

Local trends in Gastrointestinal diseases: Audit review of Endoscopy data at Sir Ganga Ram Hospital

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ABSTRACT

Objective: To review endoscopic data to assess local trends of gastrointestinal diseases and its complications, in order to improve our quality of service.

Design: Retrospective review of comparative data for two years i.e 2009/10.

Data sources: Data collected from record keeping registers as well from special booking performas.

Review methods :Data was formulated into tables according to patients demography, initial clinical & biochemical presentation , nature of procedure and outcome.

Results: Record of 420 procedures were reviewed from 2009/10. More than 80% were related to upper GI tract. Most of the procedures were diagnostic with 20% had therapeutic intervention in form of Variceal banding. Majority 60% presented with features of upper GI bleeding mostly due to oesophageal varices, keeping in line with high prevalence of Chronic Hepatitis C infection and cirrhosis.

Conclusion: This was a review of our Endoscopy service over the period of two years. It has suggested a high prevalence of liver diseases and our satisfactory ability to deal with its serious complications like Variceal Haemorrhage. We have also highlighted our deficiency areas and put forward suggestions to improve our efficiency.

Key words : GI(Gastrointestinal system), HPB(Hepatobiliary system), Oesophageal Varices- dilated veins, Gastritis-Inflammation of Stomach wall, Oesophagitis(Inflammation of oesophagus), Ulcerative Colitis(Inflammation of colonic wall)

INTRODUCTION

In this day & age Endoscopy has helped improve diagnosis and management of diseases especially in the field of Gastroenterology. (1)Improvement in endoscopic technology has helped in detecting serious diseases early and offering cure for these problems.(2) Endoscopy unit has become an essential part of major GI/HPB units which has helped in reducing morbidity & mortality. (3)

Endoscopy equipment in expert hands with careful selection of patients reduces the risk of complications and improves the quality of service. (4,5) An efficient service has become an important benchmark of quality of care provided by an institution. It provides much needed care for in as well as outpatients.

Our endoscopy unit has basic equipment which consists of a fiber-optic endoscopy system along with provision of few therapeutic procedures. There are an average of three procedure lists per week which are shared between consultants. It performs about 250 procedures per year with major bulk including upper GI procedures. Considering a unit of tertiary hospital, it still

remains deficient in many different ways ,especially not in par with other institutions.

Objectives

To review our endoscopy service at GRH with following objectives:

- To collect basic patient related demographic data
- To assess the trend of GI diseases at local level
- To review efficiency & quality of our service
- To identify basic needs and deficiency areas
- To suggest steps in order to improve quality of care

Patients & Methods

- This is a retrospective study in which we reviewed data collected from record of endoscopy procedures done over the period of two consecutive years i.e 2009/2010 and compiled into data sheets for analysis.

- We also designed a special endoscopy booking performa to collect more detailed necessary information including patient's demography, co-morbidity, essential blood tests,

haemodynamic status, urgency and indication for the procedure.

RESULTS

This study consists of comparative data for the two consecutive years-Table 1. Initial results suggested that a total of 177 procedures were performed in 2009 versus 243 procedures performed in 2010. It is worth mentioning that our endoscope remained out of order for three moths in 2009 and back up scope was not available. Majority of the procedures were related to upper Gastrointestinal tract in form of Gastrosopies , 80.7 % Vs 79.4%. Male Vs female ratio was variable, there were more females (56%) females in 2009 but more males(56.3%) in 2010.

In 2009 Majority of patients were below 40 yrs of age i.e 36.7% as compared to 2010 when majority were between 40-60 yrs of age i.e 48.5%. In 2009, major upper GI diagnosis were Gastritis 24.2%, Oesophageal Varices 10.1%, Oesophagitis 20.9% and normal in 6.2 %. From lower GI diagnosis, majority(41%) had a diagnosis of Ulcerative Colitis.

In 2010, major upper GI diagnosis showed that 22.2% of patients having Gastritis, 22.2 % were found to have oesophageal varices and 50% had oesophageal band ligation, 7.4% having oesophagitis and normal in 7.4% . Our lower GI series suggested that majority(41% Vs 38.5%) had a diagnosis of Colitis.

