Utility of Surveillance Endoscopy for Gastric Ulcers: Are We Scoping too Much?

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Background

- After diagnosing a gastric ulcer, it has become routine practice for surveillance endoscopy (SE) to ensure ulcer healing and to rule out malignancy.
- Current ASGE guidelines recommend that most gastric ulcers undergo biopsies, but individualized approach should be taken.
- We hypothesized that most gastric ulcers were benign and did not need SE and that most malignant ulcers have appearance characteristic of malignancy at index endoscopy and therefore, diagnosed by gastric biopsies.

Objectives

- We aimed to characterize gastric ulcers diagnosed on endoscopy and determine risk factors for malignant ulcers.
- We sought to develop an algorithm for evaluating gastric ulcers and the need for SE.

Methods

- The PDSA QI methodology was used to develop an intervention (algorithm) incorporating national guidelines and expert opinion.
- Pre-intervention data was collected from February 2019 to July 2021 using endoscopic reporting software from two tertiary care institutions in Houston, TX.
- Consecutive gastric ulcers were reviewed and risk factors for malignant ulcers were determined.
- We developed an algorithm for SE after gastric ulcer diagnosis incorporating these and other published risk factors as well as expert opinion.

Results

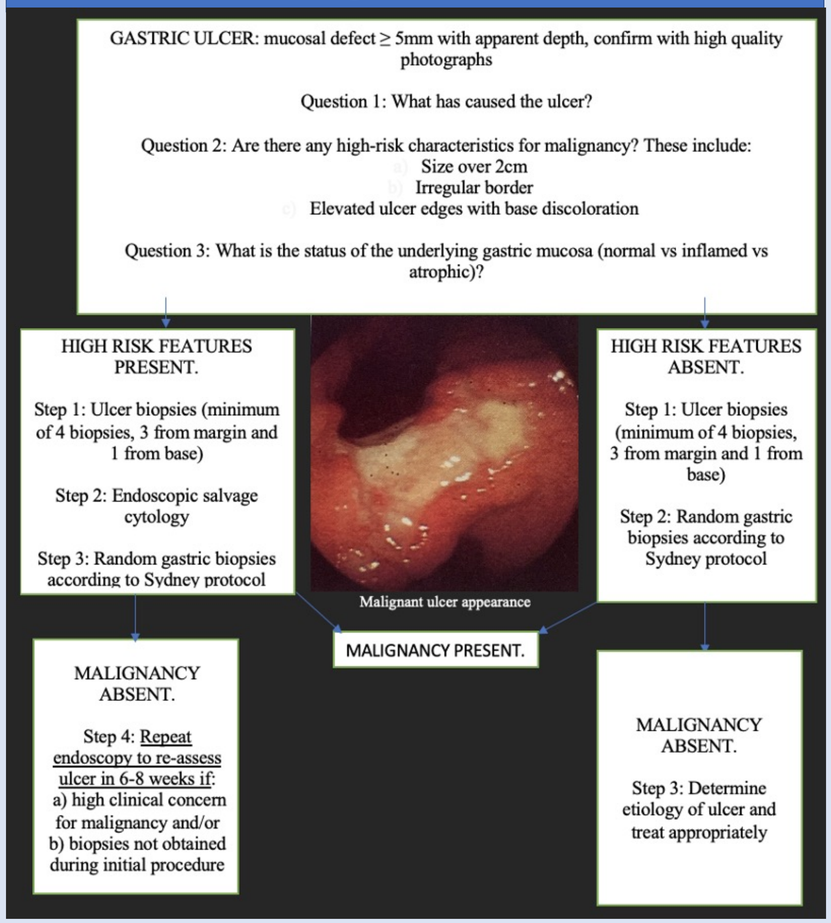
- There were 198 patients in total, and 147 were men.
- The average age was 61.1 years and the overall ulcer size was 14.5mm.

- Malignant ulcers were found in 16 patients (8%), as follows:
  - 11 gastric cancer, 4 lymphoma, and 1 lung cancer.
  - The average malignant ulcer size was 25.6mm.
  - Importantly, the majority were biopsied on index endoscopy (15, 94%).
  - Upon review of endoscopic images, 14 (87.5%) had malignant features defined as: size over 2cm, irregular borders, and elevated ulcer edges with base discoloration.

- For the 182 patients without malignancy:
  - 61 (33.5%) had malignant ulcer features.
  - Of these, 40 (65.6%) got biopsied on index endoscopy.

- An algorithm was established from this pre-intervention data.

Algorithm



	Number	Male/ Female	Average Age (years)	Ulcer Size (mm)	Malignant Features (%)	Biopsied on Initial EGD (%)
Malignant Ulcer	16	10/6	54.4	25.6	14 (87.5%)	15 (94.0%)
Non-malignant Ulcer	182	137/45	61.7	13.5	61 (33.5%)	40 (65.6%)[1]
Total	198	147/51	61.1	14.5	37.9%	67.9%

Discussion

- Most gastric ulcers were not malignant and 94% of malignant ulcers were biopsied on index endoscopy based on appearance.
- We developed an algorithm incorporating biopsies for gastric ulcers at index endoscopy and decreasing the need for SE.