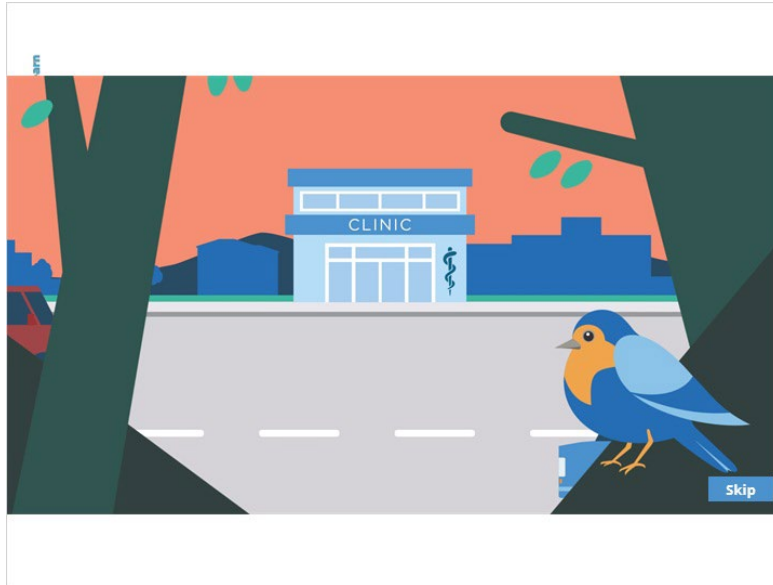


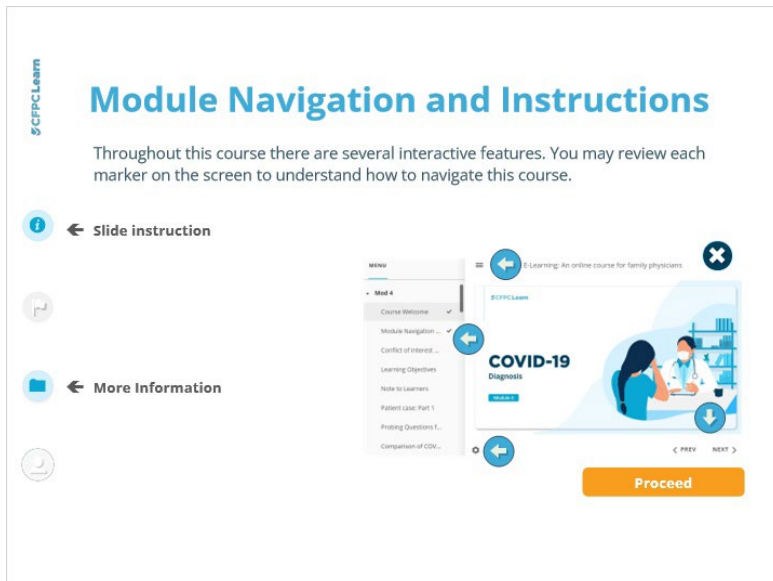
Case 42 Per Colate

1. Conflicts

1.1 Intro Video



1.2 Module Navigation and Instructions



1.3 Learning Objectives

CFPC Learn

Learning Objectives

At the end of this module participants should be able to:

1. Identify key factors/findings in family medicine to help establish common clinical diagnoses.
2. Evaluate best evidence/guidance and practice tools to determine preferred treatment options for patients.
3. Synthesize patient preference, evidence and experience to formulate comprehensive plans for patient cases.

Approximately 15 minutes to complete each patient case.

Proceed

2. Mr Per Colate

2.1 Meet Per Colate

CFPC Learn

Mr Per Colate, 72


Per Colate is a 72 year old male patient who you see regularly for hypertension, diabetes (HbA1C: 7% on insulin) and chronic kidney disease (eGFR 25, stable). His BMI is 35.

Medications: Ramipril

Today, Per is here with his wife.

Conversation

What do you think?



Conversation (Slide Layer)

SCFPCLearn

Mr Per Colate, 72

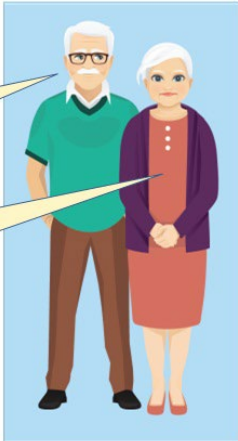
X

Have you been giving me some sort of a water pill for my blood pressure? I've been getting up to pee five times at night.

You're exaggerating! I'm getting up to pee more than you have, Per!

Conversation

What do you think?




