

Cholesterol concerns

Alkykhan S.M. Abdulla BSc, MD, CM, LMCC, CCFP(C);
and Faiza Abdulla, CDA

CardioCase Presentation

Beatrice's query

Beatrice, 54, has been post-menopausal for three years and has a history of high familial cholesterol. Her parents both died of heart disease. She does not smoke or drink alcohol. She has a normal blood pressure of 140/80 mmHg and a resting heart rate of 80 beats per minute (bpm). She is sedentary and hates exercise. She spends most of her time doing needlework or talking on the phone. We had worked for a long time trying to manage her high cholesterol through diet and walking at a casual pace, with little benefits to her cholesterol profile (Table 1).

Table 1
Cholesterol levels

Type	Level
Total	6.8 mmol/L
LDL	4.4 mmol/L
HDL	1.1 mmol/L
Total/HDL	6.2 mmol/L

LDL=Low-density lipoprotein
HDL=High-density lipoprotein

Her stress test three years ago was normal, but she was recently sent for another one, given some non-specific ST-T changes in a recent electrocardiogram (ECG). Five days after her stress test, she ended up in the hospital with an acute coronary event. Her cardiologist sent her for yet another stress test, which was equivocal. Beatrice also had an angiogram done and was found to have multi-vessel disease not amenable to angioplasty or bypass at this time.

What should be done to optimize her prognosis?

What's Your CardioCase Diagnosis?

CardioCase Discussion

How should you manage Beatrice?

This is an excellent case to show the merits of a multidisciplinary approach to cardiac rehabilitation.

Beatrice was first placed on a cholesterol-lowering drug, acetylsalicylic acid, a beta blocker, an angiotensin-converting enzyme (ACE) inhibitor, and vitamin E (with their relative merits and disadvantages, which are beyond the scope of this discussion). She was also recommended to consider hormone replacement therapy, as it has been shown to have positive effects

on cholesterol profile. The counsellor found Beatrice to be quite nervous and, over various interviews, decided to curtail the patient's employment duties, as they were thought to be the cause of most of her stress. In the end, a regimented exercise program was facilitated with the acute coronary event as the instigator.

Beatrice started on a regimen of walking with a target heart rate of 100 bpm. At the end of her 15-minute session, she performed a stretching regimen on her calves, hamstrings, quadriceps, piriformis, and lower back. Through constant supervision, she slowly progressed to 120 bpm for 40 minutes, followed by a gentle weight-training program involving her legs, abdomen, back, biceps, and shoulders. She did this from Monday to Friday, with weekends off.

Within six months, her resting heart rate dropped to 60 bpm. Her cholesterol/high-density lipoprotein ratio changed to 4.8. Her subsequent angiogram is pending. *Fund*



About the authors:

Dr. A. Abdulla is a specialty consultant in sports medicine, Ottawa, Ontario.

F. Abdulla is the executive director and owner of the Kingsway Health Centres, Ottawa, Ontario.