Multiple Adenocarcinomas of the Colon and Rectum*

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MULTIPLE PRIMARY CARCINOMAS of the colon and rectum are not rare. The incidences in various large series range from 2.0 to 5.3 per cent,1–3, 6, 10, 11, 13 depending on the criteria for inclusion. They may occur as multiple simultaneous neoplasms (synchronous carcinomas) or multiple non-simultaneous neoplasms (metachronous carcinomas). Survival rates are low in some series5 and high in others,1, 6, 14 This paper reviews the experience with this problem at a large charity hospital.

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Clinical Material

All cases were obtained from the Charity Hospital Tumor Registry. During the years 1948 through 1966, 2,230 patients were admitted to Charity Hospital with carcinoma of the colon or rectum, including the appendix. Two hundred seventy-five (12 per cent) of these each had two primary carcinomas. There were 92 patients with second primary carcinomas in the colon or rectum (4.1 per cent). This group included patients who had familial polyposis with two primary neoplasms, patients with one carcinoma and one carcinoid, and many patients with early noninvasive carcinoma. All these patients were excluded, leaving 47 patients (2.1 per cent) with multiple discrete invasive adenocarcinomas of the colon or rectum.

To meet the criteria for multiple primary carcinomas, each of the neoplasms had to: 1) be separated from the other neoplasm by a zone of normal tissue; 2) show definite submucosal invasion; 3) show invasion of the stalk, if polypoid; 4)
Thirty-one of the patients with synchronous carcinomas had two carcinomas each, two had three carcinomas each, and one had four carcinomas simultaneously. Table 2 lists the distribution of these lesions in the colon and rectum. On gross inspection, 28 of the tumors were ulcerating, 21 were of the napkin-ring type, 12 were fungating, and 11 were polypoid. Five of these 34 patients had carcinomas in the same segment of the bowel; 17, in adjoining segments; 12, in remote segments. Forty per cent of these patients had one to three associated polyps. At operation 66 per cent of the patients had metastases to the regional lymph nodes and 44 per cent, metastases to distant organs.

Table 3 shows the location of each lesion in the 13 patients who had two carcinomas occurring at different times, and the age of the patient when he developed it. On gross inspection, seven lesions were ulcerating, two were polypoid, and four were fungating. The incidence of associated polyps at the time of appearance of the first neoplasm was 43 per cent, and that at the time of appearance of the second neoplasm, 33 per cent. At the initial operation, no patient had either nodal or distant metastases. At the second operation, 38 per cent had nodal metastases and 23 per cent, distant metastases.

**Diagnosis**

The means of diagnosing two or more concurrent carcinomas are listed in Table 4.

Nine patients were found to have two lesions before resection. In seven, one lesion was found by proctoscopy, and one by barium-enema studies; in two, both lesions were found by barium-enema studies. In 19 patients, one lesion was found preoperatively and a second lesion at operation. Barium-enema studies revealed only one lesion each in 17 of these patients. No