2.2 Question

(Multiple Choice, 10 points, 1 attempt permitted)

SCFPCLearn

Which of the following statements about lower urinary tract symptoms (LUTS) is false?



1

2

3

4


☒ Men are twice as likely to suffer from LUTS than women

☐ Obesity is associated with LUTS



☐ Lack of physical activity is associated with LUTS

Submit

2.3 Review



Review



Answer: The statement "Men are twice as likely to suffer from LUTS than women" is false.

Prevalence I

Prevalence II


CV Risk

Data



Click on the buttons to view additional information

Moving Forward

LUTS (Slide Layer)



Review



Answer: The statement "Men are twice as likely to suffer from LUTS than women" is false.

Prevalence I

Prevalence II

CV Risk

Data

LUTS are equally common among men and women.



The prevalence of LUTS and urinary incontinence varies across studies. For example, urinary incontinence occurs in ~5-25% of men and ~5-45% of women, depending on the study. The ranges are likely due to different populations and definitions used.





Moving Forward

Cross-Sectional Study (Slide Layer)

SCFPCLearn

Review






Answer: The statement "Men are twice as likely to suffer from LUTS than women" is false.

Prevalence I

Prevalence II

CV Risk

Data



One cross-sectional study examined 19,165 patients from five different countries. For patients > 60 years old:



- Urgency / frequency / nocturia ≥ 2 per night occurred in ~47% women and 44% men.
- Intermittency / slow stream / straining / terminal dribble: 25% women and 37% men.
- Incontinence: 19% women and 10% men.





Moving Forward

moderate-severe LUTS (Slide Layer)

SCFPCLearn

Review






Answer: The statement "Men are twice as likely to suffer from LUTS than women" is false.

Prevalence I

Prevalence II

CV Risk

Data




LUTS seems to cluster with cardiovascular risk factors such as lack of physical activity and obesity. The presence of moderate-severe LUTS is associated with increased incidence of major cardiovascular events (odds ratio was 1.7 compared to control, based on cohort studies).


Moving Forward

Published by Articulate® Storyline www.articulate.com

Data (Slide Layer)



Review



Answer: The statement "Men are twice as likely to suffer from LUTS than women" is false.

Prevalence I

Prevalence II


CV Risk

Data

- Epidemiological data show that healthy eating habits and physical activity are associated with a lower risk of LUTS.
- A Cochrane review supports weight loss for improvement of incontinence. Most of the evidence is derived from RCTs that studied intensive lifestyle intervention for overweight women with diabetes. Incontinence improvement occurred in 75% of participants who lost weight versus 54% in the control arm.

Moving Forward

2.4 Conversation




I am sorry to hear that you are both struggling with those symptoms. Since Per is booked for today, let's go over his symptoms first. Micti, looks like the next patient canceled. We can go over your symptoms then.

Micti: Ok, sounds good to me!

Why don't we complete this questionnaire together?

What do you think?



2.5 Conversation

CFPCLearn

Over the past month:

| | |
|--|-----------------------------|
| Incomplete emptying | Less than half the time (2) |
| Intermittency | About half the time (3) |
| Weak stream | About half the time (3) |
| Straining | About half the time (3) |
| Frequency (urinating within 2 hours) (0-5) | About half the time (3) |
| Urgency (0-5) | Less than half the time (2) |
| Nocturia (0-5) | Almost always (5) |

Adapted from the International Prostate Symptom Score.

Questionnaire available [here](#).

Per's Total score: 21

0-7: mild symptoms

8-19: moderate symptoms

20-35: severe symptoms

2.6 LUTS

CFPCLearn

Mr Per Colate, 72

Male LUTS can result from multiple medical conditions (not related to the prostate). For example:

- Urinary tract infections
- Increased urine volume: uncontrolled diabetes, heart and kidney failure, or medications such as diuretics.
- Inability to squeeze the bladder (neurogenic bladder) due to stroke, parkinson's, multiple sclerosis, or neuropathy.

Symptoms

Physical Exam

What do you think?

symptoms (Slide Layer)

SCFPCLearn

1

2

3

4

Mr Per Colate, 72

Mr Colate has no hematuria or dysuria. The symptoms have been going on for a few months. He has no abdominal or pelvic or back pain.

Symptoms

Physical Exam

What do you think?



physical exam (Slide Layer)

SCFPCLearn

1

2

3

4

Mr Per Colate, 72

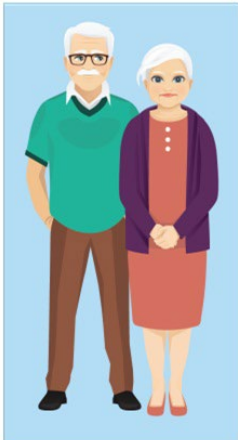
Micti goes to use the washroom.