After compiling results (Table 2), based on data from specialized performa we found that majority of the patients were referred from Inpatient department i.e 63.4% and out of those 53.7 % were from medical department. Rest of the 46.3% of patients were from surgical, ENT and outdoor departments. Commonest indication 59.1% for performing Gastroscopy was Upper GI bleeding followed by abdominal pain 13.9% and dysphagia & weight loss 7%. From Lower GI point of view commonest indication was altered bowel habit 53.3% followed by PR bleeding in 46.6% of patients.

Initial biochemical profile of the patients suggested that a significant proportion i.e 18.5% of patients had Haemoglobin levels less than 9.0 g/dl. A large proportion of patients i.e 21.2 % had Platelets levels of less than 100, 000/mm with 19.4 % had disturbed coagulation profile. From co-morbidity point of view 37% of patients referred for endoscopy procedure were Anti HCV positive,

16% were labeled to have CLD and 13.8 % had Diabetes Mellitus

Table 1: Comparative data between two consecutive years

	2009	2010
Total Procedures	177	243
Gastroscopy	143 (80.7%)	193(79.4%)
Sigmoidoscopy	2	7
Colonoscopy	32	50
Male	78 (44%)	137(56.3%)
Female	99(56%)	106(43.6%)
Age		
<40	65(36.7%)	70(28.8%)
40-60	58(32.7%)	118(48.5%)
>60	43(24.2%)	55(22.6%)
Diagnosis		
Gastritis	43(24.2%)	54(22.2%)
Oesophageal Varices	10.1%	22.2%
I & II	11	38
III	7	38
Banding	-	19(50%)
Sclerotherapy	3	1
Gastric Varices	-	5(6.5%)
Duedenitis	14	8
Oesophagitis	37(20.9%)	18(7.4%)
Normal	11(6.2%)	18(7.4%)
Oesophageal tumour	3	1
Oesophageal Stricture	4	-
Hiatus Hernia	3	7
Duedenal ulcer	1	-
Duedenal tumour	1	-
Gastric ulcer	1	4
Pyloric obstruction	1	1
Lower GI		
Colitis	14(41.1%)	22(38.5%)
Normal	12(35.2%)	30(52.6%)
Colonic polyps	8	2
Rectal Tumour	1	1
Others	7	3

Table 2: Data collected after institution of special endoscopy booking performa from Sept 2010 till December 2010

Total Procedures	108
Gastroscopy	93
Sigmoidoscopy	7
Colonoscopy	8
Sex	
Male	51
Female	57
Age	
<40	30
40-60	54
>60	19
Indoor	59
Outdoor	49
Referred from	
Medicine	58
Surgery	11
Other specialty	39
Indications	
Haemetemesis & Melaena	55
Abd Pain	13
Dysphagia	6
Dyspepsia	5
Anaemia	4
Wt Loss	3
Vomiting	3
Others	4
Lower GI	
PR bleeding	7
Diarrhea	5
Constipation	3
Patient profile	
Haemodynamically unstable	5
Hb < 9.0 g/dl	20
Plt <150 g/dl	11
Plt < 100 g/dl	23
Prolonged coagulation profile	21
Co-morbidity	
CLD	18
DM	15
IHD	4
HTN	4
Viral serology	
Anti HCV pos	37

HBsAg	2
Diagnosis	
Gastritis	24
Oesophageal Varices	
Grade I & II	11
Grade III	24
Gastric Varices	5
Band Ligation	19
Gastric Ulcer	4
Oesophagitis	11
Hiatus Hernia	7
Duedenitis	2
Duedenal Ulcer	2
Oesophageal Polyp	1
Pharyngeal Pouch	1
Pharyngeal Tumour	1
Normal OGD	18
Lower GI	
Colitis	3
Colonic polyps	2
Rectal Tumour	1
Rectal Ulcer	1
Normal	6

DISCUSSION

It has been estimated that 1% of the population will eventually require an upper gastrointestinal endoscopy every year (6). Our endoscopy figures suggest far less number of procedures compared with the number of population we serve. If these demands are to be met, endoscopy units will need to be expanded considerably with improvement in service conditions for the doctors as well as for the patients. While the number of gastroscopies performed yearly grows rapidly, however, the increase in the diagnosis of serious abnormality has been marginal, and in some cases and for some pathologies has fallen. In order to maintain efficient use of resources the procedure must be used appropriately and any test justified(7) . Moreover, upper gastrointestinal endoscopy is associated with a small but definite mortality and morbidity, and inappropriate use means unnecessary risk to the patient. Our endoscopy figures have suggested that majority of patients have shown some form of pathology which justifies appropriate but under use of our service.

