Upper Gi Endoscopy-indications and Findings at Tertiary Care Hospital Hyderabad/Jamshoro

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Authors’ contributions

This work was carried out in collaboration among all authors. Authors JD and MAB designed the study, wrote the protocol and wrote the first draft of the manuscript. Author NA review the literature. Authors RF to KK managed the analyses of the study, managed the literature searches, manuscript writing formatting, data entry and its analysis by SPSS. All authors read and approved the final manuscript.

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ABSTRACT

Objective: To document different indications and findings of upper GI Endoscopy in our endoscopy suite.

Methods: A descriptive study of 500 patients who underwent upper gastrointestinal (UGI) endoscopy was conducted in the Endoscopy Unit of PNS DRIGH LUMHS Jamshoro and Civil Hospital Hyderabad from April to September 2020. Included patients underwent UGI endoscopy. Demographic data including indications and endoscopic findings of the patients was collected via study proforma.

Results: Total five hundred patients were studied; their mean age was 42.4±16.8 years. Out of all 52.8% were males. Upper GI bleed was the commonest indication (33.2%) followed by dysphagia.

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2. MATERIALS AND METHODS

This was a cross-sectional descriptive study, conducted at the Department of Endoscopy of LUMHS Jamshoro/Hyderabad from April to September 2020. Five hundred patients were recruited, who were referred from inpatient, outpatient, and emergency department. Demographic characteristics including age, gender, ethnicity, indications, endoscopic findings, and the type of therapeutic intervention in patients were gathered on the structured proforma. The endoscopy was performed using endoscope Pentax. Lignocaine (4%) gargles were used for local analgesia before the procedure. All the data was recorded via study proforma. Statistical analysis was done by using Statistical Package for Social Sciences (SPSS).

3. RESULTS

There were 264 (52.8%) males out of the total 500 patients. The mean age of patients was 42.4±16.8 years. Three hundred and twelve (62.4%) patients were in the age group 20-50 while 142 (28.4%) were greater than 50 years of age. The demographics for age, gender and ethnicity have been described in Tables 1 & 2. Three hundred and eleven (62.2%) patients were referred from the outpatient department while the rest were from different inpatient departments. Upper GI bleed was the commonest indication (n=166; 33.2%) followed by dysphagia representing 108 (21.6%) patients. Other common endoscopic indications have been shown in Table 3. The most common findings were esophageal varices (32.2%), and then gastritis (18.8%), followed by other findings which are shown in Table 4. The endoscopy was diagnostic in 386 (77.2%) patients and therapeutic interventions were carried out in 114 (22.8%) patients. Therapeutic procedures included esophageal variceal banding in 95 (19%), esophageal web broken with a scope in 15 (3%), savary dilation in 3(6%) patients, and adrenaline injection was given in 1(2%) patients as indicated for respective disorders. In patients with esophageal varices, 77.4% patients had chronic liver disease with positive serology for hepatitis C virus (HCV) and Hepatitis B virus (HBV) in 63.4% and 23% respectively. The overall serological findings in patients are described in Table 5.

4. DISCUSSION

Upper GI endoscopy is a quick and cost effective diagnostic tool for a wide variety of gastrointestinal disorders. In addition to its diagnostic potential, it also has established
therapeutic role for various disorders. In this study mean age of patients was 42.4±16.8 years and this was similar to Jeje et al. [7], Ahmad et al. [4,8], Abubakar Sadiq et al. [9] and Khurram et al. [10] while in other studies mean age is quite variable. Javed et al. [11], Raza et al. [12], A. B. Olokoba et al. [13], A.B. Olokoba et al. [14], and Keren et al. [15] had a mean age of 35, 45, 48 and 58 years.

This study showed male predominance (52.8%) which was consistent with Jeje et al. [7], Patel et al. [16], Javed et al. [11], Abubakar Sadiq et al. [9], Ahmad et al. [4,8]. On the other hand females were reported to be predominant by Agyei-Nkansah et al. [3], Khurram et al. [10], Raza et al. [12], A. B. Olokoba et al. [13], A. B. Olokoba et al. [14], and Keren et al. [15]. The cause of differences in the age and gender could be the difference in sample size, location and time period of the studies which were carried out.

The study showed that upper gastrointestinal bleeding as the most common indication accounting for 33.2%. Ahmad et al. [4,8] demonstrated the similar observations. However, in the study by A.B. Olokoba et al. [14], Patel et al. (16), Keren et al. [15], Khurram et al. [10], and Agyei-Nkansah found dyspepsia to be the most common cause of referral. While these commonest finding were also reported by Jeje et al. [7] and Javed et al. [11]. Other indications were dysphagia (21.6%) and epigastrum pain (10%), surveillance (9%). Dysphagia was also the second most common referral in the finding of Ahmad et al. [4,8].