You perform a digital rectal exam. The prostate is smooth, non tender with no nodules. His abdomen is benign.

Symptoms

Physical Exam

What do you think?






2.7 Question



(Multiple Choice, 10 points, 1 attempt permitted)



CFPCLearn



Let's focus on urogenital causes of male LUTS. Which of the following statements is the most accurate?



 90% of men with LUTS have BPH (Benign Prostatic Hypertrophy)

 The international prostate symptom score is helpful to diagnose BPH

 10% of men with LUTS will have prostate cancer


 It can be difficult to distinguish the causes of male LUTS


Submit


2.8 Review


CFPCLearn


Review



**Answer:** It can be difficult to distinguish the causes of male LUTS.

**Urogenital Etiologies**






**Obstruction**

**Prostate Cancer**



Click on the buttons to view additional information

Moving Forward

Urogenotal Etiologies (Slide Layer)



Review



Answer: It can be difficult to distinguish the causes of male LUTS.

Urogenital Etiologies

Obstruction






Prostate Cancer

Urogenital etiologies of male LUTS (non neurogenic):



- Hypersensitive bladder
- Detrusor under- or over-activity
- Bladder outlet obstruction (e.g., prostatic obstruction, poor relaxation of the urethral sphincter)
- A combination of these or other etiologies.

Moving Forward

Obstruction (Slide Layer)



Review



Answer: It can be difficult to distinguish the causes of male LUTS.

Urogenital Etiologies



Obstruction

Prostate Cancer


- Only ~50% of men with LUTS have urodynamically proven outlet obstruction (most commonly: BPH).
- Conversely, only 25-50% of men with BPH have LUTS.
- About 50-75% of men with bladder outlet obstruction (like BPH) also have overactive bladder symptoms (e.g. urgency).
- There is a weak correlation between LUTS and prostate size.
- For all these reasons, it can be difficult to distinguish the causes of LUTS.

Moving Forward





Prostate Cancer (Slide Layer)



Review



Answer: It can be difficult to distinguish the causes of male LUTS.



Urogenital Etiologies

Obstruction

Prostate Cancer



It is not known whether men with LUTS are at increased risk of prostate cancer (lack of studies). The Canadian Urological Association guideline on male LUTS due to BPH indicates:

- Digital rectal exam is "mandatory"
- Urinalysis is "required"
- PSA should be "offered to patients who have >10 years life expectancy"
- Formal symptom inventory (International Prostate Symptoms Score): recommended


Moving Forward

2.9 Choose all that apply





(Multiple Response, 10 points, 1 attempt permitted)



Which of the following would be appropriate next steps:



Choose all that apply



☒ Educate (lifestyle management)


☒ Start alpha-blockers (e.g., Tamsulosin)

☐ Start 5-alpha reductase inhibitors (e.g., Finasteride)



☒ Start PDE5 inhibitors (e.g., Tadalafil)

Submit






2.10 Review



Review



Answer: Education, or starting an alpha-blocker, or starting a PDE5 inhibitor are all reasonable next steps.




Lifestyle Modification
First line medication
Alpha-blockers
PDE5 Inhibitors
Combination



Click on the buttons to view additional information

Moving Forward






Lifestyle (Slide Layer)



Review



Answer: Education, or starting an alpha-blocker, or starting a PDE5 inhibitor are all reasonable next steps.



Lifestyle Modification
First line medication
Alpha-blockers
PDE5 Inhibitors
Combination

Lifestyle management, although widely recommended has unclear benefits (lack of studies). It includes:



- Stopping diuretics (if possible)
- Avoiding excessive fluids, especially in the evening
- Avoiding caffeine and alcohol
- Voiding before bedtime / trips / meetings, etc.
- Although not in the guidelines, but supported by evidence: weight loss (evidence mostly in women, as discussed earlier)

Moving Forward

first line med (Slide Layer)

SCFPCLearn

Review



Answer: Education, or starting an alpha-blocker, or starting a PDE5 inhibitor are all reasonable next steps.

X

Lifestyle Modification

First line medication

Alpha-blockers

PDE5 Inhibitors

Combination



- There is no well accepted algorithm for the treatment of male LUTS. UpToDate™ suggests that alpha-blockers or tadalafil are good first line options. These can be started without knowing prostate size.
- If urgency and/or frequency are prominent, anti-cholinergics or β_3 agonists can be tried.

Moving Forward

Alpha-Blockers (Slide Layer)

SCFPCLearn

Review



Answer: Education, or starting an alpha-blocker, or starting a PDE5 inhibitor are all reasonable next steps.

