GASTROSCOPY IN THE EARLY DIAGNOSIS OF GASTRIC CANCER: EXPERIENCE WITH THE STORZ GASTROSCOPE IN 122 CASES

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INTRODUCTION

Gastric carcinoma is a disease which is well known for its insiduous onset. In Singapore it is one of the commonest carcinomas, being among the top 4 or 5 of all cancers seen in practice here. The incidence is especially prevalent among the Chinese population, and this parallels the great frequency of gastric cancer in the Japanese in Japan, where the incidence is approximately 4 times that found in the United States (Morrisey et al, 1967). In Japan it is also the most common and the most feared cancer among men.

Because of the apparent lack of symptomology in the early stages of gastric cancer, a large proportion of our cases present in a late stage of the disease, often with clinical evidence of metastatic spread. It is largely because of this that special methods have been devised to detect the malignancy as early as possible. At present the most useful combination of investigations has been found to consist of (I) radiology—mainly barium studies, (2) Endoscopy—either gastroscopy or gastrocamera study, and (3) exfoliative gastric cytology. When these procedures are employed together a very high percentage of gastric cancers are detected. In Japan the disease is so common that the public has accepted mass screening programmes, which usually employ the same combination of diagnostic procedures but with greatest emphasis on the use of the gastrocamera, and other special gastro-fiberscopes that are designed for biopsy and cytology. The Japanese results are very encouraging as they claim that as many as 50% of the cancers that were detected in some of their series were found to be early with involvement of only the mucosa and submucosa. These results would seemingly justify the use of screening programmes in the early detection of gastric cancer in places like Singapore where the incidence is extremely high. Endoscopy would play a major role in such a programme.

METHOD

Patients were fasted overnight and premedication consisting of inj. omnopon and atropine were given 1 hour before gastroscopy. The throat was sprayed with 2% amethocaine, and gastroscope introduced with the patient on the left lateral position.

Fig. 1. A large gastric Carcinoma protruding into lumen of stomach. Areas of haemorrhage can be seen on the surface of the Tumour. Photograph made through Storz Gastroscope.

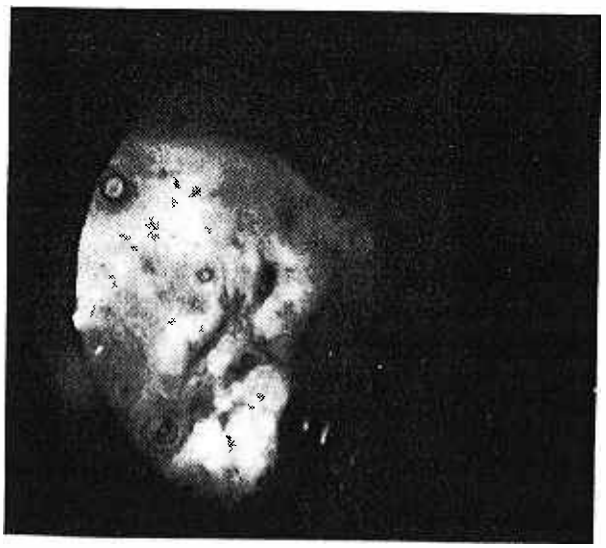

Fig. 2. Large fungating Carcinoma of stomach as seen through the Storz Gastroscope.

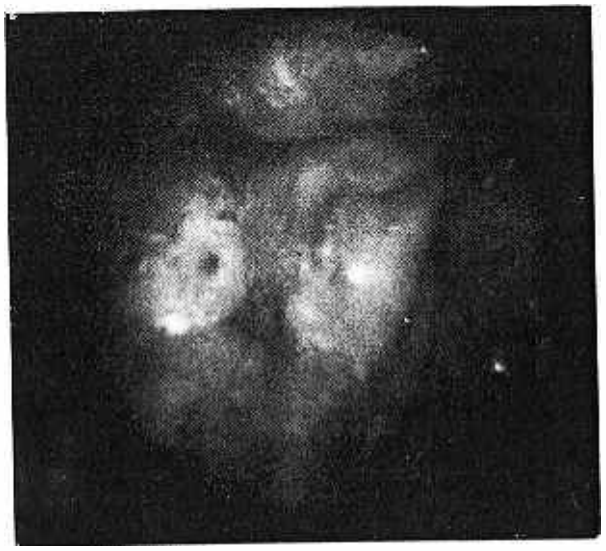

Fig. 3. Infiltrative Carcinoma of the stomach as seen through the Storz Gastroscope. Note the large infiltrated folds with areas of haemorrhage.

