

The
JOURNAL
OF THE
PHILIPPINE MEDICAL ASSOCIATION

VOL. XXII

JANUARY, 1946

No. 1

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Published Monthly by the Philippine Medical Association
547 Herran Street, Manila

Entered as second class matter at the Manila Post Office, June 21, 1925

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THE JOURNAL
OF THE
Philippine Medical Association

*Devoted to the Progress of Medical Science and to the interests of the
Medical Profession in the Philippines
Manila, Philippines*

VOL. XXII

JANUARY, 1946

No. 1

Original Articles

COBRA VENOM—ITS POSSIBILITIES IN PHILIPPINE
MEDICINE

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Our main interest in Cobra Venom is due to our desire to produce supply of Cobra Antivenin to cope with snake bites, which have caused many, though unreported deaths.

In order to avoid interruption in this work due to lack of supply of snakes, such as had happened with a similar work before, we have attempted to produce active immunity in volunteers among our force of helpers. Properly protected against cobra bites, those attendants are prepared, not only to give good care to the cobras kept in the laboratory, but also to catch more snakes in the field to keep the laboratory continuously supplied with cobras and, therefore, of venom.

French studies on the subject in 1938 (2, 3, 4, 5, 6) suggested new angle in the exploration of the therapeutic possibilities of Cobra Antivenin as an analgesic in controlling the pain in advanced and inoperable cancer cases in the Philippines. This report is intended to stimulate local interest on this subject.

The Venom—The Venom is the toxic secretion extracted from the poison glands of cobras *Naja naja Philippinensis*. These glands are situated on each side of the upper jaw, from each of which protrudes a very sharp slender slightly curved hollow fang of about a centimeter and a half. These fangs are like flexible hypodermic needles which pierce the soft tissues of the victim quite efficiently and through which the poison is injected. The poison comes out as a thick transparent liquid when the poison glands are pressed.

The extracted venom is dried *in vacuo* and stored in airtight glass containers. The dry venom is in the form of yellowish or light yellowish crystals not unlike the crystals of sodium or potassium cyanates. In the dry state and kept in the dark, the venom maintains its toxicity for a long time.

The amount of venom that can be extracted from a cobra at one time depends much on the size of the snake, its health and nutrition, and the length of time it has been in captivity. As a rule a newly caught snake yields the greatest amount and the most potent venom. The yield of venom per extraction varies from 0.130 gm. to 0.7214 gm.

The amount of venom sufficient to kill an average man weighing 50 to 60 kilos has been calculated to be 0.0114 gm.¹ The minimum yield of venom in our collection would, therefore, be sufficiently fatal to 11 persons. The toxicity (1) of cobra venom extracted from *Naja naja Philippinensis* has been found to be higher than the venom of cobras elsewhere.

Extraction of Venom—Although the technique of venom extraction from living cobra is very simple, the work on cobra venom in the Philippines has been greatly handicapped, interrupted, or delayed by lack of sufficiently trained and immunized helpers. The first work (1) on the subject had to be given up on this account. Without such help one's technic of venom extraction would be clumsy, and the continuity of the work would always be hampered by the death of the snakes. The present work has also been postponed on this account.

However, in 1937 we found a boy who had been employed in a circus troupe and who had had some experience with snakes. He knew how to manage our snakes and to dodge their bites. He was bitten once, but he soon recovered. Later we secured another helper, also immune. We have also immunized two of our laboratory helpers. With such helpers, we have been able to continue milking the snakes.

Our supply of snakes was uninterrupted until the middle of 1943 when, due to difficulties in the field, we could not send our men out to replenish our stock.

Method of Extraction—The snake is caught by the tail with the left hand; and, while it is still out of balance, the head is grabbed quickly by the right and firmly held. This renders the snake helpless. The mouth can then be easily forced open and made to bite the lip of a sterile test tube. The poison, in the form of a thick transparent liquid, trickles slowly in small drops and adheres to the sides of the tube. While the snake is thus held, artificial feeding can also be administered. The jaws are forced wide open and pieces of meat are inserted deep into the throat. A funnel can be inserted for feeding liquids such as eggs or milk.

