CLINICAL CASE HISTORY

A. Cardiac Events

First Month: Mr. B, a 52 year old man who had a heart attack on January 1, 2013. His diagonal branch was 100% blocked and he received one stent; the LAD had a 30% blockage and was left. Before discharge he had a stress test (which he said "was perfect"). He was discharged from hospital after one week.

In his first week home he felt okay. However, the second week he said his heart rate dropped to 45 bpm and his blood pressure to 80/60. He developed shortness of breath, chest pain, and said he "couldn't walk at all".

Within a week Mr. B was readmitted and all his medications stopped. He had a second angiogram which he said felt "weird". He began to have panic attacks with the thought that "My heart is going to stop". After this angiogram he had pain in his right arm all day, and pain in the back of his chest. Both his knees felt weak.

Second Month: He had a stress test with nuclear imaging done February 1, which showed that his ejection fraction was 37%-48%, but with normal perfusion. By the end of the month, he was referred for Cardiac Rehab and began CR.

Third Month: A few weeks after the nuclear imaging test, an Echo test estimated his LVEF at 62%. The doctor told him the earlier test "was wrong".

B. Psychosocial and Vocational History prior to MI

Mr. B is university-trained, married and has a son aged 20. His wife works full time as a secretary and his son is doing well in University. There are no conflicts at home and he has no history of anxiety or depression.

In 2001 Mr. B immigrated to Canada, but he has had persistent difficulties finding work in his field of artificial insemination of livestock. Across eleven years, he has gone for re-training courses for “a dozen” different jobs: everything from tax preparation, shipping and receiving, security and electrical work.

After years of trying, he finally found a full time job 7 months before his heart attack. He was working as a maintenance man for a company that provided lighting, staging and props for the movie and events industries. His boss found he could deal with almost every kind of repair and maintenance task, and had him working 10 to 12 hours a day. With his 2-hour commute to work his average day was 12-14 hours long, and he was expected to work Saturdays.

Do you see any red flags in working with this patient?

– Cardiac? ***– Psychosocial?***

EVALUATION

A. Observations Trackside

First Month of CR: Mr. B. could not walk at all the first few weeks due to shortness of breath. He was committed to doing rehab but struggled to walk around the track even once without being out of breath and stopping. He reported feeling dizzy and looked pale.

Second Month of CR: He is now beginning his second month of CR classes. Today, you go to talk to him and find he is crying. He is distressed and feels that he will never be able to return to work, or to support himself and his family again. He is emotional and complains of having no energy. He has never experienced anything like this before in his life.

How would you typically manage this patient at your setting?

Do you have resources available to help with such patients?

– On site? – Off site?

B. Psychosocial Status

Second Month of CR: You have a 1:1 meeting with Mr. B on April 7th and determine:

1) He is not able to do more than two minutes of exercise

2) He is fearful about his health: he says he is afraid of walking on back streets in case he collapses and might not be found

3) He is moderately depressed, with moodiness and cognitive symptoms (trouble finding words to express his thoughts and is forgetful (like paying bills on time)

4) His wife and son are very supportive, but he has distanced himself from his ethnic supports because he is embarrassed about his low work status

5) He feels he has lost control of his life and will never be able to enjoy good health

6) He says he sleeps only 2-3 hours a night since the second angiogram.

7) No prior history of anxiety or depression.

Where would you begin your intervention(s)?

INTERVENTIONS

A. Sleep

Mr. B reports he has suffered from interrupted and non-refreshing sleep for years. However, since his second angiogram he reports sleeping only 2-3 hours a night with multiple awakenings. He was prescribed sleeping pills on discharge but was afraid to take them due to low blood pressure.

Second Month of CR: Mr. B attended a sleep lab test, which revealed severely disrupted sleep and mild OSA. He was advised to use CPAP nightly. He began with use of an APAP machine for 3 weeks, and then a CPAP which he continues to use 4-5 times a week for about 5 hours a night. He was a mouth breather and found that the full face mask helped him the best. After he started using the CPAP he reports feeling "full of energy".

B. Breathing

Assessment: *Mr. B thinks he is a shallow breather. He gets out of breath, begins hyperventilating and soon feels panicky and fearful. You want to assess how bad these patterns are, to help him calm down, exercise more and to feel in better control.*

See the Behavioural Breathing Assessment (next page)

Contact Dr Reitav at jaan.reitav@uhn.ca for scoring information.

Intervention

Fourth Month post MI: You begin Mr. B on abdominal breathing exercises. He is very motivated to do the exercises daily.

Have you ever prescribed breathing exercises?

What guidelines can be used to train breathing?

OUTCOME

Mr. B was treated in five consultations across 3 months for his mood, work-stress and poor sleep problems. You focused only on 1) sleep and 2) breathing. For his sleep he used the CPAP machine about 5 days a week for 5 hours a night. For breathing he did the abdominal breathing exercises 100 times daily on his way to work. After four weeks, he reduced these to 53 repetitions a day (because he said he was 53 years old). With these two interventions he was quickly able to do all of his exercise prescription and he notices an increase in his stamina. His mood improved and he was able to return to work: on modified hours by the sixth month (post MI) and working full time hours four weeks later.

7 EASY STEPS – BEHAVIOURAL BREATHING ASSESSMENT

STEP	DIRECTIONS FOR EACH ASSESSMENT STEP	OBSERVATIONS Check the appropriate box		
		Column 1	**Mid**	**Column 2**
1	Number of breaths taken in one minute: _____ (One inhale and exhale counts as one breath.)	[__] 15+ # Breaths __	Between	[ ] Under 12 # Breaths ___
Inhale Observations				
2	When you INHALE which hand MOVES FIRST?	[ ] Chest	Both move	[ ] Belly
3	When you INHALE which hand MOVES MOST?	[ ] Chest	Same	[ ] Belly
4	ON INHALE does your right (belly) hand move in OR out?	[ ] IN	Neither	[ ] OUT
5	IF your hand moves OUT, how much does it move?	[ ] A little		[ ] A lot
Exhale Observations				
6	ON EXHALE the right (belly) hand move out OR in?	[ ] OUT	Neither	[ ] IN
7	Take 5 full breaths and pause. Do you feel DIZZY?	[ ] Yes	A little	[ ] No
8	In the past month, have you noticed that you sigh, yawn, or feel short of breath on a regular basis?	[ ] Yes		[ ] No
9	Take a big deep and Exhale slowly; As you exhale; whisper by counting from 1 to as high as you can before you need another breath. Count Quickly.	[ ] Under 50 Your #_____	Between	[ ] Over 60 Your # _____
10	Breathe in and out and then pause **after your exhale**. Count how long you can pause before starting your next inhale.	[ ] Under 20 Your # _____	Between	[ ] Over 25 Your #_____
TOTAL (ADD up the check marks in each column)				

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