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THE PREVALENCE OF CANCER IN THE PHILIPPINE ISLANDS.*

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MANILA, P. I.

From a perusal of the literature on cancer, one is led to believe that carcinoma is either very rare, or does not exist at all in tropical and subtropical countries. To show that this is not the case, in the Philippine Islands at least, is the purpose of this paper.

As a reason for the non-existence of the disease in tropical countries, is given the fact that the people subsist practically on a vegetable diet. They live almost entirely on rice and starchy tubers, varied, when possible, with, perhaps, a little fish, shellfish, or other sea food. The Filipino is not a vegetarian by choice, but is forced to be so of necessity. His consumption of meat is only limited by his ability to buy it. The vast majority practically never taste meat. The middle class eat a limited amount of native pork, while the wealthy class, principally confined to the larger cities, consume as much meat as most other people.

A great improvement in the general well-being of the poor native when changed from his accustomed diet to the more substantial one issued by the United States Army, with a reasonable meat component, was noted by not a few in the government service during the early days of military occupation.

Rayburn says "Cancer is not known in Borneo," yet it exists in the southern portion of the Philippine Islands, cases having been reported as far south as Palawan. In 1902, there were eleven cases reported from Bohol. The southernmost island of the Philippine Archipelago is Sibutu, the northern end of which lies some twenty miles from British North Borneo, and the latter can be distinctly seen from the island of Sibutu on a clear day.

While it is true that the present meager data on the subject would indicate that the percentage of the prevalence of the disease gradually diminishes as one proceeds south from Manila, yet this can be accounted for by the lack of authentic information from these parts and that the country is not so densely populated.

The following statistics are taken by kind permission from Dr. McDill's clinic, St. Paul's Hospital and Free Dispensary, Manila:

Since the establishment of this hospital, April 8, 1905, to Feb. 8, 1908, covering a period of two years and eight months, there have been admitted to the wards 4,284 patients. Of this number 48 were suffering from carcinoma, as follows: Tongue, 1; face, 1; breast, 7; cheek, 8; cervix uteri, 9; eye, 4;

inferior maxillary, 2; buccal cavity, 5; larynx, 1; pancreas, 1; penis, 1; rectum, 2; stomach, 4; leg, 1; and lip, 1.

There were 17 admissions for sarcoma during the same period, as follows: Pancreas, 1; ear, 1; mastoid, 1; parotid gland, 2; metatarsal bone, foot, 1; neck, 4; femur, 1; tibia, 1; cranium, 1; orbit, 1; and testicle, 3.

There were refused admission, as being too far advanced for any treatment, 35 cases; 7 of these suffered from carcinoma of the cervix uteri, 8 from carcinoma of the breast, 12 from carcinoma of the tongue, 7 from sarcoma of the neck, and 1 from sarcoma of the femur. Of the 4,284 patients seen 25 suffered from sarcoma and 75 from carcinoma, or, in all, 100 cases of malignant disease, being respectively 0.0058 and 0.0175 per cent., or 0.0233 per cent. of malignant disease.

There were treated in the Free Dispensary during the same period 5,068 cases, and but 11 cases of carcinoma and no sarcoma were recorded. These 11 cases are not included in the foregoing, as the records are not sufficiently reliable to be considered.

It is believed that only from the percentage of those examined for admission can one get an idea of the frequency of the disease, as these figures are absolutely accurate.

Of the cases which found their way into the hospital, 26 were operated on, but in only 12 was there any hope of permanent relief, the rest being palliative in character. All of the cases of cancer of the uterine cervix were hopeless when first seen. The ages of these cancerous patients, under 40 years, so far as ascertained, were, according to the location of the disease, as follows:

Cervix uteri: One, 25 years; three, 30 years; one, 36 years, and one, 38 years. Rectum: One, 37 years. Stomach: Two, 24 and 30 years. Breast: One, 28 years; and eye, one, 25 years.

