Barrett's oesophagus

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 symptoms of 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. Importantly, Barrett's oesophagus is a risk factor for cancer of the lower oesophagus. The chronic reflux of gastric juices causes these cellular changes, which may eventually turn cancerous.

Symptoms of Barrett's oesophagus are usually no different from regular heartburn and may be fairly trivial. This means that 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.

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
- Weight loss
- A sensation of fullness during eating.

Cellular changes

A normal 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 secrete 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

In a percentage of cases, these cellular changes turn cancerous. There is evidence that the rate of cancer caused by Barrett's oesophagus is on the increase.

If detected early, cancer of the oesophagus can be treated successfully by 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.

Diagnosis of Barrett's oesophagus

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

- **Endoscopy** – a thin tube is swallowed so that the doctor can see inside the oesophagus.
- **Endoscopic biopsy** – a small tag of tissue is removed during an endoscopy and examined for the presence of cellular changes. Barrett's oesophagus cannot be diagnosed without this biopsy.
- **Twenty-four hour ambulatory pH monitoring** – a thin wire is threaded through the nose into the oesophagus and connected to a small recorder. This device is worn on the body, usually for 24 hours. This records the level of acid bathing the lower gullet and is an effective way of proving that therapy is adequate.

Regular examinations

Once Barrett's oesophagus has been diagnosed, regular examinations (every two to three years) are needed to check for dysplasia. Dysplasia is a further microscopic change in the cells that is recognisable in the biopsy and indicates a high risk of cancer. In this situation, endoscopies need to be performed more frequently (every six months).

Treatment for Barrett's oesophagus

Treatment includes:

- **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 and pantoprazole. These are very effective at eliminating symptoms of reflux. Specialists treating this condition may need to check the effectiveness of any medications, using 24-hour pH monitoring.
- **Endoscopic therapy** – if severe dysplasia or carcinoma is found, this can sometimes be removed with microsurgery performed using an endoscope.
- **Surgery** – an anti-reflux operation can be performed. This is usually only done if the medications are ineffective. If cancerous cells or severe dysplasia has been detected, the lower oesophagus will need to be surgically removed.

Where to get help

- Your doctor
- Gastroenterologist

Things to remember

- People who experience persistent heartburn are at risk of developing Barrett's oesophagus.
- The chronic reflux of gastric juices causes cellular changes of the lower oesophagus, which can sometimes turn cancerous.
- Treatment options include medications and surgery.

This page has been produced in consultation with, and approved by:

Canberra Hospital - Gastroenterology Unit