Action of Venom—The poisonous effects of cobra venom depends on its neurotoxic and hemolytic properties. In very small doses it is analgesic and favors clot formation.⁷

Dosage of Venom—The venom in crystal form is weighed and a stock of 1:1,000 in salt solution is prepared. Immediately thereafter sterility tests are made for both aerobic and anaerobic contaminants. The cultures are incubated for at least five days. Usually the solution is found sterile. Further dilutions are made from this stock ranging from 1:10,000 to 1:60,000. After adding 0.5% phenol the different dilutions are placed in ampules of 1 cc. each. These are then available for use.

In the very beginning since there was no previous experience to gauge the reactions that would follow the injections, we started with a very high dilution, 1:100,000. Since, however, in the course of time it has been found that even 1:60,000 dilution seldom gave even the slightest local reaction this latter dilution has been frequently used to start the treatment. The strength of the venom solution is preferably put in terms of dilution even at the risk of carrying such bulky numbers

on the labels, because the physicians or the patients can clearly figure out that they are using this substance, which they know is very poisonous, in a very much diluted and harmless amount. For this psychological reason, the usual mouse units have never been used. One mouse unit is defined as the least amount of venom that would kill all the mice injected within 24 hours. This mouse unit corresponds to at most 0.1 cc. of a 1:10,000 dilution of this venom.

Method of Administration—The venom solution is injected subcutaneously most usually in the arm in 1 cc. amounts. The initial dose is one cc. of 1:60,000. If there is no local reaction and the desired effect is not obtained within 3 to 4 hours, the injection can be repeated on the same day with the same dilution. Thereafter, even daily, if no local reaction appears, the next lower dilution is tried until the dilution is found which relieves the pain for 3 to 4 days. The relief dose is then administered every 3 or 4 days or as soon as the pain returns. The dose can be increased or decreased according to subsequent effects or even entirely withdrawn if any signs of permanent relief is observed.

Usually when the pain has just started the analgesic dose is found between 1:50,000 and 1:40,000 dilutions. In moderate degrees the dilution necessary would be 1:30,000 or 1:20,000. In very severe cases, dilutions as low as 1:5,000 and 1:2,000 could be used. It is not advisable, however, to use the lower dilutions abruptly without first trying the graduated use of dosage from at least 1:60,000 dilution, if alarming local reactions are to be prevented. By gradually going down from the higher to the lower dilution one can easily detect danger signals in the form of local reactions.

Local Reaction—Local reactions take the form of reddening of the area around the injection accompanied by some swelling, a little warmth, and a feeling of numbness. These symptoms increase with more severe reactions which may be felt through the whole system. When the dilutions recommended are used, especially during the process of changing from the higher to the lower, all these symptoms may be expected. No systemic reactions of general poisoning have ever been observed. Rarely have itching sensations over the part injected and later throughout the body been complained of. This itching subsides in a few hours and should cause neither alarm nor discontinuance of treatment. It can be overcome either by diminishing the doses or by going back for a while to the next higher dilution to that due to which such symptoms have been observed.

Cases—Nearly all of the cases treated—140 in all—have been home patients or hospitalized only for a short time because they have been all advanced and inoperable. Since these have been outside cases under the care of private physicians it has not been possible to get complete written reports. In general, the consensus of the report has been that the pain can be relieved by cobra venom injections and that the patients can be kept quite comfortable by the treatment. Some patients have not been able to continue the treatment, because they have had to go to the provinces. Some cases have been too far advanced to allow the correct determination of the relief dose before death.

The three that are cited below, however, are cases that have come actually under personal observation and are as interesting as they are illustrative. Anyone who has observed advanced cancer patients will never forget the misery the patients suffered from the intense neuralgic lightning pains which rendered them sleepless, restless,

weak, and broken down. The usual treatment most effective is opium or its derivatives, but the habit-forming effects of opium precludes its continuous use for any length of time.

