

# EXPERIENCE WITH ENDOSCOPY AT BIN JALAWI HOSPITAL K.S.A.

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**Background:** Presentation of gastrointestinal disorders may vary in different communities. This study was carried out in town of Hafoof in Eastern zone of Saudi Arabia. Purpose of the study was to observe pattern of presentation, age, sex, smoking status, haemoglobin levels, serological markers for hepatitis, endoscopic findings, histopathology, presence of H. Pylori or otherwise in biopsy materials taken during the endoscopic procedures in patients undergoing endoscopic examinations. Findings of 230 endoscopies are presented. **Methods:** All patients who underwent endoscopy in Bin Jalawi Hospital KSA, between December 1999 and September 2001 were included in the study. Data regarding above mentioned features was collected. Patients underwent gastroscopy, colonoscopy and injection sclerotherapy. Biopsies were taken and histopathological studies were carried out. **Results:** Data of 187 gastroscopies, 12 sclerotherapy sessions and 31 sigmoidoscopies is presented. Antral Gastritis was most commonly seen pathology. Gastric and esophageal varices, erosive gastritis, carcinoma oesophagus, duodenitis and oesophagitis were among the other common pathologies. Age of the subjects ranged between 15 and 80 years. Hepatitis B surface antigen was detected in 13 Patients and Hepatitis C antibodies were reported positive in 21 samples. **Conclusions:** This data reflects pattern of findings encountered on endoscopies in Hafoof area of KSA, this may assist in comparing the pattern of presentation in this centre with other centers within and outside Saudi Arabia.

**Key Words:** Endoscopy, Gastrointestinal disorders, Gastritis, Oesophagitis,

## INTRODUCTION

Patients are referred for endoscopies for variety of reasons. Peptic ulcer disease, with its complications remains the most common indication for gastroscopy,<sup>1</sup> although nonulcer dyspepsia, dysphagia, haematemesis, removal of foreign body from upper gastrointestinal tract, sclerotherapy, dilatation of stricture, polypectomy, ERCP and other therapeutic procedures are also among the common reasons for gastroscopy.<sup>2-4</sup> Similarly lower gastrointestinal bleeding, diarrhea, polypectomy and obtaining biopsy material are common indications for colonoscopy<sup>3,5</sup>.

This study was conducted at Bin Jalawi hospital Hafoof Kingdom of Saudi Arabia (KSA). This is situated in eastern zone of KSA. Patients were referred from 32 local health centers and six private sector hospitals. This study reports an experience of 22 months of endoscopy service without any time gap because of which it can be taken as reflective of the prevalent trends existing in the practice of endoscopy in this particular center. Findings of these examinations are presented and compared with the observations reported by other workers and with the relevant data from other parts of world.<sup>4,5,6</sup>

## MATERIAL AND METHODS

This study was carried out on all the patients referred to Bin Jalawi hospital for endoscopy between December 1999 and September 2001. Patients referred by primary health care physicians of Hafoof area, and referred from private hospitals of same area and from inpatients and outpatients departments of Bin Jalawi Hospital were included. During this time a total of 230 patients underwent endoscopic procedures. Patients were referred on request proforma which provided details of epidemiological characteristics, clinical history, relevant findings on physical examination, age, sex, smoking status, and results of serological investigations. All these information were recorded in the register of endoscopy room. Endoscopic procedures were then performed. Finding of endoscopy, details of procedures, number of biopsies taken and sites from where biopsies were taken were registered. All the biopsy material was sent to laboratory where it was examined for H.Pylori and histological appearance and other studies. Modified Giemsa staining method was used for identification of H.Pylori.

Oesophago-gastro-duodeno-scopic examination was performed on 199 patients. Out of these 12 patients needed sclerotherapy. Ethanolamine was injected by injection wire through endoscope for the purpose of sclerotherapy. Colonoscopy and sigmoidoscopy was performed on 31 patients. Most of the patients were repeatedly seen by their treating physicians and so were adequately investigated. Electrocardiograms, X-rays of chest and abdomen, abdominal sonography, liver function tests, Prothrombin time, partial thromboplastin time, levels of urea and creatinine were available for all patients. Data was collected prospectively to identify any peculiar trend.

## RESULTS

A total of 230 patient under went various endoscopic procedures. 162 were male 68 were female.187 had upper GI endoscopy. 12 had injection sclerotherapy sessions for esophageal varices and 31 had sigmoidocolonoscopy. Thirteen patients were seropositive for Hepatitis B Surface antigen and 21 subjects had evidence of Hepatitis C antibodies. Saudi Arabia has a significant population of expatriates from Middle East, Africa and subcontinent of India and Pakistan. Among different nationals who under went investigations 12 were Indian, 6 were Pakistani, 15 were Egyptian, 3 Syrian, 2 Turkish and 192 of Saudi origin. Results are summarized in Table 1-5.

## DISCUSSION

This study highlights several features observed on endoscopy. Endoscopic procedures were undertaken more often in men as compare to women. This is in accordance with the findings of other workers.<sup>3,4</sup> Data presented in this study has shown high proportion of smokers (63%). This is partly because of the widely known fact that smoking is associated with upper gastrointestinal disorders which require endoscopy more often than non smokers.<sup>8</sup> Gastroscopy has been done mostly in subjects older than 35 year of age, whereas colonoscopy is required relatively as frequently in younger individuals as in the older population.

