Pre-cancerous condition linked to chronic acid reflux faces several hurdles

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A pre-cancerous condition linked to chronic acid reflux often gets overlooked. Can the medical community do a better job intervening? Researchers from the Hutchinson-MRC Research Centre in Cambridge think so.

In a review published in the inaugural issue of *Disease Models & Mechanisms* (DMM), http://dmm.biologists.org, experts on a disease known as "Barrett's oesophagus" discuss how "Barrett's" presents unique challenges in diagnosis and treatment. They cite key factors which make this illness difficult to detect, and suggest how scientists and doctors can team up to improve the odds of intervention.

Doctors want to understand more about this condition because patients with Barrett's have 30 to 125 times increased risk of an often fatal cancer of the oesophagus. One of the most common indicators of Barrett's is severe and chronic acid reflux. The authors of the review article discuss several reasons why most Barrett's cases are undiagnosed. The wide-spread availability of over-the-counter antacid medications may contribute by suppressing symptoms such that only the most severe and persistent cases of acid reflux are recommended for screening. Additionally, in order to screen for Barrett's, the oesophagus must be examined with a small light and camera (endoscope) which is not a routine procedure.

The biological basis of Barrett's is an abnormal change, or dysplasia, in the oesophagus. Normally, the oesophagus is lined with flat-shaped cells

known as squamous cells. However, in patients with Barrett's, the cell lining consists of rectangular-shaped columnar cells. This process of normal cells morphing into abnormal cells is common to several types of cancer, not just oesophageal cancer. Thus, a greater understanding of Barrett's can also lead to potential therapies for similar pre-cancerous conditions.

In order to advance the diagnosis of Barrett's oesophagus, researchers recommend identifying standardized indicators which can be used to identify the presence of Barrett's as well as predict the likelihood that it will progress into cancer. Additionally, they recommend developing less costly screening methods to allow routine checks for Barrett's in patients with acid reflux. They point out the need for developing laboratory animal models of this disease in order to study the underlying molecular mechanisms of Barrett's, as well as to test potential novel therapies.

Source: The Company of Biologists