CASE I

One of the first cases to receive cobra venom treatment was a woman patient of Dr. Baldomero Roxas. She was around 60 years of age. She had cancer of the cervix which involved the vagina and the rectum with a recto-vaginal fistula. She had all the secondary symptoms of advanced cancer and anemia with hemorrhages from the vagina. She suffered much from excruciating neuralgic pains. She consented to be treated with cobra venom. The treatment was started at 1:100,000 dilution, and the concentration was gradually increased to 1:5,000. This finally relieved her pain for 3 or 4 days. For the next 2 years thereafter, she was given regular injections. During that period she was comfortable and free from pain and was able to receive all the other treatments, like deep therapy and liver extract for anemia and good feeding. She was able to attend to her personal and household needs and for one whole year after the two years with cobra venom she remained painless even after the venom had been withdrawn. Dr. Roxas reported subsequently that her growth disappeared and she improved in health considerably. The disappearance of the growth, while intriguing, cannot, of course, be attributed to the cobra venom; it could have been the effect of the deep therapy. This patient died afterwards of some other intercurrent disease.

CASE II

Another case was that of a woman about 45 years of age who had cancer of both breasts. The entire chest was practically totally eaten up by the ulcerating growth. There were metastases into the axillary glands and in the abdomen, which was much ulcerated in the lower regions. There were also metastases at the back which ulcerated the buttocks and exposed the large nerve trunks on the left side. It was a case of the most extensive carcinomatous invasion, with equally extensive metastases ever seen. The neuralgic pains of the lower extremities was extreme and continuous.

At the beginning, she was given 1:75,000 dilution; and, as rapidly as possible, the dose was increased to 1:5,000 dilution. Relief, however, did not come. From this dilution, we had to go slowly down but she died soon after with only short temporary relief from pain.

We can only explain the failure in this case to the exposure of the nerve trunks to direct atmospheric irritation and to the inability to determine the optimum effective concentration of the venom in such a short time. The patient showed much local reaction when the lower concentration were being administered.

CASE III

The third case is that of a lady of about 55 years old who had cancer of the left breast for nearly 10 years. She objected to any operation or to any kind of physical therapy.

At the time she came to our attention, the disease was already too far advanced for any radical treatment. The whole left breast was ulcerated, including the left

armpit. The metastases on the left axillary glands blocked the lymphatics of the left arm, which had become swollen and indurated. Scoliosis had resulted from the metastasis in the vertebral column.

The patient had anemia and moderate cachexia and avitaminosis. If not for the pains she would not have consented to any treatment at all. The pain however was so unbearably distressing that she finally yielded to have a trial of the cobra venom. She was given the usual preliminary adjustment of dosage until the effective dose of 1:3,000 was found. She was given this dose every 3 or 4 days for nearly 4 years. This kept her relatively comfortable. She received the other treatments for anemia and avitaminosis and other local and symptomatic treatments with considerable case.

DISCUSSION

The three cases cited above especially 1 and 3, show how cobra venom can be administered with effect; and, if enough time for adjustment is available, the proper dosage concentration can be found which would make the patient relatively comfortable and free from pain while other treatments are given.

The failure in Case 2 is apparent. There was not enough time to prepare the system to get adjusted so that a sufficiently larger dosage suited to the extremely advanced condition could be given before death.

The greatest advantage of cobra venom is in its freedom from any side-effects, like what follows the prolonged administration of opium. Its action is slow but long-lasting. It does not have the hypnotic effect of opium, and it does not produce any gastric upset. Opium acts quickly, but its effect is of short duration. So far as at present known, cobra venom can be administered continuously during the rest of the patient's lifetime without fear of any deleterious consequences. The only other effect that it has is to render the patient relatively immune from cobra bite.

