PRIMARY MALIGNANT TUMOURS OF THE COLON

ESSAY

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BY

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The responsibility of any errors that remain is, of course, entirely mine.

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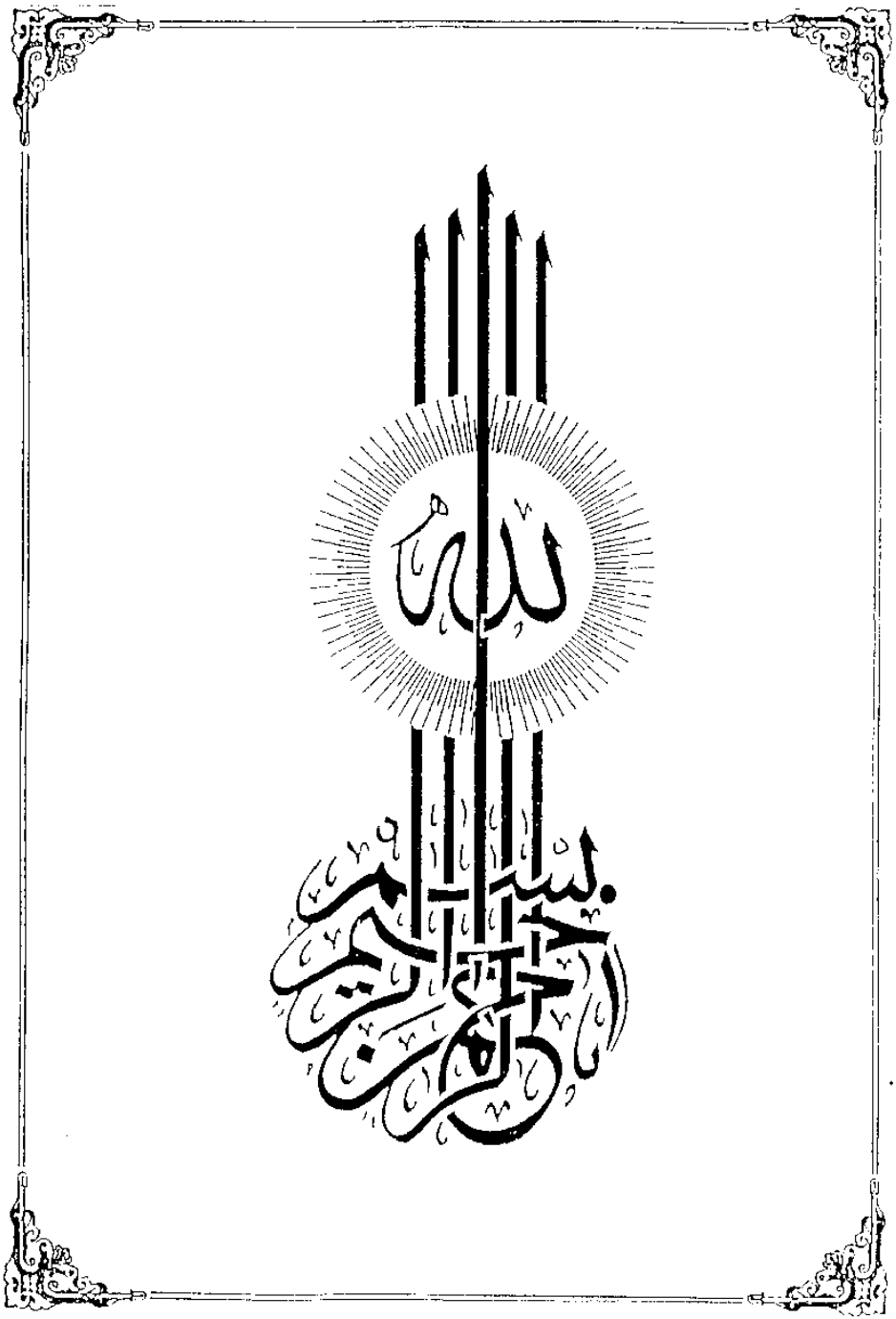

C O N T E N T S

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INTRODUCTION

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Cancer colon is a common malignancy. It represents a tremendous hazard in most affluent countries. The frequency with which cancer of the colon occurs makes some knowledge of its course and therapy mandatory for all physicians.

The aim of this essay is to represent sufficient accounts on modern methods of investigations and treatment of cancer colon, also intended to provide an indepth coverage of current tends of pathology.

Cancer colon is not a horrible lesion beyond control. Actually, it is curable, but only on terms. These include early detection and proper management. To do so, we have to know at first how to diagnose it, what is the pathology and on what bases our attacks should be planned upon.

Surgery is the favourite line in the management of cancer colon and this is due to the good prognosis gained by this line. However, other lines especially chemotherapy are not denied.

EPIDEMIOLOGICAL PATTERNS OF CANCER COLON

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Carcinoma of the large intestine is one of the four or five really common cancers, being in fact only less frequent than malignant tumours of the bronchus and lung (Goligher, 1984). Moreover, there has been very little change in incidence and mortality from carcinoma of the colon during the past 40 years (Sugarbaker et al., 1985).