The statistics of the Board of Health for the Philippine Islands show the following deaths from cancer in the city of Manila for the year ending Dec. 31, 1907:

Buccal cavity, 14; stomach and liver, 9; peritoneum, intestines and rectum, 5; female genital organs, 13; breast, 5; skin, 3; not specified, 15—a total of 64 deaths. The population of Manila being 223,542, this would give 0.000286 per cent. of the total population. The total number of deaths from all causes for the year was 7,613, or 0.00852 per cent. of all deaths from cancer.

The reports from health districts outside of Manila were not used, as they were not considered to be accurate enough to be of much value.

In the census of the Philippine Islands, 1903, a comparative table for the year 1902, giving the percentage of deaths in the Philippine Islands and in the United States, states that deaths from cancer (and under this heading for the Philippine Islands, are included deaths from "other malignant tumors") are 0.1 per cent., while 2.8 is given as the rate in the United States.

As an instance of the medical value of this report, it may be mentioned that the death rate under the heading "Nephritis and Bright's Disease" respectively, for the Philippine Islands and the United States is given in the same table as 0.1 and 3.5 per cent. yet the

* Read at the Fifth Annual Meeting of the Philippine Islands Medical Association, Manila, P. I., Feb. 29, 1908.

hospital records will show that nephritis is very much more common here than in the United States!

The report shows 301 deaths from cancer and "other malignant tumors" for the year 1902, for the entire Philippine Islands, and shows that the disease was reported from every province in the Islands but three, during that year. There were 329,671 deaths for the year among the civilized people from all causes.

From several years service in the Insular Board of Health, and the United States Army, I am fully aware of the inaccuracy of reports from the outlying districts. From experience in many of the provinces, from Samar to Ilocos Norte, I feel safe in saying that the 301 deaths from cancer and other malignant tumors in the Islands for the year 1902, could be multiplied by one hundred without exaggeration, bringing the death rate up to about 5 per cent.

Professor Gilman¹ states that two cases of carcinoma were encountered in the first one hundred autopsies done at the Philippine Medical School morgue.

The frequency of cancer as shown by St. Paul's Hospital statistics is due, to some extent, to a rather careful clinical diagnosis, the employment of exploratory operation for diagnostic purposes, the microscopic examination of tissues removed, and the bringing to autopsy of all cases dying in the hospital.

Cancer of the cervix leads in frequency, and seems to occur about as frequently, as compared with cancer of other parts of the body, as elsewhere in the world, while cancer of the stomach seems considerably less frequent. The latter might be explained owing to the bland unirritating nature of the Filipino's diet, and to the fact that the drink habit practically does not exist.

Cancer of the buccal cavity and tongue is frequent, and it is thought to be due in large measure to the irritating effects of chewing "buvo," a composition which is generally used. It is composed of a piece of nut called "bonga," and lime made from oyster shells, and both are wrapped in a leaf taken from a tree called the "betel" (*Piper betle*). The general belief is, that no greater damage results to the chewer than the coloring of the teeth, which are permanently stained a reddish-brown.

But one case of cancer of the lips was admitted to the hospital. No other cases have been heard of, though considerable inquiry has been made. The Filipino does not use the pipe, confining his smoking almost entirely to cigarettes. All the cases here reported occurred in natives of the islands.

Rayburn has stated that the offspring of syphilitics and tuberculous patients and drunkards suffer from cancer more frequently than others, and assuming this to be correct, then it is not unreasonable to believe that the widespread distribution of tuberculosis throughout the islands may, to some extent, at least, account for the prevalence of cancer.

It is thought that the bad hygienic conditions under which the poor class of Filipinos, as a rule, live, ill-nourished by poor and often-times insufficient food, would lessen their resisting powers and make them easy prey to cancer, and that the absence of a better and more nourishing diet, with some meat, contributes to,

rather than lessens the frequency with which they suffer from carcinoma.

