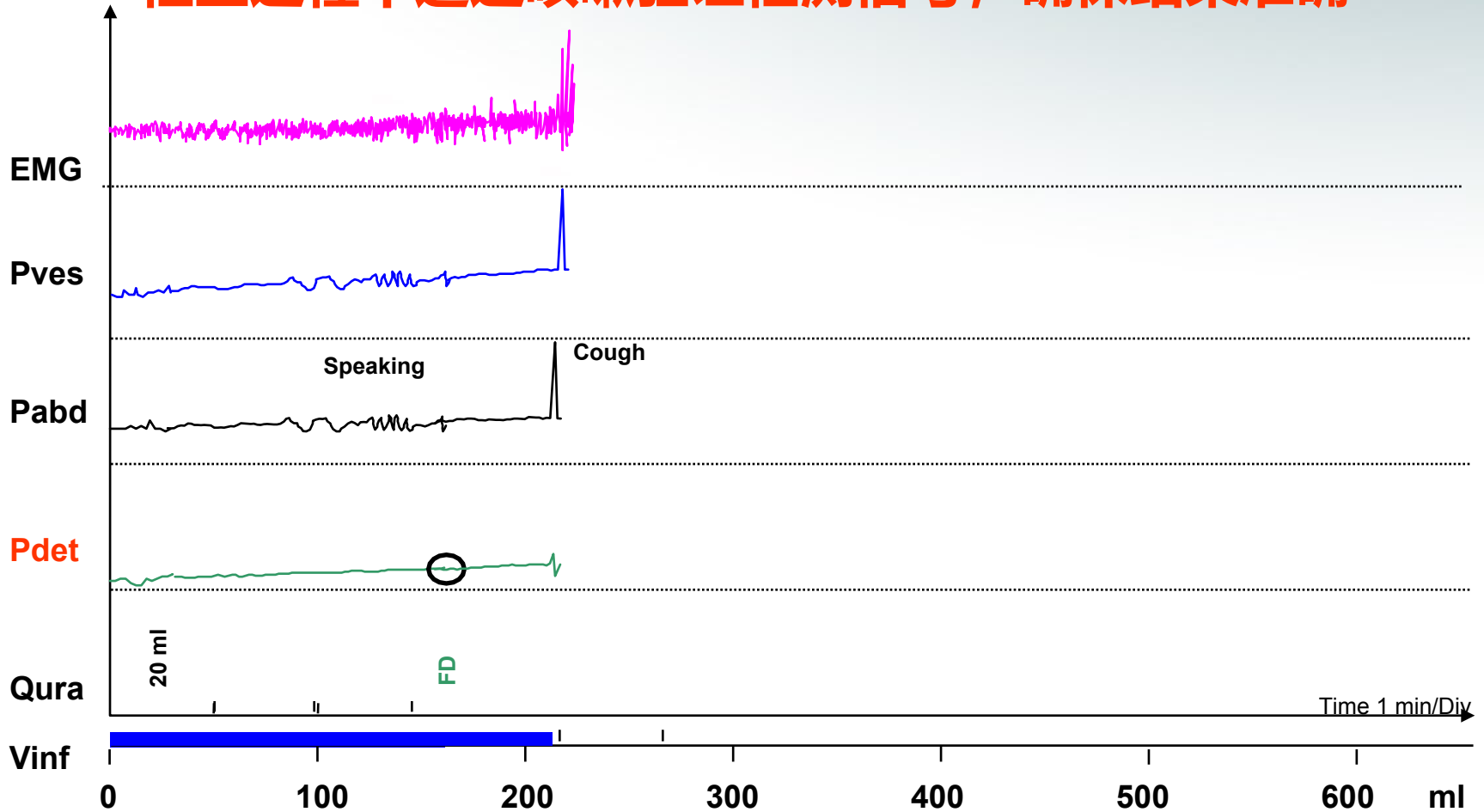
# 常用检查--压力流率(肌电图)同步测定

充盈过程中分别记录患者的FD、ND、SD  
膀胱感觉功能的评估指标--初始尿意容量