In the United States, today the incidence and mortality rates for colorectal cancer are second only to those for lung cancer. In 1985 an estimated 138.000 new cases were diagnosed; 70 percent in the colon and 30 percent in the rectum, and an estimated 59.900 deaths occured. Colorectal cancer constitutes about 15 percent of all newly diagnosed cancers, if non-melanoma skin cancers and various carcinoma in situ are excluded. Further more colorectal cancer constitutes about 13 percent of all cancer deaths (Zeigler et al., 1986).

In the United Kingdom, in 1980 there were 10.314 deaths from colonic carcinoma which accounted for 8 percent of all deaths from malignant diseases (Hawley, 1985).

Distribution of carcinomas in the colon:

In cancer colon; the sigmoid accounts for nearly half of the growths of the colon proper (about 45 percent), and carcinoma of the caecum and ascending colon for roughly a quarter (about 24 percent). Thereafter the order of frequency for sites of carcinoma of the colon would appear to be transverse colon (about 12 percent) then splenic flexure (about 8 percent) descending colon (about 6 percent) and hepatic flexure (about 5 percent) (Goligher, 1984).

One interesting finding to emerge from repeated studies over a 40 years period has been the "proximal shift" of colorectal cancer. Cancer of the right side of the colon is becoming more common while that of the left side - and particularly the rectum- becomesless frequent (Slater et al., 1984).

In a study done by Frederick Greene in the University of South Carolina, classification of each adenocarcinoma according to location showed a 12 percent increase in number of right sided lesions and 44 percent decrease in rectosigmoid lesions when compared with other previous series (Greene, 1983). What is interesting in Greene's study is that evaluation of benign adenomatous polyps showed

DISTRIBUTION OF CARCINOMAS IN THE COLON ACCORDING TO VARIOUS AUTHORS

Site of growth	No. of growths in each site					
	Körte (1900)	Judd (1924)	Fraser (1938)	Smiddy and Goligher (1957)	McDermott et al. (1981)	Collective series
Caecum	47	159	171	101	148	759 (24%)
Ascending colon	22		63	48		
Hepatic flexure	19	29	54	29	37	168
Transverse colon	44	75	126	77	95	417
Splenic flexure	31	24	90	50	30	225
Descending colon	10	46	27	45	80	208
Sigmoid colon	124	292	369	350	313	1448 (45%)
All sites	**297**	**625**	**900**	**700**	**703**	**3225**

After (Goligher, 1984).

a similar increase of proximal colonic lesions and a decrease of rectosigmoid adenomas which further supports the intimate relationship between benign and malignant tumours of the colon (Greene, 1983).

This change in distribution is important in epedimiological terms and also for practical management, that is why although sigmoidoscopy remains important, the need for other procedures that evaluate the more proximal areas of the colon, such as colonoscopy and double-contrast barium enema, should be seriously considered (Slater et al., 1984).

The causes of a changing distribution of colon neoplasms are not easily discernible. It is possible that some new enviromental agents that are particularly important in the formation of tumours of the right colon have arisen (Slater et al., 1984).

Age incidence:

Cancer of the colon, like carcinoma else where, is predominantly a disease of older patients though it may occur at almost any age. More than half of the cases of cancer colon affect those over the age of 60 years. In the United States, between 0.6 percent and 3.7 percent of colorectal cancers

occur in persons younger than 30 years of age and are generally presented with advanced stages of the disease with poorly differentiated tumour (Rao et al., 1985).

However, the prognosis in younger patients does not differ than in elderly. The poorly differentiated nature of the tumour being balanced by the greater ability of the young to with stand an emergency operation (Umpleby and Williamson, 1984).

Sex incidence:

The recent international survey revealed that males generally have a higher incidence than females, with the male-to-female ratio in nearly all the registries ranging from 1.1 to 1.4. The ratio were highest for the Japanese (1.8) and Chinese (1.6) in Hawaii, and lowest for the Hispanics in New Mexico (0.9) and for Cuba (0.9) (Zeigler et al., 1986).

Familal incidence:

Carcinoma of the colon may be present in two or more members of the same family, the age of onset in such families is significantly earlier than in the general population.

Macrae et al. (1981) have recently described an association of hereditary brachydactyly with a familial predisposition to colorectal cancer. The brachydactyly consisting of hypoplasia of the middle phalanges of the second, third and fifth fingers of both hands.

Race incidence:

Carcinoma of the colon is extremely rare and almost non-existant in the indigenous black population of most parts of Africa. However, it has an incidence in the white population in these countries roughly the same as that found in the peoples of western European countries. When the African native becomes westernized and abandons his customary diet and way of life, the frequency of cancer of the colorectum progressively increases. Similarly, in American negroes there is a gradual rise in the incidence of bowel cancer accompanying their adoption of the feeding habits of the white population (de Dombal, 1983).

Rate of growth:

Primary carcinoma of the colon is a slowly growing tumour with a doubling time of about 620

days. This means that large bowel tumours have very long periods of silent growth before they become large enough to produce symptoms. Even the fastest growing cancer would require 6-8 years to grow from glandular size to a diameter of 60 mm (Sugarbaker et al., 1985).

However, the growth rate of pulmonary and hepatic metastases is much more rapid than the growth of the primary tumour within the bowel wall, this may be as much as five or six times faster (Bolin et al., 1983).

AETIOLOGY OF CANCER COLON