It is said that people who live much in the open air suffer but little from cancer, yet the Filipino is much given to living in the open air, he being unable to exclude much of it even from his shack of nipa and bamboo construction.

Dr. Dalgetty, who says that he has never seen a case of malignant disease of the mamma in a native of Hindostan, wonders whether the constant presence of malaria in that country has anything to do with it. There is hardly a native in the Philippine Islands who escapes malaria.

The same writer speaks also of the possibility of the light clothing worn, which causes no pressure on the breasts, and the fact that the women are in the habit of suckling their children until the breasts are quite dry, as possibly contributing to the absence of cancer. It is thought such a gland would be less likely to undergo perverted action than one arrested while its function is still in full force. This all seems very plausible, but both of these statements apply equally well to Filipino women, and yet cancer of the breast is as common in the Philippine Islands, if not more frequently met with, than it is in the United States.

Not only all the cases of carcinoma of the cervix, but a vast majority of the cases of malignant diseases of other parts of the body, as well, come to the surgeon too late for hope of a successful operation. In no other country in the world is popular instruction regarding the nature of cancer, not only of the uterine cervix, but of all parts of the body as well, and the necessity of early operation, more needed than in the Philippine Islands.

The medical and surgical staff of St. Paul's Hospital has carried on its little propaganda since the hospital's foundation, and surgical patients are coming to it in ever increasing numbers, now including some of the better class, but most of the cases of cancer, as yet, come too late.

The meager statistics and the inaccuracy of most of those we have at hand make it impossible to show the true prevalence of cancer. The apparent rarity of the diseases, as shown in most reports, may be accounted for as follows:

The people are naturally averse to entering a hospital for treatment, looking on it as a family disgrace to have a member treated in a hospital, even as a pay patient, and I am sorry to say that the Filipino physicians, with few exceptions, foster this belief. The people generally do not submit readily to surgical operations, usually putting off such treatment until too late, and many prefer to die rather than submit to operation. They can not be blamed for this, however, as there were no modern hospitals in Manila before American occupation, and in the only then existing hospital open to civilians, only the few physicians on its staff were permitted to treat patients therein.

Owing to a lack of medical men in the islands, the government has found it necessary to continue to license the "cirujano ministrante." He is an ignorant man, whose only training consists in having served at practical work in the wards of a hospital very much antiquated in its methods. He is productive of more harm than good. There are many others who practice without a license, being collectively styled "mediquellos" and individually under various titles, such as "practicantes," "herbolarios," and "curanderos," all of

1. A Report on the First One Hundred Autopsies at the Philippine Medical School, by Dr. Philip K. Gilman, Biological Laboratory, Bureau of Science and Assistant Professor of Pathology and Bacteriology, Philippine Medical School, read at the Fifth Annual Meeting of the Philippine Islands Medical Association, Manila, P. I., Feb. 27, 1908.

whom cause the patient consulting them (and the great majority seeking relief go to them) to delay in consulting a competent surgeon so long as there is any money in sight.

The very condition of things makes it impossible to secure accurate medical statistics, inasmuch as the great majority of the officials in charge of the municipal boards of health, the source of our statistics, are not possessed of the necessary training, to say nothing of the dearth of medical men in the provinces and their generally poor training.

I had charge of health conditions in Pampanga province, one of the wealthiest and most agricultural, close to Manila, during the years 1903-5. The population of Pampanga is 226,180, and there were but six licensed physicians practicing there during 1903. During the year 1905, there were 7,131 deaths, and but 421 of these received medical attendance. There were during the year 1907, 7,613 deaths in the city of Manila, and of these, 3,324, or 43 per cent., died without medical attendance.

As an illustration of the caliber of some of the men who gather medical statistics, is the following:

Very recently, an American school teacher in a town not far from the railroad was stricken with smallpox. The president of the municipal board of health was sent for, there being no other medical assistance available. He declared the teacher's affliction to be "an act of God" and refused to interfere by prescribing.

