A Prospective Study on Endoscopy for Luminal Abnormalities on Imaging and its Impact on Clinical Management

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Introduction

- Cross-sectional imaging especially CT scans are widely used as an initial diagnostic test in evaluating patients with a variety of symptoms.
- When an abnormality relating to the GI tract is detected they are often referred to a gastroenterologist for further evaluation. Whenever there is an abnormality involving the lumen of the GI tract one undergoes an endoscopic evaluation.
- Data are limited whether performing an endoscopy would add further value and alter the clinical management of these subjects.

Methods

- This study was done between February and August 2014 at a large tertiary care center.
- It was approved by the Institutional Review Board.

- Patients referred as outpatients for abnormal imaging were identified by ICD-9 code 793.4.
- Charts were reviewed by independent examiners for clinical data and outcomes of endoscopy.
- Inclusion criteria were:
  - Cross-sectional imaging
  - Imaging study done after October 2013
  - Abnormality of luminal tract reported
  - Follow-up endoscopy was performed.
- Data were collected on the following:
  - Demographic data
  - Family history
  - Symptoms, duration of symptoms
  - Indication for imaging
  - Interval between abnormal imaging and endoscopy
  - Endoscopy findings, pathological data and clinical management changes.

- Reviewers determined if endoscopic abnormalities were identified corresponding to the region that was abnormal on imaging.
- Positive associations for having corresponding endoscopic findings were:
  - Symptom of abdominal pain
  - Ascending and sigmoid colon thickening or imaging
  - No significant association seen for having a corresponding finding and:
    - Age of subject
    - Duration of symptoms
    - Use of contrast
    - Time interval to endoscopy
  - 36% had no gross endoscopic abnormality in area corresponding to luminal abnormality but had pathology detected on biopsy or in other regions on endoscopy.

Results

- 122 subjects were included.
- 73% were female with mean age 57 yrs. (SD: 16.3 yrs.)
- 13% blood in the stool
- 13% diarrhea
- 43% of patients with an abnormal imaging get a change in clinical management.
- 36% had no gross endoscopic abnormality in area corresponding to luminal abnormality but had pathology detected on biopsy or in other regions on endoscopy.
- 23% have a change in management based on endoscopic findings.

Aim of Study

- Access utility of endoscopy for luminal abnormalities detected on a CT scan –
  - whether they confirm or rule out any significant pathology.
  - does doing endoscopy lead to a change in clinical management.
  - Detect any patient or imaging related features that are associated with detecting abnormalities on endoscopy.

Conclusions

- Endoscopy is warranted for further evaluation if there are abnormal findings on CT scans.
- Endoscopy results in change in clinical management for 23% of subjects, 47% of subjects exclude inflammatory or malignant changes.
- Significant correlation exists between abnormal imaging and a positive endoscopic finding especially if abdominal pain is present.
- Descending or sigmoid colon inflammatory changes present on imaging have significantly more often an abnormal finding on endoscopy.
- 43% of patients with an abnormal imaging get a diagnosis by endoscopy.
- 23% have a change in management based on endoscopic finding.
- 12% of patients without gross abnormality on endoscopy in the corresponding area of abnormal imaging still have a pathological diagnosis made often in another region resulting in a change in clinical management.
- 3% had a luminal malignancy diagnosed by endoscopy after an abnormal cross-sectional imaging.