Trend of the GI disease, has suggested that majority of our patients were below the age of 60 considering our expected age limit. Due to this reason majority had benign problems rather than Neoplastic lesions. This may give a false reflection suggesting that Cancer may not be as prevalent as in western society. In fact majority of cancers are being under diagnosed due to intervention of alternative health care personnels like Hakeems & Quacks. In one study, peptic ulcer disease and malignancy accounts for 10% of endoscopic diagnosis in elderly > 85yrs of age. (8) A very small percentage of patients had dyspepsia as their major presenting complaint which suggests reluctance towards any invasive procedure unless patients had serious symptoms like haemetemesis or melaena. This may be due to an unknown fear that this procedure may do more harm than good. This can be addressed by putting in more robust measures of disinfecting instruments. This is in contrast to western society where majority had dyspepsia as the major indication.

Our outcome figures, in terms of diagnosis, have been consistent with other studies done in the past apart from high ratio of presence of Oesophageal Varices, which have been around 10% . As majority were positive for hepatitis C with a background of chronic liver disease who presented with probable variceal haemorrhage. Outcomes also suggested that a large proportion of patients had grade III oesophageal varices which were therapeutically treated. (9) This is very much consistent with the high prevalence of chronic hepatitis C infection in our society and reflects a huge burden of its related complications.(10)

Our figures have suggested that majority of our procedures were mainly diagnostic and about 20 % had therapeutic intervention done mainly variceal band ligation (11). In one large audit in also suggested that 92% of the procedures were diagnostic and only 8% had therapeutic intervention. (12)

Majority 59% of our patients had history of Haemetemesis, melaena or both and the most prevalent outcome suggested presence of Oesophageal varices. This result is in contrast with UK studies which suggested that peptic ulcer disease as commonest underlying pathology in up to 50 % of patients. (12)

Results also suggested a high predictive value of the degree of thrombocytopaenia in terms of severity of portal hypertension and presence of

large varices. Majority of the patients who were Anti HCV positive with platelets of less than 100,000/mm had 94 % chance of finding large varices. (13,14)

From lower GI point of view ulcerative colitis remains a major (upto 41 %) cause of morbidity in our society. Presence of malignant lesions, polyps or diverticular disease has been negligible i.e < 1%.

Recommendations

- Although our performance remains deficient in many areas but it has gradually shown promising improvement in terms of diagnostic yield and therapeutic procedures. Considering our basic facilities, our role remains very important in dealing with a large share of morbidity.
- Considering it is a busy tertiary care hospital our endoscopic workload still remains low which may reflect a reluctant attitude towards having an invasive procedure like Gastroscopy. This should be addressed with education of the patients and colleagues in order to promote use of endoscopy for diagnosis and therapeutics.
- Non-Availability of modern video endoscope remains at the heart of our deficiencies. This inhibits us from improving our diagnostic and therapeutic efficiency. It is also a hurdle in teaching & training of junior colleagues.
- A lack of therapeutic equipment inhibits us from performing simple but essential procedures.
- An up-to-date automatic disinfection equipment needs to be installed in order to reduce spread of serious infections like Hepatitis C. (15,16,17)
- An approach to safe sedation and monitoring of the patient to be implemented according to standard protocols. (18)
- Special protocols need to be in place in dealing with GI haemorrhage as urgently as possible.
- A computer based endoscopy reporting system should be in place which will help us to report our results in a better way. It will also help us in planning follow ups and collecting data for research.
- A 360 degree feedback system will help us to get suggestions from the patients as well.
- Our aim should be to develop Hepatobiliary services especially therapeutic ERCP in near future.

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