Other Conditions—In the early part of 1933 when the supply of opium and its derivatives became scarce, Dr. Neri of the Surgical Staff of the Philippine General Hospital tried cobra venom on post-operative pain. He subjected about 30 operated cases of various kinds of the treatment, and relieved the pains thirty minutes after the injection of 1 cc. of 1:40,000 dilution. The relief lasted for 45 minutes to an hour. He probably could have prolonged the analgesic effect had he had a supply of the lower dilutions so he could push the dosage further until the desirable result was obtained. This was only an experiment; but, as the results were promising, it will be pushed further.

The venom has also been tried in a preliminary way as a substitute for morphine in pre-operative cases by Dr. Apelo of the Staff of Gynecology; but, inasmuch as there is no way of adjusting the dose to be given to the amount of pain expected during the operation the experiment has not been so fruitful. It would seem that in pre-operative cases the amount of cobra venom to be injected should be tried out first to determine the dose that would relieve the pain due to a certain type of operation as well as the time interval between the injection and the onset of analgesia so that the operation can be started just as the analgesic effect sets in.

Several outside physicians have tried with satisfactory results the use of cobra venom in relieving pain in arthritis, and the excruciating pain in dry gangrene complicating diabetes.

There have been many reports of the beneficial effects of venom—viper venom especially—as anticoagulant in hemorrhagic diseases. Recently cobra venom has been tried locally by a private practitioner on a case of purpura but did not push the treatment to the limit. Trial in case of amputations, sciatica, migrain, and similar chronic conditions accompanied with neuralgic or protracted pains is suggested.

It has been tried in leprosy by Chovan and Chopra⁸ in India with promising results.

SUMMARY AND CONCLUSION

In proper dosage, cobra venom can relieve protracted neuralgic pains associated with advanced cancerous conditions. Because it does not possess the undesirable side effects of opium and other drugs, cobra venom may be given continuously without danger.

ACKNOWLEDGMENT

This is the first report in the Philippines on the use of cobra venom as an analgesic. I am sure further and more illuminating reports will be presented later by the many physician collaborators in this work, too many to be named, who have been interested in the trial in behalf of their patients. I am taking this liberty to make this preliminary report for them, but I should like to acknowledge their help and interest. This report deals, not only with the possibilities of the use of cobra venom, but also with the successful introduction of the use of this agent among the Filipino physicians and patients who, by nature, as a racial trait, have an inborn aversion to snakes.

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SYMPTOMATOLOGY OF SEVERE ASCARIS INFESTATION

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There is no worm which more commonly inhabits the human body or has a wider distribution in the world than the ascaris. The disturbances which the worm occasions in the intestine itself vary; isolated worms do not as a rule give rise to any symptom at all, but a large number eventually give rise to severe local symptoms, or those of toxic or reflex nature. Numerous cases are entirely unsuspected until the eggs are found in the feces.

Dangerous complications of ascaris infections have been largely due to the notoriously erratic habits of these worms especially their tendency to invade and explore ducts and cavities. Symptoms of ascaris infections are usually referable to the gastro-intestinal tract, the worms irritating the mucosa by their excretions thus causing spasmodic contractions or mechanical obstruction by the worms themselves.

In a total of twenty-four cases of severe ascaris infections that have been admitted in the P. G. H. wards during the months of April, May, and June 1945, the manifestations simulated those of acute gastro-enteritis, gall bladder disease syndrome, peptic ulcer, and acute surgical abdomen. The most frequent symptoms observed were those of gall bladder disease. The cases reviewed only include those admitted with symptoms explainable exclusively by ascariasis, (ascaris eggs being an incidental finding in the wards in about 80 per cent of the total admissions).

Of the cases that have been admitted, two are noteworthy:

CASE I

A. R., 18, male, admitted for the first time on April 26, 1945, complaining of epigastric pain and jaundice. The illness was three months in duration, starting as chills followed by epigastric pain (severe) radiating to the hypochondria. A week later, the pain became more intense, even radiating to the lumbar regions and causing him to double up. Two months after the onset, he noticed that his sclerae became yellow, and on succeeding days he was yellow all over his body. His urine, too, turned dark yellow and stained his clothes. Bowel movements were regular but at times were acholic. Three weeks later, vomiting set in. Relief was obtained immediately after vomiting; but 1/2 hour afterwards, the pain would reappear.