**Table-1: Types of endoscopic procedures (n=230)**

Procedures	Numbers	%
Gastroscopy	187	81.3

Colonoscopy	31	13.48
Sclerotherapy	12	5.22

**Table-2: Nationalities of subjects (n=230)**

Nationalities	Numbers	%
Saudi	192	83.4%
Egyptian	15	6.5%
Indian	12	5.2%
Pakistani	6	2.6%
Syrian	3	1.3%
Turkish	2	.9%

**Table-3: Age groups in relation with procedure**

Age group (years)	Gastroscopy (n=187)	Colonoscopy (n=31)	Sclerotherapy (n=12)
15-35	48 (25.6%)	14 (45.1%)	2 (16.6%)
36-55	63 (33.6%)	9 (29%)	8 (66.6%)
56-75	74 (39.5%)	7 (22.5%)	2 (16.6%)
>76	2 (1.06%)	1 (0.3%)	0 (0%)

**Table-4: Other significant findings/characteristics (n=230)**

Finding/Characteristic	Number (%)
Smokers	145 (63%)
HbSAg Positive	13 (5.6%)
Hepatitis C Ab	21 (9.1%)
Hb >9gms%	46 (20%)
Hb <9gms%	184 (80%)
Male	162 (70%)
Female	68 (29.6%)

**Table-5: Diagnostic conclusions (n=230)**

Endoscopic Impression	Nos (%)	Histopathological Diagnosis	Nos (%)
Antral gastritis	75 (40%)	Acute gastritis	87 (46.5%)
Varices	19 (10%)	Oesophagitis	9 (4.8%)
Gastic Ulcer	4 (2.1%)	Ca Oesophagus	7 (3.7%)
Duodenal Ulcer	9 (4.8%)	Gastric Lymphoma	1 (.5%)
Erosive gastritis	17 (9.1%)	Chronic gastritis	29 (15.5%)
Oesophagitis	11 (5.8%)	Normal	54 (28.8%)
Duodenitis	9 (4.8%)	<b>H.Pylori status</b>	
Ca Cesophagus	7 (3.7%)		
Gastric Neoplasm	2 (1.05%)	H Pylori Positive	116 (62%)
Hyperrugosity of gastric mucosal folds	6 (3.2%)	H Pylori Negative	71 (37.9%)

Normal	28 (14.9%)		
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Prevalence of H Pylori was high in this series. In other studies done in the same region and neighbouring countries even higher figures have been reported.<sup>9</sup>

Human gut has been included in temple of wonder for ages. It was difficult to explore and see through large and tortuous coils of intestine. Rigid open ended. Endoscope could offer visual examination of proximal 40 cm and distal 25 cm of gut. Biopsies of there area were real achievements. Semi flexible lens gastroscopies were developed during 1930s and 1940s<sup>10</sup>. Though their use was limited to few centers but their popularity grew very fast. Japanese had been trying hard to develop an instrument which could help them to diagnose cancer of gut as early as possible (which was prevalent in their country). Blind gastro-camera in 1950 and flexible fibroptic endoscopy in 1960 was their real success.<sup>11</sup>

Modern Endoscopies are easy to use highly maneuverable and have very high yield to scan the part under examination. Deep duodenoscopy, cannulation of papilla of Vater for cholangio-pacreatography, transendoscopic diathermy and laser photocoagulation have made the procedure of high therapeutic value.<sup>12</sup>

Endoscopy is one of most important investigation modality used in exploration of GI tract. Among most of other investigations available including Barium contrast studies, ultrasound, Computed tomography and Magnetic Resonance imaging, which are used visualize GI tract indirectly. Endoscopy has its advantages. It is direct and provide excellent access to tissue. Investigation techniques relevant to GIT have developed quite fast, but like many other developments their use is restricted to few centers of excellence. In contrast facility of endoscopy has emerged as readily accessible and useful way of GIT investigation.

Radioisotope imaging to demonstrate esophageal reflux using 99m Tc is another great achievement.

Technetium-Sulfur colloid is used to calculate rate of gastric emptying. Extent of inflammation in inflammatory bowel disease by using 99m Tc HMPAO Hexamethy & prophyleme is another hallmark of modern isotopic application in investigative medicine. Amine oxide labeled white cells also give relatively accurate idea of extent of inflammation in inflammatory disorders.

In the technique of endoscopy, newly emerging Video endoscopic technology is impressive development where expensive fragile fiber is being replaced by more durable laser channel and electronic circuit.<sup>10,11</sup> Angulation, water injection, suction & passage of biopsy forceps or brushes for obtaining tissue samples can be used with much more ease.

Virtual colonoscopy is an astonishing development in which computed tomographic image develops and reconstructs colonic image into 3 dimensional way which exactly simulate interior of colon and is much easier, convenient and safer.<sup>12</sup>

Wireless capsule endoscopy is a new technique in which a videotelemetry capsule which is 11x27mm is swallowed and images are recorded through inbuilt recording system simulating video camera.

## CONCLUSION

Trends shown in this study are in accordance with the other works. Male undergo endoscopy more often than females. Smokers are more likely to have endoscopy as compare to nonsmokers. Prevalence of hepatitis C antibodies and HBsAg are observed high as reported in the studies done in general population.<sup>13</sup> Patients who need endoscopy and have low hemoglobin levels are likely to have positive findings when procedure is undertaken.

Patients older than 35 year are more likely to need endoscopy when compared with younger subjects. Data included different nationals and is more and less comparable to the data for Australia, Europe and Indian subcontinent.<sup>3,6</sup>

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