The Storz gastroscope is a new conventional gastroscope with cold light illumination (light being transmitted to the stomach via a fiber-Optic bundle). A channel is provided in the scope for introduction of a biopsy forceps. An electronic flash tube is provided to enable colour photography with an Exakta varex IIB coupled to the eyepiece and using high speed colour film (Ektachrome, ASA 160).

RESULTS

Up to January 1968. 122 cases have been gastroscoped. Table 1 shows the 3 main indications for gastroscopy. Table 2 shows the main gastroscopic findings in the 3 groups. Table 3 indicates whether there was confirmation of malignancy in the 15 cases that had gastric cancer on gastroscopy.

TABLE I

INDICATION FOR GASTROSCOPY:

Upper Gastrointestinal Bleeding	63 cases
Suspicion of Gastric Cancer	34 cases
Peptic Ulceration - -	25 cases
TOTAL	122 cases

TABLE II

GASTROSCOPIC FINDINGS IN THE 3 GROUPS OF PATIENTS

	U-Git-Bleed	?Carci-noma	Peptic Ulcer
Number of cases	63	34	25
Gastric Carcinoma	4	11	0
?Gastric Cancer	2	1	1
Malig. Gastric Ulcer	0	1	0
Gastric Ulcer	22	4	12
Acute Gastritis & Acute Erosions	23	2	8

N.B.: Numerals indicate number of cases

TABLE III

CONFIRMATION OF GASTRIC MALIGNANCY

Number of Cases who had Gastric Cancer on Gastroscopy -	15
Carcinoma Stomach found at Operation (with Histology) -	7 cases
Skin Metastasis from Gastric Carcinoma present - -	1 case
Clinical Metastases present (considered inoperable) - -	3 cases
Confirmation by BMX. but refused operation - - - - -	2 cases
BMX. not done and refused operation - - - - -	2 cases
TOTAL	15 cases

DISCUSSION

From the results it can be seen that 15 cases had gastric cancer detected on gastroscopy, out of 122 cases gastroscoped, giving an overall incidence of 12·3% for gastric cancer among patients coming for gastroscopy in the Dept. of Clinical Medicine. The most striking thing however is that 11 of these 15 cases were in the group where gastroscopy was done to exclude gastric malignancy. 11 out of 34 cases or about 1/3 of the cases in this group had gastric malignancy on gastroscopy. There was also a case with a malignant gastric ulcer detected by gastroscopy in this group. Gastroscopy is thus very useful in the detection of

gastric cancer in patients who have a clinical suspicion of gastric malignancy, and it should be done in every case suspected to have gastric carcinoma, but preferably after a barium meal.

Of 63 cases gastroscoped for upper gastrointestional bleeding, only 4 cases had gastric carcinoma on gastroscopy, giving an incidence of about 6%. Gastric carcinoma is thus not a common cause of haematemesis and maelena. The gastroscopic finding of malignancy in this group is nevertheless extremely important. especially in deciding the line of management.

It is noteworthy that of 25 cases gastroscoped for peptic ulceration, gastric carcinoma was not found in any.

From table 3 it can be seen that most of the 15 cases who had gastric cancer on gastroscopy, had their cancers confirmed—in 7 by surgery, in 1 by biopsy, in 3 by presence of metastases, and in 2 by barium studies. In 2 cases it was unfortunate that they had no barium studies nor surgery, but the cancers were so advanced that it was easily diagnosed on gastroscopy.

SUMMARY

Gastric carcinoma was detected in 15 out of 122 cases gastroscoped with the Storz gastroscope. 11 of these 15 cases were gastroscoped for a clinical suspicion of gastric malignancy, the remaining 4 being gastroscoped for upper gastrointestinal bleeding. A high incidence of gastric cancer was found in the group of 34 patients gastroscoped for gastric malignancy (11 out of 34 *i.e.* almost one third). Gastroscopy is thus very useful in detection of gastric malignancy in this group, especially when combined with barium studies and if available cytology. Gastric cancer was found in only 4 cases out of the group of 63 patients gastroscoped for upper gastrointestinal bleeding giving a low incidence of about 6% in this group.

In conclusion, it has been shown that gastroscopy is a useful procedure in the detection of gastric carcinoma.

REFERENCES

1. Morrissey, J.F. et al, 1967: "Gastroenterology", 53, 456.

(N.B. Figs. 1, 2 & 3 are black and white prints made from colour slides. Details of the gastric lesions are thus not as well seen as in the original colour prints.)