| Table 1. Age distribution of the patients (n=86) |
|-----------------------------------------------|
| Age (years) | Number of Patients |
|-------------|-------------------|
|             | Males | Females | Total |
| <20         | 26    | 20      | 46    |
| >20-50      | 152   | 160     | 312   |
| >50         | 86    | 56      | 142   |

| Table 2. Ethnicity of the patients (n=86) |
|-----------------------------------------|
| Ethnicity                  | No. of patients (%) |
| Sindhi                     | 388 (77.6%)         |
| Urdu                       | 85 (17%)            |
| Punjabi                    | 13 (2.6%)           |
| Balochi                    | 8 (1.6%)            |
| Pathan                     | 5 (1%)              |
| Siraiki                    | 1 (0.2%)            |

| Table 3. Distribution of endoscopic findings and its frequency with gender |
|-----------------------------|
| Indication                  | Males (% within gender) | Females (%) | Total (%) |
| Upper GI Bleed (Hematemesis/Melena) | 93 (35.2%)            | 73 (30.9%)   | 166 (33.2%) |
| Dysphagia                   | 46 (17.4%)            | 62 (26.3%)   | 118 (21.6%) |
| Epigastric pain             | 20 (7.6%)             | 30 (12.7%)   | 50 (10%)    |
| Surveillance                | 30 (11.4%)            | 15 (6.4%)    | 45 (9%)     |
| Screening                   | 27 (10.2%)            | 14 (5.9%)    | 41 (8.2%)   |
| Dyspepsia                   | 17 (6.4%)             | 18 (7.6%)    | 35 (7.0%)   |
| Persistent vomiting         | 18 (6.8%)             | 9 (3.8%)     | 27 (5.4%)   |
| Unexplained Anemia          | 5 (1.9%)              | 4 (1.7%)     | 9 (1.8%)    |
| Chronic Diarrhea            | 3 (1.1%)              | 5 (2.1%)     | 8 (1.6%)    |
| Foreign Body                | 3 (1.1%)              | 2 (0.8%)     | 5 (1.0%)    |
| Corrosive injury            | 1 (0.4%)              | 3 (1.3%)     | 4 (0.8%)    |
| Weight Loss                 | 1 (0.4%)              | 1 (0.4%)     | 2 (0.4%)    |

(P=0.001)
Table 4. Endoscopic findings

| Findings                  | No. Of patients (%) |
|---------------------------|---------------------|
| Esophageal Varices        | 161 (32.2%)         |
| Gastritis                 | 94 (18.8%)          |
| Normal                    | 57 (11.4%)          |
| Esophageal Growth         | 34 (6.8)            |
| Esophageal Ulcer          | 21 (4.2%)           |
| Esophageal Web            | 15 (3.0)            |
| Oropharyngeal growth      | 14 (2.8%)           |
| Gastric Ulcer             | 12 (2.4%)           |
| Stomach growth            | 9 (1.8%)            |

Table 5. Esophageal varices according to etiology of liver disease

| Serology      | No. of Patients (%) | With Esophageal Varices |
|---------------|---------------------|-------------------------|
| None          | 310 (62%)           | 14 (8.7%)               |
| HCV           | 129 (25.8%)         | 102 (63.4%)             |
| HBV           | 52 (10.4%)          | 37 (23%)                |
| HBV+HDV       | 3 (0.6%)            | 3 (1.9%)                |
| Alcohol       | 3 (0.6%)            | 3 (1.9%)                |
| HBV+HCV       | 2 (0.4%)            | 1 (0.6%)                |
| AUTOIMMUNE    | 1 (0.2%)            | 1 (0.6%)                |

Esophageal varices (32.2 %) accounted for the majority of cases of upper GI endoscopy findings, which is consistent with Ahmad et al. [4], and Ahmad et al. [8]. Other findings were gastritis in 18.8% and normal in 11.4 % of patients. While in other studies findings were quite variable. Agyei-Nkansah et al. [3], Abubakar Sadiq et al. [9], Patel et al. [16] and Rabbani et al. [17] found gastritis as the most common finding in upper GI endoscopy.

The high incidence of UGI bleeding due to esophageal varices could be attributed to the end-stage liver diseases due to chronic hepatitis with HBV and HCV, representing high rates of infection in this part of the world. Whereas a comparatively lower incidence of peptic disease as a cause of UGI bleeding could be attributed to the easy access to the acid-suppressive therapy and its frequent prescription by primary care physicians.

This study showed the indications and findings of upper GI endoscopy. However, it can’t provide the prevalence and incidence in the population since it’s a single hospital-based study. Several such large-scale multi-center studies and population-based registries are required to identify the actual burden of the upper GI diseases in the country, which would help to direct the health care services and calculated allocation of limited resources.

5. CONCLUSION

Upper GI endoscopy is one of the most essential tools to evaluate gastrointestinal disorders with both diagnostic and therapeutic potential. The current study found UGI bleed as the most common indication for the procedure and esophageal varices were found to be the leading underlying etiology. The high incidence of esophageal varices attributed to the CLD due to viral hepatitis that mandates the need for early screening with endoscopy to mitigate the morbidity and mortality associated with UGI bleeding.

CONSENT AND ETHICAL APPROVAL

The study was carried out after approval by the Institutional Ethical Review Committee. The patients of either gender, who gave informed consent were included in the study while non-consenting patients were excluded.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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