SMALL GASTROINTESTINAL STROMAL TUMORS (GIST): A RETROSPECTIVE ANALYSIS OF EUS SURVEILLANCE

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**Background:** Gastrointestinal stromal tumors (GISTs) are the most common mesenchymal tumors of the GI tract. They are often noted incidentally at endoscopy or cross sectional imaging. Following their identification, further investigation via endoscopic ultrasound (EUS), often with fine needle aspiration (EUS-FNA) confirms diagnosis. The natural history and appropriate management of small (<2 cm) GISTs is not well understood and in 2010 the National Comprehensive Cancer Network (NCCN) guidelines recommended surveillance EUS every 6-12 months.

**Aims:** To determine if our management strategy for <2cm GISTs was consistent with present guidelines. Secondary outcomes were to identify barriers to surveillance and determine the natural history of GIST.

**Methods:** A retrospective chart review of all EUS procedures at St. Paul's Hospital (SPH) and Vancouver General Hospital (VGH), Vancouver, Canada was completed from 01/05-06/17 and 01/12-06/17 respectively. Individuals with <2cm GISTs were identified. A GIST was defined as a hypoechoic lesion arising from the 2nd or 4th layer of the GI wall +/- cytologic or histologic diagnosis. Data collected included patient demographics, clinical presentation, initial and subsequent EUS findings, interval between EUS, reasons for not undergoing surveillance EUS, and pathology. Candidates were collated based on the presence of GISTs and whether appropriate follow-up occurred based on NCCN guidelines. This study was approved by the IRB at SPH and VGH.

**Results:** GISTs were identified by EUS in 199 patients, 94 (47%) had lesions <2 cm in size. Mean age at diagnosis was 64 years (SD:12.6). 77% were referred due to incidental findings at initial endoscopy and 23% were referred based on CT imaging. GISTs identified were located in the stomach and esophagus. Of the 94 patients with <2cm GISTs, surveillance was recommended in 86 (92%) and 69 (80%) had at least one surveillance EUS. Of the 17 patients surveillance was recommended but not completed, the barrier was not identified. Over the review period, there was an improvement in surveillance adherence to 100%. During a median follow-up of 6 yrs (1-10), 66 (96%) lesions remained unchanged in size and 3 increased in size. Of these 3 lesions, 1 exceeded 2cm in size but remained stable over serial examinations. Of the
69 patients with <2cm GISTs, 3 were referred to surgery for high risk features. No patients with <2cm lesions developed unresectable disease.

**Conclusions:** SPH and VGH endosonographers recommendations for surveillance of <2cm GISTs agreed with current guidelines in 92% of patients. Adherence to recommendations improved to 100% over the study. Rate of progression of <2cm GISTs is very low and evidence supports that surveillance intervals can be increased for patients with small GISTs that have been stable over serial examinations.

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