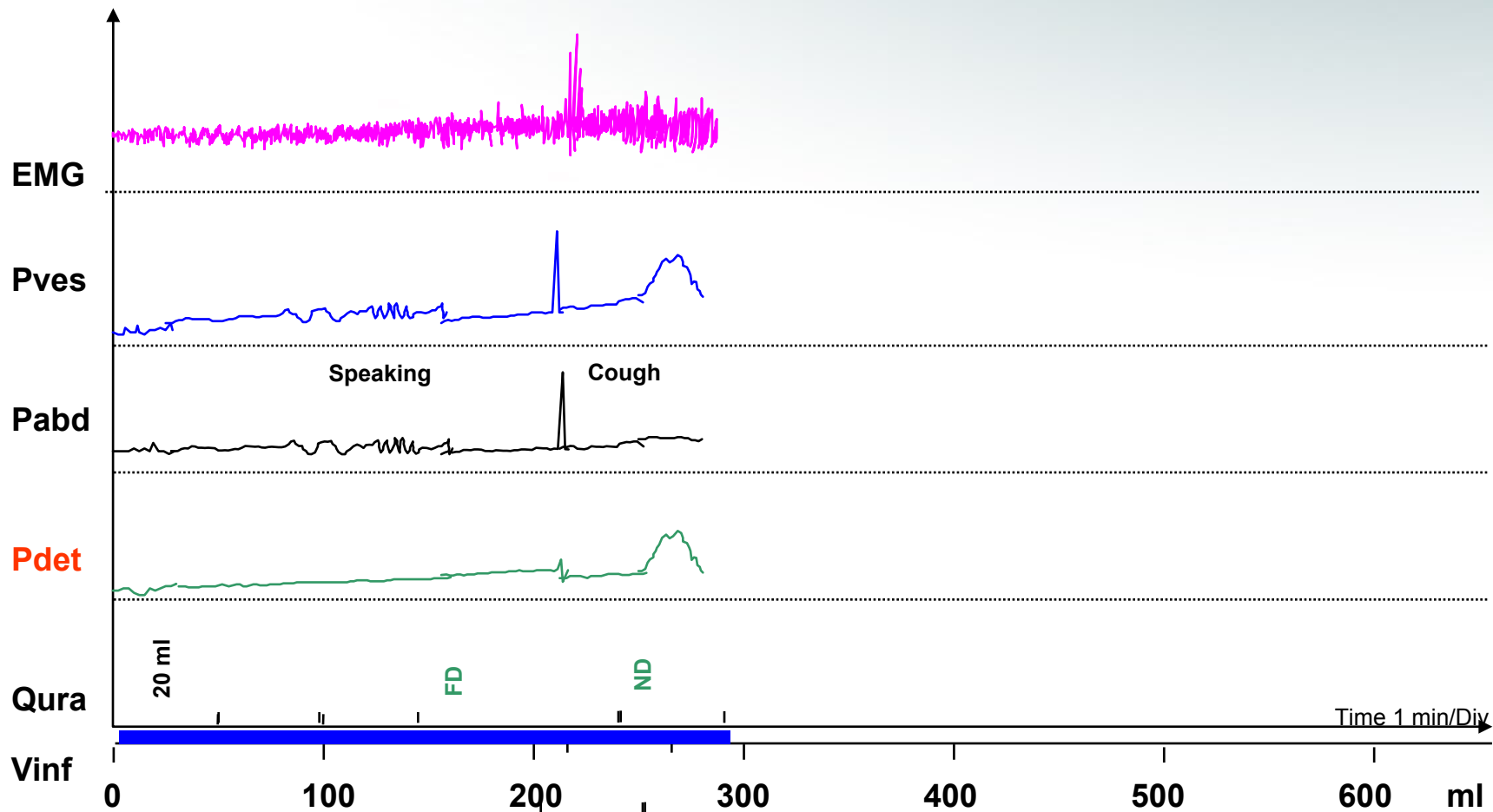
# 常用检查--压力流率(肌电图)同步测定

检查过程中通过咳嗽验证检测信号，确保结果准确