In justice to the Government, it may be said that every possible means have been taken to increase the number and efficiency of medical practitioners in the Philippine Islands. "An Act Regulating the Practice of Medicine and Surgery in the Philippine Islands" was passed in 1901. In 1903 the government began sending annually to the United States, selected students to be educated in branches to be selected by themselves, at the government's expense, and some of these choose medicine. In December, 1905, Act 1415 was passed, providing for the establishment of the Philippine Medical School in Manila, where medical education of a high standard can be had free by all who comply with the requirements governing admission.

In April, 1907, free scholarships were provided for, with the object of defraying the student's personal expenses, one from each province, the students to be selected by competitive examination. Each scholarship student who graduates must either accept government appointment, or return to his province and practice medicine and surgery therein, for a period at least equal to the time of his scholarship tuition.

The first academic year of the Philippine Medical School opened June 10, 1907.

CONCLUSIONS.

In conclusion it may be said:

1. Cancer is not confined to temperate climates.
2. It is believed that cancer exists in the Philippine Islands to a greater extent than in the United States.
3. The measures now being taken in other more enlightened countries to warn the people of the necessity of early diagnosis, and early radical surgical treatment in this disease, should be adopted here.
4. The disease is of sufficient importance in the Philippine Islands to warrant an effort being made to obtain better statistics in the future.

There is no doubt that the Philippine Medical School morgue will help us out greatly in this matter in the future.

THE CAUSE OF MILKSICKNESS OR TREMBLES.*

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OCCURRENCE OF THE DISEASE IN THE PAST.

A peculiar disease, now all but forgotten both by physicians and the general public, prevailed extensively in certain sections of the United States during the years of pioneer settlement. This disorder was known under a great variety of names, but was most commonly referred to as milksickness, from its apparent connection with the use of milk and milk products. A singular feature of the disease was its geographic limitation, the states of Ohio, Indiana, Illinois, Kentucky and Tennessee covering the area chiefly affected. Milksickness has never been known east of the Alleghanies and there is no record of its occurrence outside of the United States. The medical journals of the Western States, in the period of from 1840 to 1860, contain numerous articles on the disease, but coincident with the clearing and cultivation of the land milksickness has tended to disappear and, except for its sporadic appearance in certain localities, has become practically extinct in those states in which it was once a barrier to settlement. Cases, however, have occurred in Illinois as recently as 1904,¹ and six deaths were reported from this cause in Macon County, Tennessee, in April and May, 1907.² A bibliography of the earlier articles on milksickness has been given by Schuchardt.³

Only the chief symptoms of the disease need be mentioned here. There were usually persistent nausea and vomiting, which led to the use of the name "sick stomach" in some localities. Obstinate constipation was an almost invariable accompaniment of the malady. A peculiar odor of the breath, usually described as "sweetish," was commonly noted and was regarded as highly characteristic by those having most experience with the disease. Muscular weakness, abdominal pain and other symptoms were more or less frequently reported. In the more severe cases great prostration occurs. As a rule, little or no fever is present and the temperature is said sometimes to be subnormal, although there are few instances where the temperature has been accurately recorded by a clinical thermometer. Little is known about incubation period, and autopsy records are few, fragmentary and largely unreliable.

* CONNECTION WITH DISEASE IN CATTLE.

One of the most striking features of milk sickness is its association with certain localities. Settlers along the valleys of certain rivers or small streams are known to have been liable to outbreaks of milksickness, while those living in adjoining regions and under apparently similar climatic and geologic conditions remained entirely free from the scourge. Equally significant is the fact that in those localities where the disease existed

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1. Palmer: Chicago Clinic, pp. 267-269, 1904.

2. Report of the Surgeon General Public Health and Marine-Hospital Service for 1907, p. 33.

3. Janus, 1897-1898, 2, pp. 437, 525.