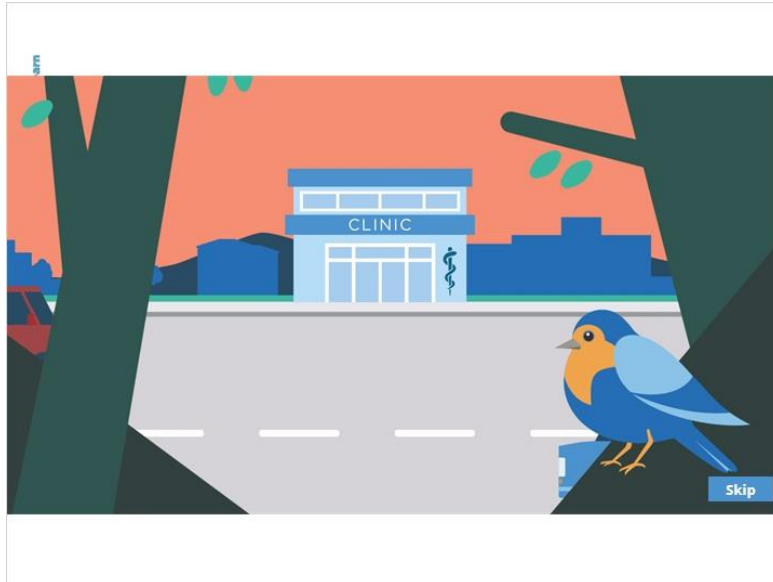


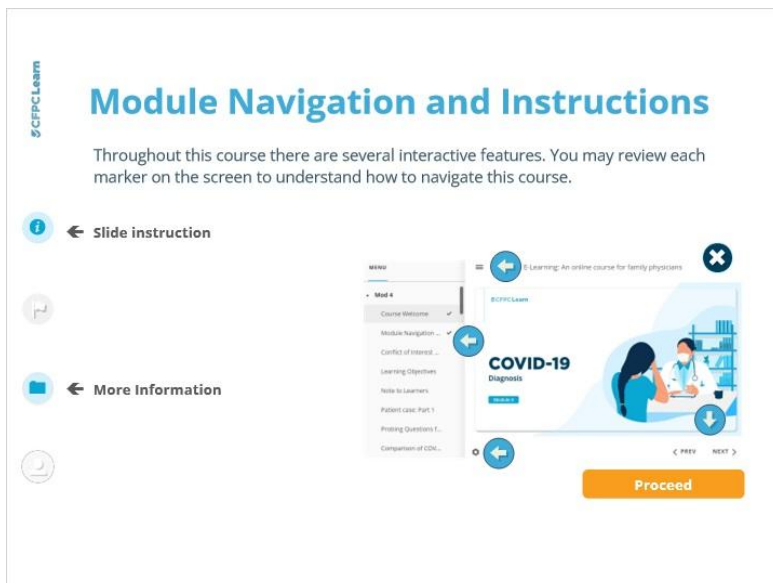
Case 51 Hamilton Redick

1. Untitled Scene

1.1 Intro Video



1.2 Module Navigation and Instructions



1.3 Learning Objectives

CFPC Learn

1

2

3

4

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. Hamilton Redick

2.1 Hamilton Redick

CFPC Learn

1

2

3

4


Hamilton Redick, 69

Hamilton is a 69 year old male patient with a history of diabetes and hypertension. He is a non-smoker. His father had an MI at age 69.

Nine months ago, you and Hamilton reviewed his cardiovascular risk and after discussing, he was started on rosuvastatin 20mg daily. His other medications include metformin 1g BID and ramipril 10mg daily.

[Last Visit](#) [Decision Aid](#) [Achy](#)

[What do you think?](#)



Last Visit (Slide Layer)

SCFPCLearn

1

2

3

4

Hamilton Redick, 69

At that visit nine months ago, Hamilton's blood pressure was 138/84, LDL 5.7 mmol/L and HDL 1.3 mmol/L.

Hamilton's risk of a CV event was estimated using the PEER Cardiovascular Decision Aid. His 10-year risk was found to be ~33%. His risk could be reduced to 22% by taking a high dose statin.

Last Visit

Decision Aid

Achy

What do you think?



CV decision aid (Slide Layer)

SCFPCLearn

1

2

3


4

Hamilton Redick, 69

10-year risk of cardiovascular disease
(heart attack, angina, heart failure, stroke)

Intermittent class II

Your risk 33.3% With treatment 21.6%



2. Choose your treatments

Lifestyle options

☐ Mediterranean diet

☐ Physical activity

Medication options
(only select one)
These options have clear and direct evidence for primary prevention

☐ No drug (no moderate dose)

☒ Statin (high dose)

Other options
pressure medications (thiazide, ACE/ARB, or CCB)


You can try the [PEER Simplified Cardiovascular Decision Aid](#) online.