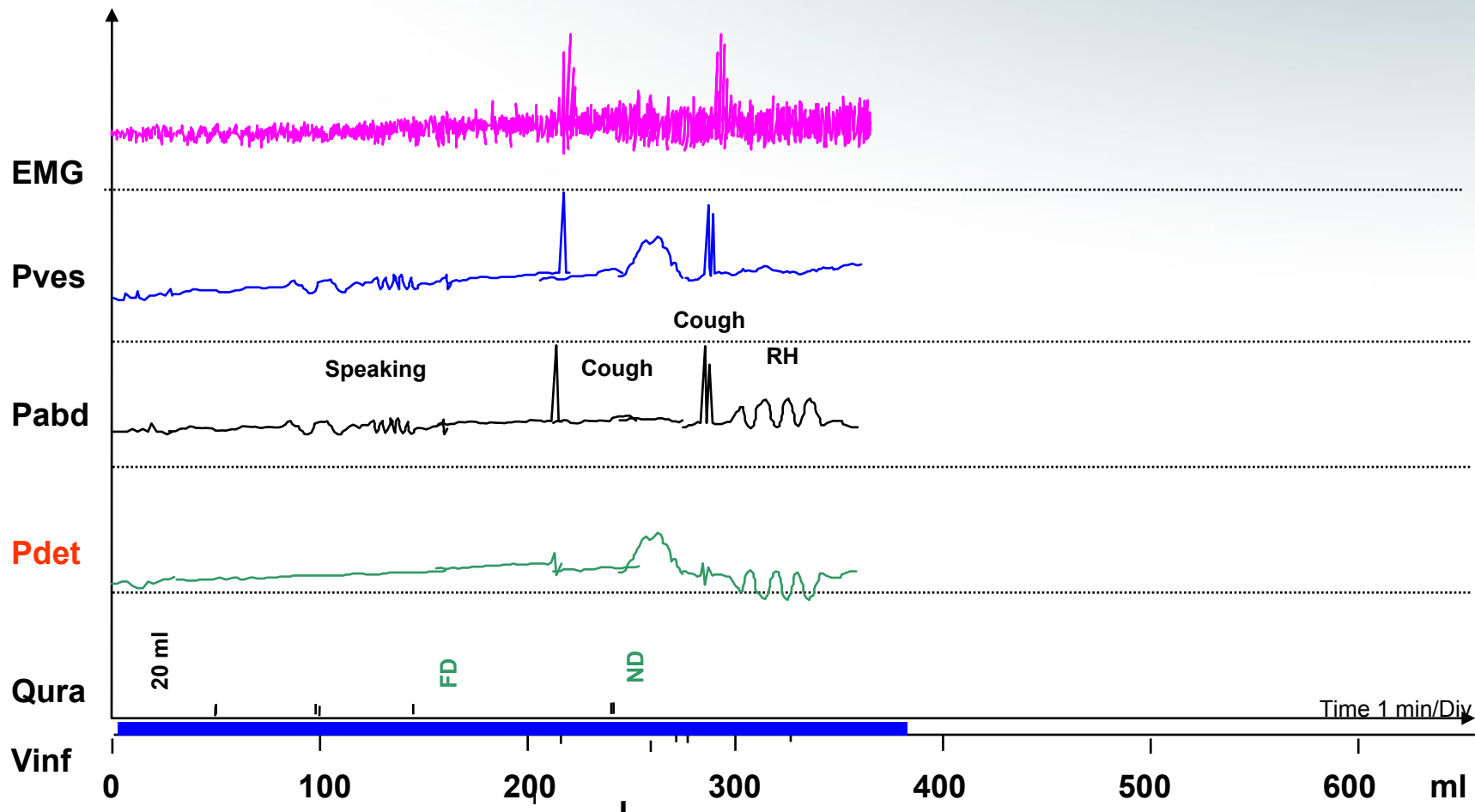
# 常用检查--压力流率(肌电图)同步测定

储尿期逼尿肌自发性收缩：逼尿肌过度活动



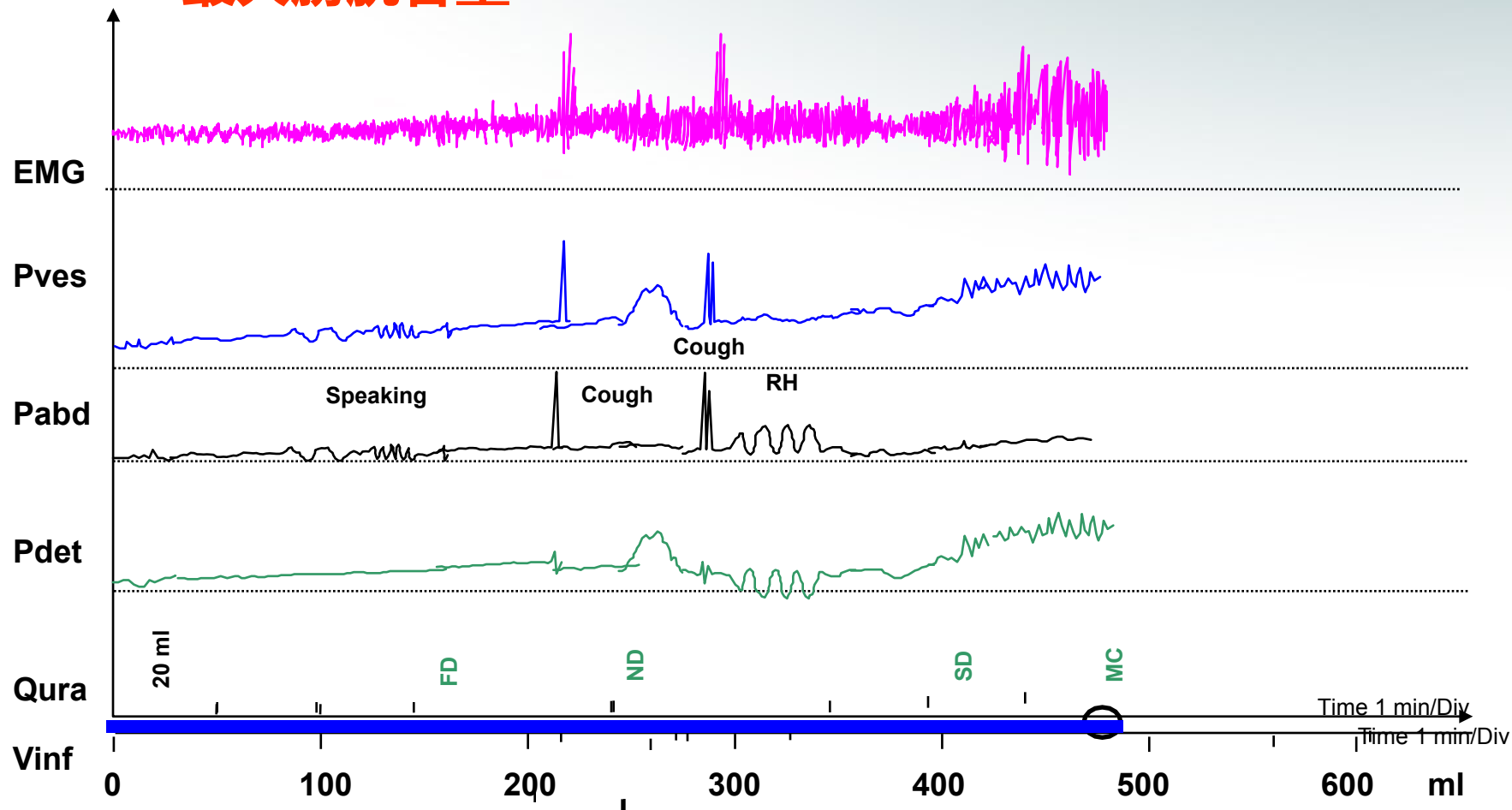