Physical examination revealed nothing abnormal except tenderness at the epigastric region. He was given 4 gms. of magnesium sulfate daily before breakfast, plenty of sugar, aspirin, and 1-1/2 gr. calomel for three days. This treatment was continued until June 3, 1945 without any appreciable improvement except a gradually subsiding jaundice, and epigastric and hypochondriac pain continued.

Santonin treatment was then instituted (4 gr.). The next day, 30 live worms

(ascaris) came out. The patient was much relieved; jaundice continued to subside until only a sub-icteric tinge of the sclerae was left. Bilirubin I and II dropped to 0 from a previous reading of B I-822; B II-1.480. Total white blood cell count showed 8,300 cells/cmm. with polymorphonuclears—59%; Lymphocytes—37%; Monocytes—2%; Eosinophiles—2%. Succeeding blood counts showed total WBC count—3,400 N—59%; L—38%; E—6%.

Because of the severe epigastric pain radiating to the right hypochondrium and even the back, we supposed that there might be ascaris worms blocking the biliary passages. A laparotomy was performed on July 2, 1945 and one ascaris worm was found in the common bile duct. The patient has been feeling much better after the operation and aside from the post-operative wound has no other complaint.

CASE II

N. M., 35, female, admitted for the first time on May 28, 1945, complaining of severe epigastric pain. This pain appeared for the first time three weeks before admission and was pricking in character. A week after, the pain was more severe, this time accompanied by vomiting and profuse perspiration. She noticed too that her abdomen was distended, and she was giving off much gas and sour eructations. Bowel movements had always been regular and normal, except for one tarry stool that she had before admission.

Physical examination revealed nothing abnormal except slight tenderness and rigidity in the epigastric region and tenderness in the lumbar region. In the ward, the patient complained of a persistent severe epigastric pain that tincture of belladonna or morphine could not relieve. On the 2nd day of her stay, she vomited 4 ascaris worms. Santonin treatment was instituted, and 5 ascaris worms were expelled the next day. However, the pain persisted.

A laparotomy was done, and in the common bile duct 14 ascaris worms were found. Enterotomy was done in two parts of the intestine, and a total of 148 worms were removed. On the day after the operation, 5 more ascaris worms were expelled.

A week after, santonin treatment was again instituted. No more ascaris worms came out, but stool examination revealed still many ascaris eggs. Two weeks later, another santonin treatment was instituted, but no more ascaris eggs were expelled. Stool examination—ascaris eggs few. Leucocyte count in this patient was total WBC—15,000; P—69%; L—21%; M—3%; E—7%.

Both of these cases showed gall bladder disease syndrome. The pain was severe at the epigastric region, and it radiated to the right hypochondrium and to the back. It was accompanied by vomiting and jaundice.

Next in the order of frequency of the varied symptoms of ascaris infection is acute gastro-enteritis. Cases that have come have usually showed frequent bowel movements numbering 8-10 times a day without blood or mucus in the feces. Most of the time, there was accompanying abdominal pain without any febrile reaction. In only three cases was there any febrile reaction. Total white blood cell count showed leucocytosis ranging from 11,000 to 15,000 cells/cmm. and eosinophiles from 3-9%. Stool examination has invariably shown many ascaris eggs and occasionally a few trichiuris eggs, but it has always been negative for amoeba. Cases of acute gastro-enteritis of this nature have always recovered after santonin treatment and after a number of worms have been expelled.

Some of the cases that we have had in the ward have been characterized by severe epigastric pain which has sometimes even caused loss of consciousness.

V. Q., 18, female, admitted June 1, 1945, complaining of epigastric pain that had lasted for three years. This pain had occurred every now and then almost every three months, sometimes lasting for 30 minutes and even causing loss of consciousness; but it had never radiated to any other part of the abdomen.

