

Figure 1 Endoscopy of the oesophagus at 35 cm showing the tablet bolus.

Following the diagnosis of an adenocarcinoma of the oesophagus he declined surgery as well as chemo- and radiotherapy.

Three months later he was referred because of increasing dysphagia. He ate a normal breakfast, including toast, but found that his swallowing was poor for the rest of the day. By the following morning his symptoms had improved again.

On the morning of his clinic visit he had eaten his usual breakfast and then underwent an upper gastrointestinal endoscopy at midday. Endoscopy (fig 1) revealed a bolus in the oesophagus above the tumour. The bolus was removed with a dornier basket and a standard (11 mm) endoscope passed through the 3 cm long tumour. The patient saw the bolus and immediately identified it as the alfuzosin slow release tablet he was taking after breakfast.

Xatral XL tablets measure 8×6 mm and swell up to twice their original size in vivo. They slowly dissolve over 24 hours. For pharmacokinetic reasons patients are advised to take the medication after meals. Our patient was changed to a different medication for his benign prostate hyperplasia and did not experience this unusual pattern of dysphagia again.

Large tablets and capsules can cause dysphagia in patients suffering from conditions such as oesophageal tumours or achalasia. Slow release tablets may increase in size in vivo and often do not dissolve for hours. Therefore, when prescribing medications for

these patients, attention should be paid to choose the appropriate formulation of the drug.

C P Selinger, D G Clements

Department of Gastroenterology, Airedale General Hospital, Keighley, UK

Correspondence to: Dr C Selinger, Department of Gastroenterology, Airedale General Hospital, Skipton Rd, Keighley, BD20 6TD, UK; Christian.selinger@web.de

doi: 10.1136/gut.2005.086306

Conflict of interest: None declared.

Risk of subsequent development of gastric cancer in patients with previous gastric epithelial neoplasia

The development of gastric epithelial neoplasia is closely linked to precursor conditions in the background mucosa.¹⁻³ Recently, endoscopic mucosal resection (EMR) has become widely used for the treatment of gastric neoplasia,⁴ resulting in almost complete conservation of the patient's stomach. To determine the risk of a second cancer in the stomach that once gave rise to epithelial neoplasia, we conducted a long term retrospective cohort study of 255 patients with primary gastric epithelial neoplasia who underwent curative resection by EMR between 1983 and 2002 at our hospital.

Characteristics of the subjects at the initial treatment are shown in table 1. Synchronous multiple neoplasias were confirmed in 19 (7.5%) of the 255 subjects; 56 patients had adenomas and 199 had cancer. In the eight patients with both gastric cancer and adenoma, cancer was taken as the representative histology. In this study, we defined lesions classified as category 3 in the Vienna classification⁵ as "adenoma" and categories 4 and 5 as "cancer".

A second gastric cancer developed in 43 of the 255 patients. The crude incidence rate of the second gastric cancer was 3.9 per 100 person years. Kaplan-Meier estimates showed that the three year and six year cumulative incidence rates of newly developed gastric cancers were 10% and 20%, respectively. The cumulative incidence of subsequent cancer increased steadily throughout the observation.

To compare the risk of new development of gastric cancer in our patients with that of general population in Japan,¹⁰ the standardised incidence ratio (SIR) was calculated. SIR for newly developed cancer in our patients was 10.4 (95% confidence interval 7.0-14.9). SIRs stratified according to sex, age, and synchronous multiplicity at the initial treatment are also shown in fig 1A.

Furthermore, we analysed the factors predicting subsequent gastric cancer development. Ten of the 56 adenoma and 33 of the 199 cancer patients had newly developed gastric cancer. The crude incidence rates of the second cancer were exactly the same (3.9 per 100 person years) in both groups, and the cumulative incidences did not differ between the two groups using the Kaplan-Meier method ($p=0.97$; fig 1B). Patients with synchronous multiple lesions were at a significantly higher risk than those with a solitary lesion ($p<0.01$; fig 1C). Multivariate analysis confirmed the above findings (table 1).

All of our patients were positive for *Helicobacter pylori* but did not receive eradication therapy because many underwent EMR before the mid 1990s. Thus a very high rate of *H pylori* infection appears to be at least partly responsible for the high incidence of the second cancer in our patients.⁶ However, the incidence in our patients was much higher than *H pylori* positive Japanese⁷ and Chinese⁸ patients without a history of gastric neoplasia. Thus factors other than *H pylori* infection were also involved in the development of the second gastric cancer in our patients with previous gastric neoplasia.

An important finding of our study was that patients with gastric adenoma had the same risk for the development of a subsequent gastric cancer as those with gastric cancer. In addition, we found that a considerable number of our patients with gastric adenoma (12.5%) had concurrent gastric cancer. Thus although gastric adenoma may rarely progress to cancer,⁹ it is likely that gastric cancers and adenomas develop in the same background of the gastric mucosa, probably with similar genetic alterations or environmental conditions.

