Gastric cancer risk in patients with premalignant gastric lesions

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Gastric cancer is an important worldwide health problem and causes considerable morbidity and mortality. It represents the second leading cause of cancer–related death worldwide. A cascade of recognisable precursor lesions precedes most distal gastric carcinomas. In this multi-step model of gastric carcinogenesis, chronic active inflammation of the gastric mucosa, mostly caused by \textit{H. pylori} infection, progresses over time through the pre–malignant stages of atrophic gastritis, intestinal metaplasia and dysplasia to gastric carcinoma. As a result, the prevalence of premalignant lesions increases with age, and is common in both Asian and Western countries in subjects over 50 years of age. In countries with a decreasing prevalence of \textit{H. pylori}, the prevalence of premalignant lesions has also decreased in recent years. Detection and treatment of pre–malignant lesions may provide a basis for gastric cancer prevention. The cancer risk associated with these conditions primarily depends on the distribution, severity and stage of the premalignant lesions. The rate of progression to cancer in the presence of gastric intestinal metaplasia ranged from 0.1 and 0.9\% per annum in various large cohort studies. This risk is thus of the same magnitude as the risk associated with other premalignant conditions of the gastrointestinal tract. The gastric cancer risk increases to more than 5\% per year in patients with high–grade dysplasia. \textit{H. pylori} eradication therapy leads to partial prevention of gastric cancer, but may not benefit patients with gastric intestinal metaplasia and dysplasia. A diet high in anti–oxidants also has limited preventive effect. Surveillance is associated with detection of cancer at earlier stage, and may thus improve outcome. However, there are at present large international differences in the approach to these lesions. Whereas in Japan, premalignant gastric lesions are widely treated by endoscopic resection, these same pre–malignant changes of the gastric mucosa are frequently disregarded in Western clinical practice or handled in widely varying follow–up frequency or treatment. The presentation will provide an overview of current knowledge on the gastric cancer risk in patients with premalignant gastric lesions, with an additional focus on detection, surveillance and treatment of these patients, with identification of the uncertainties that require further research.