X

Lifestyle Modification

First line medication

Alpha-blockers

PDE5 Inhibitors

Combination

Alpha-Blockers are first line: Most trials are in men with BPH.

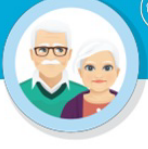
- European guideline: α_1 -blockers likely more efficacious if small prostate (<40cc).
- In a RCT of men with PSA ~2.5 who were followed for four years:
 - Worsening symptoms occurred in ~7% on α_1 -blockers versus 14% on placebo.
 - Mean reduction symptom score [range: 0 (no symptoms) to 25 (severe)]: ~5.0 (placebo) versus 6.6 (doxazosin)
- Most common side-effects: dizziness (2-10%), ejaculatory disturbances (does not impact libido).
- Needs to be stopped if undergoing cataract surgery.

Moving Forward

PDE5 (Slide Layer)

SCFPCLearn

Review



Answer: Education, or starting an alpha-blocker, or starting a PDE5 inhibitor are all reasonable next steps.

Lifestyle Modification

First line medication

Alpha-blockers

PDE5 Inhibitors

Combination

PDE5 inhibitors (Tadalafil):


- Meta-analysis of 5 RCTs (1,386 patients): Tadalafil 5mg daily had similar efficacy to tamsulosin 0.2-0.4mg daily (prostate symptoms scores, quality of life, flow rate)
- Tadalafil (longer half life) approved for male LUTS
- Recommended by Canadian Urological Guideline, "particularly" if erectile dysfunction.
- Side-effects: flushing, dyspepsia, headache.
- Contraindications: nitrates, cardiac disease, recent stroke, hepatic / renal insufficiency.

Moving Forward

Tadalafil (Slide Layer)

SCFPCLearn

Review



Answer: Education, or starting an alpha-blocker, or starting a PDE5 inhibitor are all reasonable next steps.

Lifestyle Modification

First line medication

Alpha-blockers

PDE5 Inhibitors

Combination

Combination of alpha-blockers and Tadalafil:

Limited data. Meta-analysis: improved symptoms, quality of life and urodynamics parameters with combination over monotherapy.

But risk of adverse effects are higher with combination. From a meta-analysis, adverse events:



- 25% combination, 14% tamsulosin and 18% tadalafil

Moving Forward






2.11 Let's Make a Plan

CFPCLearn

Let's Make a Plan



Write down some points related to a plan for Mr Per. It can include the following: lifestyle or prescription intervention(s), lab(s)/test(s) required, follow up appointment, and referrals required.





Fill in your plan for the patient here

See how your plan compares

2.12 Plan Answers

CFPCLearn

Mr Per Colate



These are some potential points for the patient.
How does your plan compare?

Symptoms

Lifestyle Modification

Medication

Follow Up



Click on the buttons to see suggested answers


What's in a name?

Symptoms (Slide Layer)

SCFPCLearn

Mr Per Colate






These are some potential points for the patient.
How does your plan compare?

Symptoms


Lifestyle Modification

Medication


Follow Up



What's in a name?





Per's symptoms are very bothersome to him.




Lifestyle (Slide Layer)

SCFPCLearn

Mr Per Colate






These are some potential points for the patient.
How does your plan compare?

Symptoms


Lifestyle Modification

Medication


Follow Up



What's in a name?





You review lifestyle measures. He will book an appointment with your nurse to discuss weight loss. He is motivated as it may also improve his diabetes.



Medication (Slide Layer)

SCFPCLearn

Mr Per Colate



These are some potential points for the patient.
How does your plan compare?


Symptoms

Lifestyle Modification

Medication

Follow Up



What's in a name?

 You start tamsulosin 0.4mg qhs and review the risk of dizziness. Both tamsulosin or tadalafil are good first line options as you do not need to know prostate size. But since Per's eGFR is 25ml/min, you avoid taladafil.

Follow Up (Slide Layer)

SCFPCLearn

Mr Per Colate



These are some potential points for the patient.
How does your plan compare?


Symptoms

Lifestyle Modification




Medication

Follow Up

What's in a name?





 You ask him to follow-up with you in 3 months. You give him a requisition for labs (PSA, urinalysis).

Name (Slide Layer)



Mr Per Colate

These are some potential points for the patient.
How does your plan compare?




Symptoms

Lifestyle Modification

Medication

Follow Up






What is the meaning of the name Per Colate?

Mr. Per Colate's name is inspired by a coffee percolator, that creates drips of coffee.

What's in a name?

2.13 References



References

Thanks for visiting the clinic!

References: Available [here](#).

This activity is eligible for up to 0.25 Mainpro+ credits.