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Research Article

**UPPER GASTROINTESTINAL TRACT LESIONS INCIDENCE
AS PERCEIVED ON ENDOSCOPIC BIOPSIES IN PATIENTS
ATTENDING THE HOSPITAL WITH IRON DEFICIENCY
ANEMIA**Dr Aazib Irshad¹, Dr Ans Dastgir², Dr Muhammad Umar Zubairi³^{1,2}Allama Iqbal Medical College, Lahore³Central Park Medical College, Lahore**Article Received:** August 2020**Accepted:** September 2020**Published:** October 2020**Abstract:**

Aim: To determine the frequency of various lesions of the upper gastrointestinal tract detected in patients with iron deficiency anemia following endoscopic biopsy.

Methods: This was a cross-sectional study conducted at the Medicine Unit-II of Jinnah Hospital Lahore for one-year duration from April 2019 to April 2020. All patients diagnosed with iron deficiency anemia and positive fecal occult blood tests were included in the study. Patients who had a history of gastric surgery and patients who refused to participate were excluded. After obtaining informed consent, endoscopy of the upper gastrointestinal tract in all selected patients was performed by a gastroenterologist consultant, and biopsies were sent to the laboratory for histopathological examination in order to make a proper diagnosis. In addition to collecting basic demographic data, all these findings have been recorded in a short, structured proforma form. Data were analyzed using SPSS v.16.0. Qualitative data was presented as % age and graphs, while mean \pm standard deviation was used for quantitative analyzes.

Results: The mean age of our patients was 29.8 ± 6.7 years. There was an overall predominance of women (71.61%). Of the 310 patients with iron deficiency anemia, changes in the upper gastrointestinal tract were found in 144 (46.45%), while no morbidity was found in 166 (53.55%). Regarding the incidence of various lesions of the upper gastrointestinal tract, 43 (29.86%) had erosive gastritis, 48 (33.33%) had gastric ulcer, 27 (18.75%) had erosive duodenitis, and 26 (18.06%) had gastric cancer detected by endoscopic examination. biopsy.

Conclusion: The frequency of changes / disorders of the upper gastrointestinal tract found in our patients with iron deficiency anemia was 46.4%. The most common lesion of the upper gastrointestinal tract was gastric ulcer, followed by erosive gastritis, erosive duodenitis, and gastric cancer.

Key words: gastrointestinal bleeding, capsule endoscopy, biopsy, iron deficiency anemia

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INTRODUCTION:

Iron deficiency anemia (hypochromic microcytic anemia) is a common cause of anemia due to poor consumption or chronic blood loss. Iron deficiency anemia (IDA) affects approximately 30% of the world's population¹⁻². Important implications for the diagnosis of IDA include the diagnosis and correction of the underlying causes, most of which can be identified by conventional upper GI endoscopy and colonoscopy³⁻⁴. In 20% of IDA patients, routine upper and lower gastrointestinal endoscopy may not establish the cause of the gastrointestinal tract on admission to hospital. Earlier studies pointed to upper gastrointestinal disorders as the major etiology of iron deficiency anemia⁵⁻⁶. Notable changes that were identified in these studies were peptic ulcer, erosive gastritis, erosive duodenitis, and gastric cancer⁷⁻⁸. The purpose of this study is to determine the actual incidence of upper gastrointestinal lesions as the results vary widely in the literature and there is no comprehensive study that is being conducted in our population, so this study will generate baseline results.

MATERIALS AND METHODS:

This was a cross-sectional study conducted at the Medicine Unit-II of Jinnah Hospital Lahore for one-year duration from April 2019 to April 2020. Using non-probable sampling, a calculated sample of 310 patients was selected (with a 2.5% margin of error,

95% confidence level, taking the expected percentage of gastrointestinal disorders as 5.23%) based on diagnosed iron deficiency anemia (according to operative definition) with symptoms of easy fatigue, palpitations and shortness of breath, leg cramps, pale skin and symptoms of occult blood in the stool. Patients with a history of prior gastric surgery, bleeding disorders, and those taking multivitamins such as vitamin C and iron supplements 48-72 before stool for occult blood were excluded. After obtaining informed consent, endoscopy of the upper gastrointestinal tract in all selected patients was performed by a gastroenterologist consultant, and biopsies were sent to the laboratory for histopathological examination in order to make a proper diagnosis. In addition to collecting basic demographic data, all these findings have been recorded in a short, structured proforma form. The data was entered and analyzed using SPSS v.16.0. Qualitative data was presented in the form of % and charts, while the mean + SD was used for quantitative analyzes.

RESULTS:

The mean age of our patients was 29.8 ± 6.7 years. Of the total of 310 patients, 187 (60.3%) were between 20-30 years of age and 123 (39.6%) were in the range 31-45 years. 28.3% (88) of our patients were male and 71.6% (222) female.

