Barrett's oesophagus

Summary

- People who experience persistent heartburn are at risk of developing Barrett's oesophagus.
- This is a condition where the cells lining the lower oesophagus change to resemble those of the stomach and intestine.
- These cellular changes are caused by ongoing exposure to gastric juices (reflux). The changed cells can sometimes turn cancerous.
- Treatment options include medications and surgery.

The oesophagus is the muscular tube that leads from the mouth to the stomach. Swallowed food is massaged down the oesophagus and passed through a weak ring of muscle (sphincter) into the stomach.

Reflux occurs when the acidic contents of the stomach squeeze or 'slosh' back through the sphincter and enter the lower oesophagus, causing symptoms such as heartburn (a burning sensation in the lower chest) or regurgitation.

People who experience persistent reflux (for more than five years) are at risk of developing Barrett's oesophagus. This is a condition where the cells lining the lower oesophagus change in appearance to resemble those of the stomach and intestine, due to their ongoing exposure to gastric juices.

Barrett's oesophagus is a risk factor for cancer of the lower oesophagus.

Symptoms of Barrett's oesophagus are usually no different from regular heartburn and may seem insignificant. For this reason, many people don't seek medical treatment until their condition is quite advanced. In fact, most people with cancer of the lower oesophagus have not been previously diagnosed with reflux. Barrett's oesophagus is more common in men than women.

Cellular changes in the oesophagus

A healthy oesophagus is lined with pinkish-white, flat, smooth cells (squamous cells) that allow the easy passage of swallowed food. The lining of the stomach comprises tall red cells that produce special acid-resistant mucus. Refluxed food, gastric juices and (possibly) bile inflame and irritate the cells lining the oesophagus because they are not acid-resistant. The resulting pain and discomfort is known as heartburn.

Without treatment, constant exposure to these juices can eventually cause cellular changes in the lower oesophagus. The red mucus-secreting cells normally found in the stomach replace the flat smooth cells. The presence of red cells in the oesophagus indicates Barrett's oesophagus.

Barrett's oesophagus and cancer risk

Rarely, these changed cells turn cancerous. If detected early, cancer of the oesophagus can be treated successfully by either endoscopic therapy (in some cases) or surgery. However, many people with cancer caused by Barrett's oesophagus don't seek medical advice until the tumour is too advanced for curative treatment.

If you have been diagnosed with Barrett's oesophagus, you will need to have regular examinations (every two to three years) to check for further microscopic cell changes known as dysplasia. Dysplasia indicates a high risk of cancer. If dysplasia is found, and confirmed at a later examination, therapy to remove the abnormal cells may be required.

Symptoms of Barrett's oesophagus

Barrett's oesophagus is suspected when there are symptoms of persistent gastric reflux or symptoms of complicated reflux. These symptoms include:
persistent heartburn
difficulty swallowing
painful swallowing
vomiting
a sensation of fullness during eating.

If you are experiencing these symptoms, make an appointment with your GP.

**Diagnosis of Barrett’s oesophagus**

Diagnosing Barrett’s oesophagus involves a number of tests, including:

- **endoscopy** – a thin, flexible tube with a tiny light and camera on the end is inserted down your throat so that the doctor can see inside your oesophagus
- **image-enhanced endoscopy** – the (white) light used to illuminate the oesophagus during an endoscopy can be enhanced with ‘narrow band imaging’. This usually involves using:
  - a blue light, which enhances blood vessels and can better show areas of concern for dysplasia
  - zoom magnification
  - a dye, to provide better contrast and visibility
- **endoscopic biopsy** – a small tag of tissue is removed during an endoscopy and examined for the presence of cellular changes.

**Treatment for Barrett’s oesophagus**

Treatment may include:

- **medications** – once Barrett’s oesophagus has been diagnosed, it is essential that treatment is given to eliminate acid reflux. The typical medications used are lansoprazole, omeprazole, rabeprazole and pantoprazole. These are very effective at eliminating symptoms of reflux
- **endoscopic ultrasound** – if severe dysplasia or carcinoma is found, an endoscope with an ultrasound probe can help determine how deeply the abnormal tissue has penetrated
- **endoscopic therapy** – if severe dysplasia or carcinoma is found, this can usually be removed with minimally invasive surgery performed using an endoscope
- **ablation therapy** – usually after endoscopic therapy for severe dysplasia or early carcinoma, the remaining Barrett’s oesophagus is considered to be at high risk for cancer. This can be prevented by radio frequency ablation (RFA), sometimes called HALO-RFA. An electrode is passed through the endoscope to deliver heat pulses to the Barrett’s area. This tissue then sloughs off (comes off) and, over time, is usually replaced with healthy cells
- **anti-reflux surgery** – an anti-reflux operation can be performed in some cases. This is usually only done when symptoms include reflux of large volumes of fluid. Symptom relief after anti-reflux surgery may be temporary. If cancerous cells or severe dysplasia have been detected, the lower oesophagus will need to be surgically removed.

**Where to get help**

- Your **GP (doctor)**
- **Gastroenterologist**

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