Taken together, our results indicate that patients with a previous history of either gastric adenoma or cancer are at a higher risk of subsequent development of gastric cancer. Once neoplasia develops, the gastric mucosa

Table 1 Characteristics of the 255 patients at the initial endoscopic treatment and multivariate analysis* as predictors for subsequent gastric cancer

Characteristic		Hazard ratio	95% CI	p Value§
No of patients	255			
Male sex	183 (71.8%)	1.11	0.52-2.39	0.79
Age (years) (mean (SD))	67.9 (9.2)	1.54†	1.07-2.21	0.02
Histology				
Adenoma	56	0.98	0.48-2.00	0.95
Carcinoma†	199			
Synchronous multiplicity				
Solitary	236 (92.5%)			
Multiple	19 (7.5%)	4.10	1.92-8.79	<0.01
Adenomas	2			
Adenoma and carcinoma	8			
Carcinomas	9			
Surveillance period (months) (mean (SD))	51.6 (34.9)			

*The Cox proportional hazard model was used.

†Carcinoma was taken as the representative histology of the case when the patient had multiple neoplasias of both carcinoma and adenoma.

‡Increment of 10 years.

§p values were calculated using the Wald test.

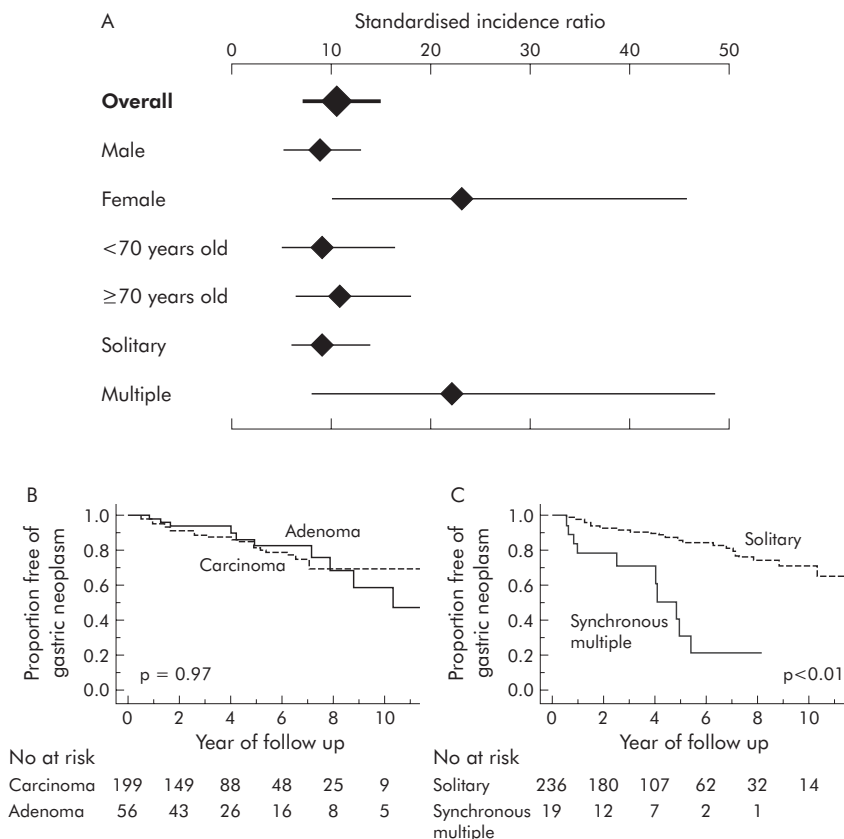


Figure 1 (A) Standardised incidence ratio (SIR) of newly developed gastric cancers according to sex, age, and multiplicity at the initial treatment. SIRs were calculated based on age, sex, and calendar year specific incidence rates of gastric cancer in the general population of Japan.¹⁰ Values are SIRs (95% confidence intervals) calculated based on Poisson distribution. This analysis was restricted to 231 patients who received endoscopic mucosal resection (EMR) and whose subsequent gastric cancer developed before 1999 because data for the estimated incidence rate of gastric cancer in Japan was available only between 1975 and 1999.¹⁰ (B, C) Cumulative incidence of subsequent gastric cancer after EMR. The Kaplan-Meier method was used to calculate the cumulative incidence. The cumulative incidence in patients with gastric adenoma did not differ significantly from the incidence in those with gastric cancer as the initial lesion (p=0.97) (B). The cumulative incidence of subsequent gastric cancer was significantly higher in patients with synchronous multiple lesions than in those with a single lesion as the initial neoplasia (p<0.01) (C). The log rank test was used to calculate p values.

should be considered to have an exceedingly high potential to develop cancers.

Acknowledgement

We thank Professor T Fujimori of the Department of Surgical and Molecular Pathology, Dokkyo University School of Medicine, Tochigi, Japan, for useful advice on histopathology.