Table 1: Basic demographic profile

Age in years (mean± SD)	29.8±67
20-30 years	187(60.3%)
31-45 years	123(39.6%)
Male	88(28.4%)
Female	222(71.6%)

Of a total of 310 iron deficiency anemia patients, 144 (46.4%) patients had gastrointestinal lesions as disease and 166 (53.6%) were non-morbid.

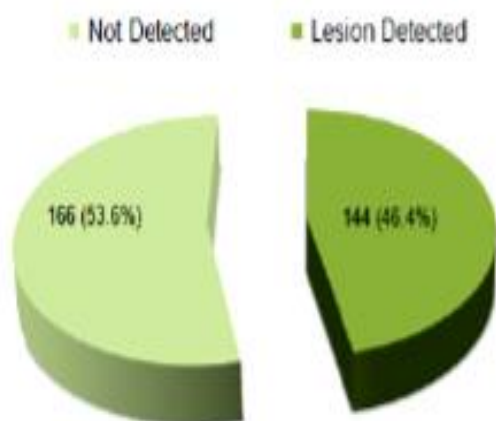


FIG-01: FREQUENCY OF UPPER GIT LESIONS IN OUR PATIENTS WITH IRON DEFICIENCY ANEMIA

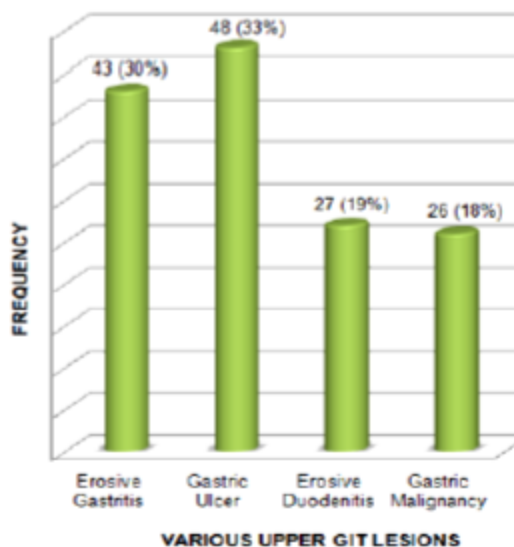


FIG-02: FREQUENCY OF VARIOUS UPPER GIT LESIONS IN OUR PATIENTS

In fig. 2 shows the frequency of various lesions of the upper gastrointestinal tract found in patients with iron deficiency anemia. Of 144 cases, 43 (30%) patients had erosive gastritis, 48 (33%) had gastric ulcer, 27 (19%) had erosive duodenitis, and 26 (18%) had gastric cancer. There was an overall predominance of women (71.61%).

DISCUSSION:

Iron deficiency and eventually IDA develop when there is a mismatch between iron inputs and outputs. In many cases, these changes will be secondary to gastrointestinal diseases. In addition to examining the signs and symptoms for an accurate diagnosis, gastrointestinal endoscopy can be performed, which is very sensitive and specific to the location of the gastrointestinal lesions causing anemia⁹⁻¹⁰. This paper is an attempt to determine the frequency of various lesions of the upper gastrointestinal tract (in endoscopic examination) that occur in patients with iron deficiency anemia in our local community. The results of our study are comparable to the previously described literature. Stražak Z et al. Described injuries of the upper gastrointestinal tract in 55.8% of patients during endoscopic evaluation of iron deficiency anemia. They reported erosive gastritis in 27.9% and erosive duodenitis in 9.3% as notable conditions, such as those found in our study, but the incidence of these conditions is slightly higher in our study¹¹⁻¹². This unexplained dynamic disease distribution is not clearly understood in our study. In another study by Gordon SR et al. The source of iron deficiency anemia in the upper gastrointestinal tract was found in 41% of patients. These findings are comparable to our results, as 46.4% of our iron deficiency anemia patients had changes in the upper gastrointestinal tract detected by endoscopy. Similarly, Annibale et al. Found the causes of gastrointestinal iron deficiency anemia in 85% of cases¹³. This variation in frequency compared to our

study may be due to the fact that the greater proportion of their patients belonged to the older group, while we only included patients in the 20-45 age group. An Iranian study found that 34% of iron-deficient patients had these changes, about 10% had gastrointestinal cancer as the cause of anemia, and 66% had no gastrointestinal cause¹⁴⁻¹⁵. In our study; of a total of 310 patients with iron deficiency anemia, 144 (46.4%) patients had gastrointestinal disease and 166 (53.6%) had no morbidity. Of 144 cases, 43 (30%) patients had erosive gastritis, 48 (33%) had gastric ulcer, 27 (19%) had erosive duodenitis, and 26 (18%) had gastric cancer. The results of our study are consistent with the above studies; however, these findings are primary in our study as there was no comprehensive study in our population, so this study generated baseline results. Other tests are required to confirm the results of our study.

CONCLUSION:

The incidence of changes / disturbances in the upper gastrointestinal tract in our patients with iron deficiency anemia was 46.4%. The most common lesion of the upper gastrointestinal tract was gastric ulcer, followed by erosive gastritis, erosive duodenitis, and gastric cancer.

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