Last Visit

Decision Aid

Achy

What do you think?



Achy (Slide Layer)

SCFPCLearn

Hamilton Redick, 69


I have been feeling pretty achy. I read that the cholesterol pill could be causing it.
I really want to stay on it because my dad had his first heart attack at my age!

Last Visit

Decision Aid

Achy

What do you think?




2.2 Multiple choice question

(Multiple Response, 10 points, 1 attempt permitted)

SCFPCLearn

The chances that Hamilton's symptoms are from the statin are:




☐ About 20%

☒ About 1%



☐ Likely not at all

Submit

2.3 Review



Review



Answer: About 1%

Muscle symptoms: Risk


Ck and muscle injury

Statin study



Click on the buttons to view additional information

Moving Forward

Muscle symptoms (Slide Layer)



Review



Answer: About 1%

Muscle symptoms: Risk

Ck and muscle injury

Statin study

Most muscle-related complaints in people taking statins are not statin-induced.


- For patients in their first year therapy like Hamilton, the risk of muscle symptoms with statins is approximately 15% compared with 14% among those taking placebo (**i.e. about 1%**)
- After one year, the differences in muscle symptoms between statin and placebo are not statistically different.

Moving Forward

CK and muscle injury (Slide Layer)

SCFPCLearn

Review



Answer: About 1%

Muscle symptoms: Risk

Ck and muscle injury

Statin study

Muscle aches are common

In a meta-analysis of 23 randomized controlled trials, ~155,000 patients were followed for ~4 years comparing statin versus placebo.


- Mean creatinine kinase (CK): 2% higher in the statin group.
- Cases of muscle injury with CK of 10X the upper limit of normal: 7.7 (statin) versus 4.4 (placebo) per 100,000 patients. While this was statistically different, unlikely to be a clinically meaningful difference.

Moving Forward

Statin Study (Slide Layer)

SCFPCLearn

Review



Answer: About 1%

Muscle symptoms: Risk

Ck and muscle injury

Statin study

Muscle aches are common

In three trials of statin intolerant patients (range: 3-200 patients), each patient tried 3-8 week cycles of statin, placebo, or no pill. Muscle symptom scores were reported (score range: 0-100):

- Statin vs placebo pill: No difference.
- Statin vs no pill: 16 versus 8 (no pill).
- These results suggest there is no clinically meaningful differences in muscle aches between the three arms.

Moving Forward

2.4 Conversation


SCFPCLearn

Hamilton Redick, 69

So, there is a small chance that it could be from the statin. What should we do?

Well let's go over some options.

Moving Forward




2.5 Multiple choice question

(Multiple Response, 10 points, 1 attempt permitted)

SCFPCLearn

Which options are the most appropriate to manage statin intolerance and reduce cardiovascular risk?



Choose all that apply.

☐ Stop statin and start ezetimibe

☐ Stop statin and start eicosapentaenoic acid (Icosapent™)

☐ Stop statin and start fibrate

☒ Try a different statin


☒ Retry same statin at lower dose

Submit

2.6 Review

CFPC Learn

Review



Answer: The most appropriate options are to try a different statin or retry same statin at lower dose.

Ezetimibe & Fibrates

Omega-3 fatty acids

Rationale

Statin regimens


Click on the buttons to view additional information

Moving Forward

Ezetimibe & Fibrates (Slide Layer)

CFPC Learn

Review



Answer: The most appropriate options are to try a different statin or retry same statin at lower dose.

Ezetimibe & Fibrates

Omega-3 fatty acids

Rationale

Statin regimens


- **Ezetimibe:** Insufficient evidence for cardiovascular benefit in primary prevention.
- **Fibrates:** As monotherapy, fibrates reduce the composite outcome of CV mortality, MI and stroke by ~15-20% with no effect on all-cause mortality. However, fibrates do not confer additional CV benefit when added to a statin.

Moving Forward

Eicosapentaenoic Acid (Slide Layer)

SCFPCLearn

Review



Answer: The most appropriate options are to try a different statin or retry same statin at lower dose.

Ezetimibe & Fibrates

Omega-3 fatty acids

Rationale

Statin regimens

Eicosapentaenoic acid (EPA) (Icosapent):


- Versus placebo, EPAs reduce major CV events (relative reduction: 20-25%) but not all-cause mortality. Limited RCTs available, only studied in combination with statin.
- Traditional omega-3 products consist of EPA and docosahexaenoic acid (DHA). However, no CV benefits have been found with this combination. This finding conflicts with benefit seen with EPA alone.
- Harms: Increased risk of atrial fibrillation (from 3.9% to 5.3%) and total bleeds (by ~0.5% over 4.5-5 yrs)

Moving Forward

Rationale (Slide Layer)

SCFPCLearn

Review



Answer: The most appropriate options are to try a different statin or retry same statin at lower dose.

