Gastric intestinal metaplasia is significantly associated with post endoscopy non-cardia gastric cancer

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Background: Evidence suggests that the presence of gastric intestinal metaplasia (GIM) is involved in the pathogenesis of Non-Cardia Gastric Cancer (NCGC). Yet, the role of GIM in the occurrence of post endoscopy cancer is scarce. Aims: To determine the incidence of post endoscopy NCGC and assess whether the presence of GIM is associated with its occurrence. Methods: Subjects with no previous cancer undergoing upper endoscopy at a tertiary referral center of the Clalit Health Services (CHS) HMO were included. NCGC was detected through the National Cancer Registry. Demographic data was extracted from the CHS database and pathology data including presence of GIM (with or without dysplasia) and extent (focal/ extensive) were reviewed. Cox proportional Hazard Ratios (HR) model along with 95% Confidence Interval (CI) was calculated. Results: Between 01.2004 to 12.2013, 34,391 subjects (55% females; mean age 60.2±17.5 years) underwent upper endoscopy. At baseline, 1406 (4.1%) had GIM:1360 without dysplasia, 46 with low grade dysplasia (LGD). During a median follow-up of 52 months, 25 cases of NCGC occurred (0.07%): 13/32,985 without GIM, 10/1360 with GIM without dysplasia, and 2/46 with GIM-LGD. The rate (cases/105) of post endoscopy NCGC for subjects with GIM and LGD, GIM without dysplasia, and without GIM was 1031, 163 and 8.5, respectively (P.001). Among subjects with GIM without dysplasia, 7/10 developed NCGC within 36 month. Compared to subjects without GIM, the presence of GIM with and without dysplasia was significantly associated with NCGC at follow-up, HR 73.5 (CI% 16.3-331) and 14.23 (CI 6.1-32.8), respectively. Among subjects with GIM without dysplasia, extensive GIM was associated with NCGC, HR 7.63 (95% CI 1.96-29.8). Conclusions: GIM is significantly associated with post endoscopy NCGC. This finding highlights the importance of GIM as a marker for identifying subjects at risk. Health policy makers may take these finding into consideration in future guidelines regarding biopsies during upper endoscopy and GIM surveillance.