Refractory Angina: Information for Patients

What is refractory angina (RFA)?
RFA is defined as chronic heart pain, due to heart disease, which is disabling. This chest pain cannot be controlled by usual treatments such as medical therapy, angioplasty, or coronary artery bypass surgery. Chronic chest pain is pain that occurs longer than three months.

What are the chest pain symptoms of RFA, how are they caused, and how are they different from regular stable angina?
Chest pain from angina occurs when there is a blockage of blood flow to the heart from a build-up of plaque in heart arteries. Blood flow slows down and causes lack of oxygen-rich blood getting to the heart. This results in chest pain or angina. Persons suffering from angina often describe it as a pain, pressure, tightness or heaviness in the chest. In addition to chest pain, symptoms may include: fatigue, nausea, sweating, anxiety, shortness of breath and dizziness. Some angina sufferers may also experience neck, arm, shoulder, back or jaw pain. Those with RFA have angina symptoms which are more severe and more difficult to manage than those who experience regular stable angina.

How can RFA be managed?
Usually, for those who have been diagnosed with RFA, the condition is being managed as best as possible with maximally tolerated dosages of various prescribed medications. These individuals will also have undergone angiography in order to determine where the blockages to the coronary arteries are. Likely, they will have also had angioplasty or even coronary artery bypass surgery, but they still have chest pain or related symptoms.

Even though the symptoms are difficult to manage, there are some additional specialized treatments which can help reduce the severity of the symptoms, and help RFA sufferers function better in day-to-day life. Some examples of these specialized treatments/strategies are listed here:

- **Enhanced External Counter Pulsation (EECP):** EECP is a non-invasive therapy (not requiring surgery) that places compressive cuffs on the upper and lower legs (calves, lower thighs, and upper thighs). The cuffs inflate in time with the beating of the heart. This helps to pump more blood to the heart muscle and decrease the work that the heart has to do in order to pump blood to the other areas of the body. This is a 1-2 hour session each time over several weeks. The total number of hours needed to complete the full treatment with EECP is 35 hours.

- **Spinal Cord Stimulation (SCS):** SCS is a minimally invasive therapy that involves application of an electrical current to the spinal cord. SCS is provided by inserting electrodes (leads) into the back or the spinal column at the level of the breast bone. This causes numbness of both sides of the chest. The electrodes are then connected to the implanted source of energy that connects to a portable control device that can be worn on one’s belt or in one’s pocket. Treatment with SCS can either be continual or intermittent, as prescribed.
• **Chronic Angina Self-Management Training (SMT):** Chronic angina SMT programs use different ways of learning and strategies to promote change in knowledge and behaviour for effective disease self management. They target day-to-day problems that patients encounter such as; angina pain, fatigue, lack of mobility and endurance, anxiety and stress. People are taught several symptom self management techniques including safe exercise habits, energy conservation, pacing, sleep quality enhancement, communication and decision making skills.

• **Medications:** The two medications listed here are specialized drugs for the treatment of angina. This small list does not include regular medications used to treat heart disease and regular stable angina. For a list of these more usual medications for angina and heart disease, see the fact sheet entitled “Stable Angina: Information for Patients”

  - **Nicorandil:** This is an oral medication that reduces chest pain by widening the heart vessels bringing good blood and oxygen the heart muscle.
  - **Trimetazidine:** This is an oral medication used in RFA to prevent chest pain by increasing blood flow through the heart arteries and allows blood rich in oxygen to get to the heart.