Ischaemic leg pain – a disease of the arteries

Ischaemic leg pain occurs when the arteries to the leg are blocked or severely narrowed and not enough blood can get to the leg. The cause of the blockage or narrowing is due to hardening of the arteries – atherosclerosis – caused by advancing age, smoking or diabetes.

Intermittent claudication

Pain in the calf, thigh or buttock muscles on walking represents the earliest stage of ischaemic leg pain. When you walk, the muscles require more blood supply to bring more oxygen to the muscles and remove toxins. If the arteries are diseased and muscles do not get the extra blood they require, toxins build up in the muscles causing them to ache and become weak. In the early stages of the disease this occurs at quite a long distance walked eg half a mile. If the narrowing in the arteries becomes worse, the distance walked before pain occurs becomes less eg 100 yards. Eventually, some patients can only walk a few yards before they are stopped by the pain in the legs. Resting usually relieves the pain within 2-3 minutes and then people may find they can walk further.

Night pain/rest pain

When the arteries are severely narrowed / blocked, even at rest the arteries cannot supply enough blood to the legs. The part of the body furthest away from the heart is affected first eg the toes and feet. Initially the feet may only be painful at night, when the legs are placed horizontally in bed, losing the help of gravity to supply blood to the feet. Some people find that dangling the leg out of the bed helps relieve the pain temporarily. Eventually the feet are painful all through the day and sleeping is very difficult due to the pain.
Ulceration and gangrene

This results from very severe arterial disease, when so little blood is reaching the lower legs and feet that ulcers and gangrene occur. Any wound requires more blood than normal in order to heal. If that extra blood is not forthcoming, the wound never heals and in fact dies back, resulting in ulceration and dry, black gangrene. This requires urgent surgery if the limb and life is to be saved.

Treatment of ischaemic leg pain

Intermittent claudication

This is the earliest stage of the disease and correct treatment at this time can prevent progression to the other stages. It is possible to cure yourself if you follow the following measures:

1. **Stop smoking**: This is very important as your condition will not get better unless you stop.

2. **Daily walks**: Exercise stimulates small arteries to open and bypass the narrowed arteries. Set yourself a course which you will enjoy walking every day. Walking the dog, going down to the shops or mowing the lawn is NO good. The only reason for going for this walk is to train the muscles. Set off at a pace that you know will bring on the pain. Note the point where the pain occurs, walk 10-20 yards further then stop and allow the pain to subside completely. Then walk on again. Gradually over the weeks and months, increase the distance before you stop. Do NOT over exert yourself, this should be gentle exercise with emphasis on the gentle, we do not want to put strain on your heart.

3. **Aspirin**: Take an aspirin (75mg – 150mg) a day to thin the blood. Alternatives are available for people who cannot take aspirin.

4. **Lose weight**: Excess weight means that your muscles have to work harder in order to walk, losing weight can cure claudication alone.

5. Your doctor will check your blood pressure, cholesterol and treat other medical conditions to ensure these are being managed correctly.

Angioplasty

If your claudication does not improve, or you are unable to exercise, we may
proceed to arrange an angiogram; which is a special x-ray. Under local anaesthetic, a needle is inserted into an artery, usually in the groin and dye is injected. X-rays are taken as the dye is carried in the blood down the leg arteries and this shows where the arteries are blocked or narrowed. Sometimes the narrowed artery can be stretched by inserting a balloon into the artery and inflating it where the artery is narrowed; this is known as an angioplasty. Stretching the narrowed artery can improve the blood supply to the leg and treat the symptoms of intermittent claudication.

**Night pain, rest pain, ulceration, gangrene**

When arterial disease has progressed to cause these symptoms, it is usually too late for exercise to work and either an angioplasty or a bypass operation is required if the leg is to be saved. An arterial bypass operation uses your own vein or a piece of artificial graft material to bypass a blockage in the leg arteries. This is a major arterial operation. If the limb is badly affected by ulceration or gangrene, or the angiogram shows that no bypass operation is possible, then amputation of the leg may be required.

**Arterial bypass surgery**

Arterial bypass surgery is performed to bypass blocked arteries and improve the blood supply to a limb. Bypass surgery is performed in those patients with intermittent claudication, ischaemic rest pain or gangrene in whom angioplasty is not possible or has failed.

The surgery involves dissecting a normal artery above and below the blocked artery and using a length of vein or artificial graft material to divert the blood around the blockage. This is complex surgery and a full discussion with your surgeon is recommended.

*The practice of medicine and surgery is not an exact science and reputable practitioners cannot properly guarantee results, either expressed or implied. These procedures are highly advanced and discussion about them, including risks and benefits, should be with your specialist.*

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