Barrett's Oesophagus

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FIGHTING DIGESTIVE DISEASES
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This factsheet is about Barrett's Oesophagus

Barrett's oesophagus is the term used for a condition where the normal cells lining the oesophagus (gullet) have been replaced with abnormal cells. The abnormal cells start from where the oesophagus meets the stomach and spread upwards. The main concern with this condition is that it can increase the risk of developing oesophageal cancer.

Causes of Barrett's Oesophagus

Barrett's oesophagus is caused by long-term Gastro-Oesophageal Reflux Disease (GORD) which causes the symptom of heartburn. Approximately 1 in 10 patients GORD will develop Barrett's oesophagus and the risk increases with duration and frequency of symptoms. GORD involves reflux of acidic stomach (gastric) contents into the oesophagus, which irritates (inflames) and injures the lining (epithelial cells). Over time, in some patients with GORD, the lining of the oesophagus changes from the normal "squamous epithelial" cells to the abnormal "columnar epithelial" cells. This change is described as Barrett's oesophagus. This process is reversible and cells can sometimes revert back to the normal type if the acid reflux is controlled. However, in some patients ongoing reflux promotes further abnormal cell changes in a process called "dysplasia". This is important because during these changes there is an accumulation of abnormalities within the cells, making them pre-cancerous.

Risk factors that can lead to GORD include obesity, smoking, high alcohol intake and a hiatus hernia (where the stomach extends abnormally from the abdomen into the chest). It is rare for Barrett's oesophagus to progress to cancer: risk factors for this progression include male sex, older age, family history and early onset of GORD.

What are the usual symptoms?

Barrett's oesophagus is associated with reflux, which can cause heartburn, regurgitation of food (bringing food back up), nausea and pain in the upper abdomen. However, the cellular changes that characterise Barrett's oesophagus do not themselves cause symptoms and patients with the condition may have no complaints.

How is Barrett's Oesophagus diagnosed?

Barrett's oesophagus is diagnosed by examining the oesophagus lining using a procedure called endoscopy. This is where a small tube (the width of a small finger), with a camera on the end is inserted into the oesophagus and stomach via the mouth. The area of interest is where the oesophagus meets the stomach (gastro-oesophageal junction). Barrett's oesophagus is identified when, instead of a normal whitish lining, a pinker lining is seen that extends from the junction and up the oesophagus. Biopsies (a small sample of tissue) are then taken to confirm diagnosis and look for abnormal cells (dysplasia). Sedation can be used to make the procedure more comfortable.

What impact can Barrett's Oesophagus have?

The diagnosis of Barrett's Oesophagus can impact a person in many ways. These include the complications of the condition and its overall impact on general wellbeing due to the symptoms and fear of cancer.

The most significant complication is the development of cancer of the oesophagus. Symptoms to watch out for include persistence of reflux, difficulty swallowing, unexplained weight loss, bringing up blood or change in voice. If any of these are experienced, then a doctor should be consulted. Further tests may be carried out and if cancer is detected, it may be treated endoscopically, with surgery or with chemotherapy, depending on the stage.

Other complications include narrowing (strictures) which can cause difficulty swallowing and sometimes weight loss due to decrease food intake. Strictures can be treated by dilating them during endoscopy. Ulceration and inflammation of the oesophagus can occur leading to bleeding. This can cause patients to vomit up blood or pass black, tarry, offensive stools. If these symptoms occur, medical attention must be sought immediately.

Symptoms from Barrett's Oesophagus can be long term and occur every day. It is recognised that ongoing symptoms and fear of developing cancer can cause major upset, frustration and feelings of hopelessness amongst many patients. If any of these feeling are experienced, it is important to let the doctor know so that appropriate support can be offered.

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What treatment is available for Barrett's Oesophagus?
The treatment for Barrett's oesophagus (and GORD) can be both non-surgical and surgical. Non-surgical options involve change in lifestyle and/or medications. Lifestyle changes can include weight loss, reduction in alcohol intake, smoking cessation, reducing portion sizes and avoiding eating within three hours of going to bed. There are certain medications that can make reflux worse, and are best avoided. These include anti-inflammatory medications (e.g. ibuprofen and aspirin), medications that affect the oesophageal movement (nitrates) and certain antidepressants (tricyclic agents).

The medications most commonly used in the treatment of Barrett's oesophagus are called Proton Pump Inhibitors (PPI). Omeprazole and Lansoprazole belong to this group (though there are others) and work by reducing acid production in the stomach, with the aim to reduce the amount of acid refluxing into the oesophagus. If medication and lifestyle intervention does not help, then there are surgical options. These include a procedure called Nissen Fundoplication.

It must be noted that these non-surgical and surgical treatments do not remove the Barrett's oesophagus and therefore, do not eradicate the risk of developing oesophageal cancer. Removal of the oesophagus (oesophagectomy) is a major operation and is reserved for patients with severe (high-grade) dysplasia or actual cancer.

Does Barrett's Oesophagus need to be monitored and, if so, how?
Barrett's oesophagus does need to be monitored, mainly using endoscopy. This is because there is an increased risk of cancer with this condition, which if caught early by surveillance, has an excellent prognosis. The frequency of surveillance endoscopy varies from person to person and is based upon the type and length of the abnormal lining seen. In general, when dysplasia cells are present (pre-cancerous cells), then an endoscopy and biopsy is needed about once every 3-6 months. In cases where no dysplasia cells are seen endoscopy may only be needed every 2-5 years.

How does Barrett's Oesophagus behave over time?
Some patients with Barrett's oesophagus may have good control of symptoms, but some patients may experience worsening symptoms, and may need surgical treatment despite medications. Overall, 1 in every 10-20 patients with Barrett's oesophagus will develop cancer over 10-20 years.

What to ask your doctor when you see them?
May I be referred to a dietician to see if there are any changes to my diet that may help with my symptoms?
Are there any other medications I can try? If not, am I suitable for surgery? How often do I need an endoscopy?

What further research needs to be done on Barrett's Oesophagus?
Future research is likely to centre on the ideal interval between surveillance endoscopy procedures and finding ways to predict which patients are most likely to develop cancer.

For more information about research in this area please contact Core.

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