T Aoi

Department of Gastroenterology and Hepatology, Graduate School of Medicine, Kyoto University, Kyoto, Japan, and Department of Internal Medicine, St Luke's International Hospital, Tokyo, Japan

H Marusawa

Department of Gastroenterology and Hepatology, Graduate School of Medicine, Kyoto University, Kyoto, Japan

T Sato

Department of Biostatistics, Graduate School of Medicine, Kyoto University, Kyoto, Japan

T Chiba

Department of Gastroenterology and Hepatology, Graduate School of Medicine, Kyoto University, Kyoto, Japan

M Maruyama

Department of Internal Medicine, St Luke's International Hospital, Tokyo, Japan

Correspondence to: Dr T Chiba, Department of Gastroenterology and Hepatology, Graduate School of Medicine, Kyoto University, 54 Kawahara-cho, Shogoin, Sakyo-ku, Kyoto 606-8507, Japan; chiba@kuhp.kyoto-u.ac.jp

doi: 10.1136/gut.2005.086884

Conflict of interest: None declared.

References

- 1 Fuchs CS, Mayer RJ. Gastric carcinoma. *N Engl J Med* 1995;333:32-41.
- 2 Correa P. Human gastric carcinogenesis: a multistep and multifactorial process—First American Cancer Society Award Lecture on Cancer Epidemiology and Prevention. *Cancer Res* 1992;52:6735-40.
- 3 Uemura N, Okamoto S, Yamamoto S, et al. Helicobacter pylori infection and the development of gastric cancer. *N Engl J Med* 2001;345:784-9.
- 4 Ono H, Kondo H, Gotoda T, et al. Endoscopic mucosal resection for treatment of early gastric cancer. *Gut* 2001;48:225-9.

- 5 Schlemper RJ, Riddell RH, Kato Y, et al. The Vienna classification of gastrointestinal epithelial neoplasia. *Gut* 2000;47:251-5.
- 6 Huang JQ, Sridhar S, Chen Y, et al. Meta-analysis of the relationship between Helicobacter pylori seropositivity and gastric cancer. *Gastroenterology* 1998;114:1169-79.
- 7 Ohata H, Kitachi S, Yoshimura N, et al. Progression of chronic atrophic gastritis associated with Helicobacter pylori infection increases risk of gastric cancer. *Int J Cancer* 2004;109:138-43.
- 8 Wong BC, Lam SK, Wong WM, et al. Helicobacter pylori eradication to prevent gastric cancer in a high-risk region of China: a randomized controlled trial. *JAMA* 2004;291:187-94.
- 9 Yamada H, Ikegami M, Shimoda T, et al. Long-term follow-up study of gastric adenoma/dysplasia. *Endoscopy* 2004;36:390-6.
- 10 Ajiki W, Tsukuma H, Oshima A. Cancer incidence and incidence rates in Japan in 1999: estimates based on data from 11 population-based cancer registries. *Jpn J Clin Oncol* 2004;34:352-6.

Tumour necrosis factor α downregulation and therapeutic response to infliximab in a case of segmental colitis associated with diverticula

Inflammatory bowel disease (IBD) confined to the diverticular tract—defined as segmental colitis associated with diverticula (SCAD)—occurs in 3.8% of diverticular patients.¹ Recently, infliximab was reported to have a dramatic impact on severe Crohn's disease and ulcerative colitis therapy.^{2,3} However, tumour necrosis factor α (TNF- α) involvement and the efficacy of anti-TNF- α in SCAD are unknown.

A 60 year old male smoker and non-NSAID user was admitted for severe bloody diarrhoea. At colonoscopy, the sigmoid and descending mucosa showed granularity, friability, and erosions confined to the diverticular tract, without alterations of the remaining ileocolonic mucosa. Histology of the inflamed tract revealed an ulcerative colitis-like picture. Therefore, a diagnosis of SCAD was made. After mesalazine and antibiotic failure, intravenous steroid therapy was successfully administered. After two years of steroid dependence, repeat endoscopy showed, in addition to the active SCAD, ulcerative colitis-like involvement of the proximal non-diverticular colon. Histology confirmed active SCAD, also showing severely active ulcerative colitis in the proximal colon, sparing the rectum and terminal ileum. A high dose steroid infusion achieved complete clinical remission, and azathioprine was started. After a further six months of steroid dependence, infliximab (5 mg/kg) was administered at 0, 2, and 6 weeks, and a steroid free complete clinical remission was achieved within one month. Maintenance treatment with infliximab every eight weeks has been successfully continued for up to 16 months of follow up. Ileocolonoscopy performed after one year from the beginning of infliximab revealed complete remission of SCAD, while a mild active colitis persisted in the proximal colon. Histology showed complete regression of SCAD but only a slight improvement in the proximal colon. TNF- α label index (percentage of positive stained stromal cells to the total number of lamina propria mononuclear cells⁴) appeared to be markedly reduced in SCAD (40% v15%) while