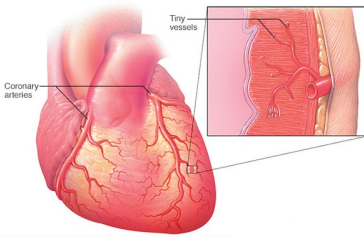


What is Microvascular Angina?



Microvascular Angina is the symptom that results when the microvessels fail to provide sufficient blood flow to the heart. The microvessels can; fail to dilate, can already be dilated to their fullest capacity or can constrict and go into spasm. The microvessels may also be thickened. All of these mechanisms can reduce blood flow to the heart. Microvascular Angina is not rare, but it is often under-recognised and under-diagnosed, as the tiny vessels it affects cannot be seen on usual tests like routine angiograms.

There is a higher proportion of women than men who have microvascular angina and some research studies suggest that hormones can have an impact on the smaller blood vessels. Many women first experience symptoms around the menopause or after.

Symptoms of Microvascular Angina

There are lots of symptoms you might have with Microvascular Angina. Below are just a few of these. Sometimes other less common symptoms may also be experienced.



Chest pain,
pressure or
tightness



Short of breath
when you've not
been exercising
or very active



Feeling suddenly
dizzy, sick and
becoming
sweaty

Chest pain or discomfort can occur, with a heavy pressure, squeezing or a tight feeling in the chest, sometimes spreading to the arms, neck, jaw, back or stomach. Shortness of breath, feeling nauseous, sweaty or feeling light-headed are also some of the symptoms you might experience. Extreme fatigue may also be a symptom. It is important to remember that these symptoms are not always related to the heart. Some of these the symptoms might be non-cardiac in nature.

Triggers



Here are just some of the things that can start or trigger a Microvascular Angina episode Stress, cold weather, exercise, or increased activity are just a few reported triggers. However, sometimes an angina episode can occur without any warning at all or without any apparent trigger, even when you are resting.

Experiencing these symptoms may itself induce anxiety, especially if the symptoms are new to you, are not what you are used to, or if they continue to escalate or reoccur.

If you have chest pain that is new to you, or that concerns you in any way, you should always seek immediate medical help.

Path to Diagnosis



The path to diagnosis should involve your primary care clinician (general practitioner) and secondary care team including a cardiologist in an outpatient clinic. If you feel unwell with chest pain that lasts longer than 15 minutes (despite using a GTN spray, if available) then you should consider attending the emergency department.

Whilst trying to discover the cause of your angina symptoms, you might be given an ECG (Electrocardiogram) and blood tests to work out if you have raised Troponins (a type of protein) in your blood. Testing Troponins is an important step as adverse results can sometimes be an indicator of cardiac damage. However, it is also important to remember that raised Troponins can sometimes happen as a result of other things too, that are not cardiac. A second follow up Troponin test is usually taken around 6 hours later (though the timings can vary depending on which Troponin test you have) and the results of the two tests are then compared to see if there have been any changes.

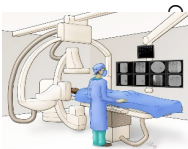
There are a number of tests you may undertake on your journey to diagnosis of Microvascular Angina and these may include some or all of the following.

- Stress Tests (including Echocardiogram, MRI, Nuclear/PET and treadmill exercise test)



In this test your heart rate is increased either by exercise or by chemically increasing the heart rate to look at how your blood vessels and heart react when the heart works harder.

- Coronary Angiogram



This test is primarily done to see if you have blockages in the blood vessels of your heart as this may indicate why you are experiencing angina symptoms (Angina Pectoris). If no blockages are found, you may then be referred for a Functional Coronary Angiogram which may include using acetylcholine to assess for coronary spasm whilst you are monitored.

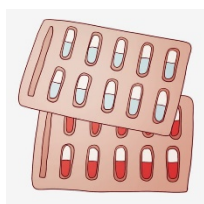
- Cardiac MRI (Magnetic Resonance Imaging) or PET (Positron Emission Tomography) Scan.



- Both these scans are non-invasive, but do involve a chemical stressor being administered to monitor what effect the stressor has on the heart, the blood flow and the blood vessels.



How is Microvascular Angina Treated?



Research to develop specific microvascular angina treatments is ongoing. At the current time there are several medications that are used to treat the symptoms of Microvascular Angina, including statins to reduce cholesterol, ACE (Angiotensin Converting Enzyme) inhibitors, calcium channel blockers and beta-blocker medications.

These medications can give different degrees of symptom relief depending on the particular mechanism responsible for your condition.

It is important to note that each patient may respond differently to medications and some may require an individually tailored medication protocol, as medications can behave differently in each individual. The conditions described as Chronic Coronary Syndromes - the umbrella term which includes both obstructive and non-obstructive Coronary Artery Disease - can exist in isolation or together and can change over time.

Women who have been found to have reduced oestrogen may be offered HRT (Hormone Replacement Therapy). HRT can be of benefit to some, but it is not a proven treatment for MVA and is not recommended in all cases. It is also important to consider any risks before adopting new medication regimes and to discuss any changes of medication or routine with your medical team.



Lifestyle changes can also be a contributing factor. Smoking for example, can damage the lining of blood vessels, so stopping smoking can be an important step in helping to reduce Microvascular Angina symptoms. Maintaining a healthy weight, eating a healthy diet and taking a form of exercise that suits your lifestyle and that you enjoy, can have positive effects on symptom control.

Ensuring you get sufficient sleep and reducing stress levels wherever possible - perhaps by the practice of yoga, meditation or Tai Chi (to name but a few) can also be beneficial, not only to angina symptoms, but also sometimes to overall health and wellbeing too!



N.B. Nothing in these summary sheets should be considered in any way as advice or recommendation. All information contained in these sheets is an opinion only and is shared here only in the hope that it is of interest to other patients and medical professionals. Always consult your own medical practitioner before trying any new medications or therapies and before changing any of your current routines.