Ezetimibe & Fibrates

Omega-3 fatty acids

Rationale


Statin regimens

In primary prevention, statins reduce major adverse cardiovascular events by 25% and all-cause mortality by 9%.


So, for Hamilton, since statins are the only medication with convincing evidence for primary prevention, we will try to continue the statin.

Moving Forward

Statin regimens (Slide Layer)



Review



Answer: The most appropriate options are to try a different statin or retry same statin at lower dose.

Ezetimibe & Fibrates


Omega-3 fatty acids

Rationale

Statin regimens

When considering alternate statin approaches, there is insufficient evidence that one approach is better than another:

- Switching statins
- Using lower dose/potency
- Alternate day dosing



2.7 Conversation




Hamilton Redick, 69

Okay, I guess we can try taking it differently.

Let's talk about that.

But should we do blood tests to check how it is going?











2.8 Multiple choice question

(Multiple Response, 10 points, 1 attempt permitted)

SCFPCLearn

Which of the following tests should you order for Hamilton?





☐ Lipid profile

☐ ALT

☐ CK



☒ Nothing





Submit

2.9 Review

SCFPCLearn

Review





Answer: The correct answer is nothing.

Monitoring

Treat to Target



Click on the buttons to view additional information

Moving Forward

Monitoring (Slide Layer)

SCFPCLearn

Review



Answer: The correct answer is nothing.

Monitoring

Treat to Target

Routine monitoring of CK and ALT levels should be reserved for patients who are

- symptomatic
- at higher risk of adverse events.

Monitoring frequency should be determined at the discretion of the clinician.



x

Moving Forward

Treat to Target (Slide Layer)

SCFPCLearn

Review



Answer: The correct answer is nothing.

Monitoring

Treat to Target

"Treat to Target:" Most clinical trials have used fixed-dose statins (mostly moderate-intensity) with dosing based on CVD risk. These trials have found benefit occurs irrespective of LDL levels achieved.

Only one RCT has compared targeting LDL versus fixed-dose statin. In this trial, no difference was observed for CV disease or mortality. A strategy of prescribing fixed-dose statin is simpler and equally effective.

x

Moving Forward

2.10 Conversation

CFPCLearn

Hamilton Redick, 69

Hmmm, that is different. My friend has a cardiologist who makes him check his cholesterol.

I know – the cardiologist's association still believe in targeting a certain level, but other guidelines have found that it doesn't make a difference.

Well, you know me well and I trust you!



Moving Forward



2.11 Create a Plan

CFPCLearn

Let's Make a Plan



Using what you have learned write a plan for Hamilton. It can include any/all of the following: lifestyle intervention(s), prescription intervention(s), lab(s)/test(s) required, follow up appointment time frame, and referral required.



Fill in your plan for the patient here

See how your plan compares

2.12 Plan Answers

CFPC Learn

Hamilton Redick



This is the proposed plan for the patient. How does your plan compare?

Discussion

New dose

Follow up



Select details on the left to see suggested recommendations

What's in a name?

Discuss (Slide Layer)

CFPC Learn

Hamilton Redick




This is the proposed plan for the patient. How does your plan compare?

Discussion

New dose

Follow up



 You discuss with Hamilton that there is a good chance that the muscle aches are due to something other than the statin. If he stays on his medication, there is a good chance that the symptoms may go away on their own.

What's in a name?

New dose (Slide Layer)

SCFPCLearn

Hamilton Redick




This is the proposed plan for the patient. How does your plan compare?

Discussion

New dose

Follow up

What's in a name?



 Given how important it is to reduce his risk of a cardiovascular event, you suggest to continue the statin but reduce the dose. Hamilton is agreeable. The dose is decreased to 10 mg rosuvastatin.

If he tolerates the new dose, continue for a year and continue to renew.

Follow Up (Slide Layer)

SCFPCLearn

Hamilton Redick




This is the proposed plan for the patient. How does your plan compare?

Discussion


New dose

Follow up



What's in a name?

 You ask Hamilton to make an appointment to follow-up if he doesn't tolerate the lower dose.





Name (Slide Layer)



Hamilton Redick



This is the proposed plan for the patient. How does your plan compare?



Discussion

New dose


Follow up

Meaning Behind the Name: Hamilton



Statins are HMG-CoA reductase inhibitors. Hamilton's first name is a nod to this class of drugs. "Redick" is a derivation of the word "reduce."

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.