lem of planning housing for optimal social conditions. More research is needed to determine the fundamental social needs and patterns of human beings.

MARGUERITE KELLER

• • •

MORTALITY AND SURVIVAL IN CANCER OF THE STOMACH[1]

CONSIDERABLY more than 100,000 patients visit the Mayo Clinic annually. Of these patients, approximately 10 per cent are found to have a malignant neoplasm and one in twenty of these neoplasms is gastric.

This report from the Mayo Clinic examines the experience of forty-three years, from 1907 through 1949, during which time 9,620 patients were operated on for cancer of the stomach. In this analysis the authors are concerned mainly with patients who had surgical treatment and only summary statistics are presented. The more detailed analyses are to be published in later reports.

For the results to be representative of the groups under investigation, it was necessary to try to follow every patient until circumstances arose which made this impossible. The follow-up of the 9,620 patients surgically treated was exceptionally good. Approximately 99 per cent were traced regardless of the period of time that had elapsed since the patient underwent surgery.

Survival studies such as this one, which contain comprehensive and systematic follow-up of patients with chronic disease, are of utmost importance in revealing the degree of effectiveness of the present methods of treatment and prevention, and disclose the areas in which more research must be done.

The authors discuss sex distribution and age in relation to cancer of the stomach. The most striking fact is that the biologic inferiority of the male clearly reveals itself in this disease

[1] Berkson, Joseph; Walters, Waltman; Gray, Howard K.; and Priestley, James T.: A Statistical Summary of the Experience of the Mayo Clinic. *Proceedings of the Staff Meetings of the Mayo Clinic,* April 9, 1952, 27, No. 8, pp. 137–151.

in the numerical excess of males over females. Males with gastric cancer outnumber females in the ratio of 3.4 to 1. Of the males, 35 per cent were found in the 50–59 year age group; 31 per cent were 60–69 years of age; and 18 per cent were in the decade 40–49 years. Among the females there was less concentration of cases in any one age group; 32 per cent of the female patients were 50–59 years of age; 28 per cent were 60–69 years; and 22 per cent fell in the decade 40–49 years.

Hospital mortality rates following gastric resection again reveal the vital inferiority of the male. With the exception of the age group 70–79 years, females consistently had a smaller rate of hospital mortality than males.

The authors also bring out that of the 9,620 operations performed during the period 1907–1949, 47.8 per cent were gastric resections, 13.8 per cent were palliative operations, and 38.4 per cent were exploratory laparotomies, with hospital mortality rates of 13.3, 12.3, and 3.8 per cent, respectively.

Survival rates following operation are presented for the three main operative groups. The authors estimate that of all patients who underwent a resection, 31.6 per cent will be living five years after operation, 23.2 per cent ten years, and 12.2 per cent twenty years after operation. Almost all of the patients who underwent either palliative operations or exploratory laparotomies died within the following five years.

Improvement in outlook for the patient with gastric cancer is discussed. The fate of patients with gastric cancer is compared for two periods, 1907–1916 and 1940–1949. In the early period, out of one hundred patients who had a diagnosis of cancer of the stomach, only five could be expected to be living five years later. In the later decade, 1940–1949, the expected number of patients who would be alive five years after the cancer was diagnosed had increased to fourteen. This is an increase of only nine persons per 100, but nevertheless an improvement of 180 per cent. In 1907–1916, only 60 per cent of the patients could be subjected to a laparotomy. Today that figure has risen to 80 per cent. Formerly, only 19 per cent of the patients with gastric cancer survived resection. Today 40 per cent survive the same operation.

Rather than leave the reader with a false impression as to

the efficiency of surgical therapy, the authors present an analysis of how 86 of every 100 patients are lost due to gastric cancer. Out of 86 patients examined and diagnosed, 20 were judged inoperable on physical examination. In 36, the lesion was found not resectable at laparotomy. Four were hospital deaths and 26 died within five years following operation. Thus, 56 of 86 patients were lost because the disease had advanced too far for surgical intervention to be of any assistance. If these 56 patients came to the surgeon when the cancer was in a resectable state ". . . . then without any improvement in the surgical results over what we have at present . . . . ," the number of survivors would be more than doubled.

Such is the evidence that reveals the importance of early diagnosis and treatment in cancer of the stomach.

KATHERINE SIMON

• • •

DIFFERENTIAL USE OF HEALTH RESOURCES BY RURAL PEOPLE[1]

"DIFFERENTIAL Use of Health Resources by Rural People" is the title of the second report on a study of the utilization of health resources by a sample of rural families in selected counties in New York State. The study was conducted by the Department of Rural Sociology, Cornell University, in cooperation with the Bureau of Agricultural Economics, U. S. Department of Agriculture.

This second report includes data on the volume of medical calls over a period of a year. The total number of medical calls by a physician per 1,000 population was 3,500 in Chautauqua County, 3,600 in Cortland, and 4,600 in Oswego and Livingston Counties. The number of home calls was 300 in Chautauqua, 400 in Cortland, 600 in Livingston, and 800 per 1,000 population in Oswego.

On the assumption that people seek medical care voluntarily when they judge it to be necessary and that their judgment is

[1] Larson, Olaf F. and Hay, Donald G.: Differential Use of Health Resources by Rural People. *New York State Journal of Medicine,* January 1, 1952, *52:* No. 1, pp. 43–49.