# 常用检查--压力流率(肌电图)同步测定

## 肠道蠕动引起的膈像



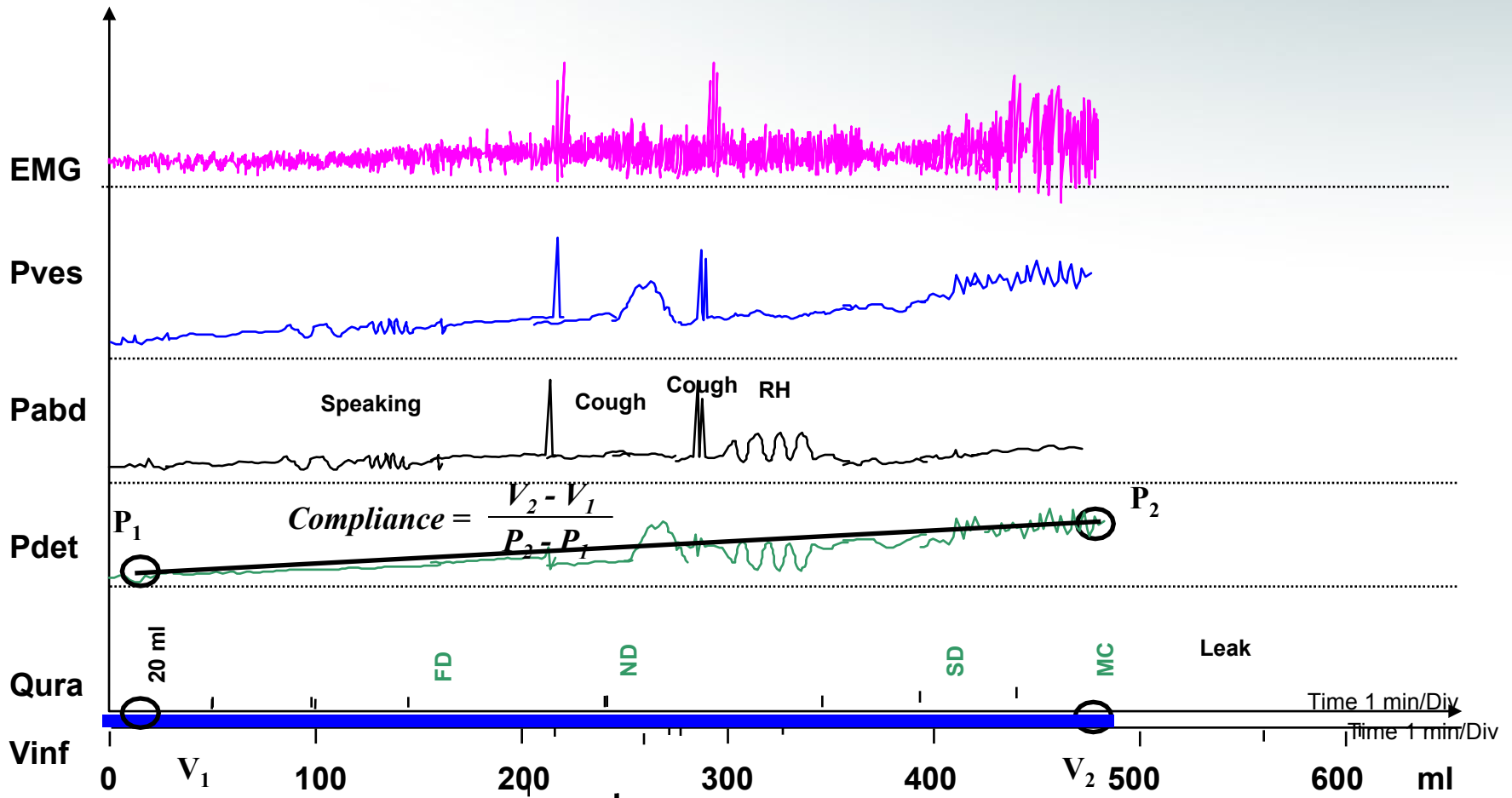
# 常用检查--压力流率(肌电图)同步测定

## 最大膀胱容量



# 常用检查--压力流率(肌电图)同步测定

## 膀胱舒张功能的评估--顺应性的计算





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