Four days before admission, the pain recurred daily. It was severe, and the patient lost consciousness on three such attacks. Physical examination revealed nothing abnormal. Stool examination showed many ascaris eggs. Total white blood cell count showed: Total WBC—10,800; N—52%; L—36%; M—2%; B—1%; E—9%.

An admission diagnosis of gastralgia was made. Only after the total and differential count and stool examination was made was ascaris infection thought of. She was given santonin treatment; and, after passing out worms the next day, she did not have any more attacks. The pain did not recur either. Other similar cases of the so-called gastralgia have recovered with santonin treatment.

It is interesting to note that most of the cases of ascaris infection in the wards have been females; of the twenty-four cases, only 5 were males. No explanation can be offered for this phenomenon.

In all cases of ascaris infection where a total and differential white blood cell count has been made, a slight leucocytosis ranging from 8,000-15,000 has been observed, with an eosinophilia ranging from 3-9%. Neutrophiles and lymphocytes have always been normal. There has not been a single case showing an increase in polymorphonuclear leucocytes.

Of the cases of ascaris infection that we have observed in the wards, 51 per cent have shown gall bladder disease syndrome, 29 per cent acute gastro-enteritis, 12 per cent gastralgia and 8 per cent peptic ulcer syndrome.

TABLE I

Sex Distribution:

Males	5
Females	19

TABLE II

Age Distribution:

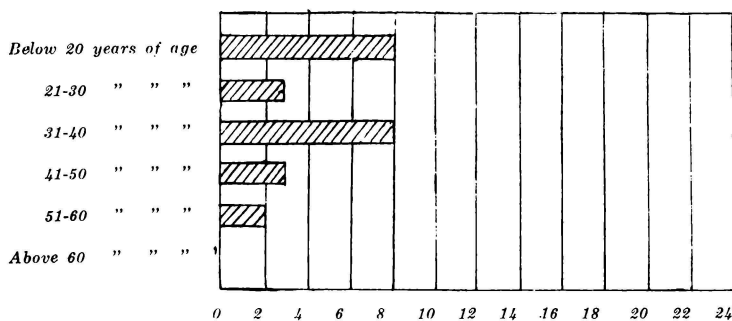
Below 20 years of age	— 8
21 — 30 " " "	— 3
31 — 40 " " "	— 8
41 — 50 " " "	— 3
51 — 60 " " "	— 2
Above 60 years of age	— 0

TABLE III

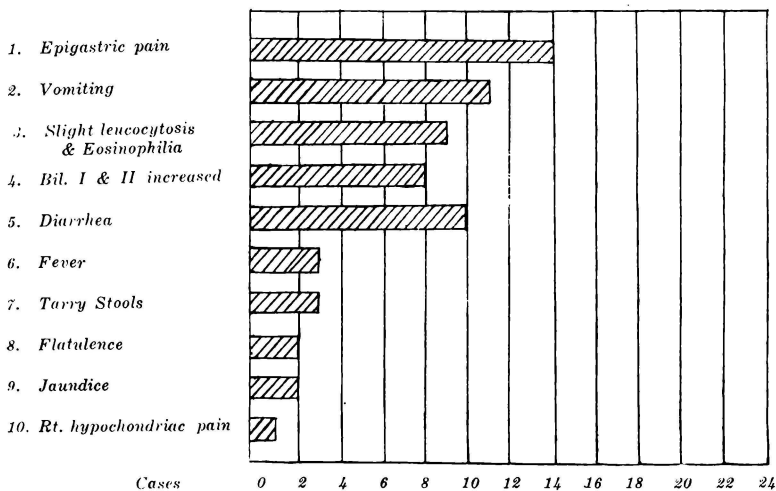
SYMPTOMS OF ASCARIS INFESTATION OBSERVED IN THE WARDS:

1. Epigastric pain	
a) localized	14 cases
b) radiating to right hypochondrium	3 "
c) radiating to lumbar regions	4 "
2. Vomiting	11 "
3. Slight leucocytosis and eosinophilia	9 "
4. Bilirubin I and II increased	8 "
5. Diarrhea	10 "
6. Fever	3 "
7. Tarry stools	3 "
8. Flatulence	2 "
9. Jaundice	2 "
10. Right hypochondriac pain	1 "

Age Distribution



Symptoms of Ascaris Infection Observed in Wards



MODERN CONCEPTS IN THE DIAGNOSIS OF RENAL TUBERCULOSIS

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and the Philippine General Hospital*

Certain fundamental facts in the pathology of renal tuberculosis are essential to a proper understanding of the clinical diagnosis of the disease, as well as of the various diagnostic procedures involved. A brief enumeration of these facts will be attempted.

First, it has been firmly established that the kidney is not a bacterial filter. Therefore the presence of tubercle bacilli in the urine of a kidney means tuberculosis of that kidney. The fallacy that tubercle bacilli could pass through the kidney excretory channels without causing pathologic damage has, doubtless in the past, caused many patients with urinary tuberculosis to go undiagnosed, for the tubercle bacilluria was then considered harmless as far as the kidney was concerned.

The consensus of opinion nowadays is that renal tuberculosis is practically always blood-borne, the primary focus being in the lungs, tonsils, or intestines. In the Philippines with its high incidence of pulmonary forms of the disease, the lungs probably are the most important focus. Blood stream invasion of the kidney, if the patient is very weak constitutionally, may result in miliary tuberculosis of that kidney in conjunction with that of other organs. This we shall exclude from discussion, for it is not a surgical or urological lesion. It is purely medical. A secondary lesion which is tuberculous (i.e. tuberculous joint, liver, or urogenital organ) may also act as a primary focus for the kidney.

The bacilli-laden embolus (from the primary focus) lodges in a glomerular capillary tuft of the kidney; and, being of slow-growing nature, the bacilli never completely obstruct the blood stream through the involved glomerulus. Indeed they may be walled off through still unknown processes (calcification, fibrosis) mostly related to body resistance and thus heal without having produced symptoms. This is still a pre-clinical lesion—that is to say, undiagnosable—for the bacilli have not yet broken through the glomerular capsule and hence are outside of the urinary channel. There are no bacilli found in the urine. The fallacy of expecting a positive finding in the urinary smear is also clearly shown, for a lesion of the urinary epithelium is necessary to release the imprisoned bacilli. It is sad to comment, however, that usually the negative diagnosis by smear simply means a failure to find the bacilli.

If clinical tuberculosis develops, the following train of events takes place in the affected kidney. Some bacilli may break through the capsular epithelium, get washed down the convoluted tubules, till they find a favorable site for further multiplication in the medullary loop. Or the bacilli in the glomerular capillary tuft may reach the medulla of the kidney by way of the efferent glomerular capillaries and the arteriolae rectae which supply the tubules in the medulla. The lymph stream may also spread the infection from the initial cortical area to final medullary location.

The growth of the medullary lesion finally encroaches on the urinary tract by discharging its bacilli-laden pus into the kidney tubules, thence into the renal pelvis. We have here the clinical type of renal tuberculosis. Pus cells and tubercle bacilli are found in the urine, or should be found after conscientious search. When the medullary tuberculous lesion becomes connected with the kidney pelvis, we have the clinical type of destructive renal tuberculosis, unmistakable pathological evidence of the healing of which has not yet been seen. The medullary lesion communicates with the renal pelvis. There is then an erosion of the pelvic mucosa, an ulcer. This can be demonstrated by the x-ray. Even isolated caseous cavities in the parenchyma but in communication with the kidney tubules can be seen in the living by the injection of organic iodine compounds (Diodrast, Neo-iopax) the active elimination of which by the kidney will fill the cavities with radio-opaque shadows. In the rare case of calcification of the tuberculous renal focus (0.5% of tuberculous kidneys) the x-ray will also detect the calcified shadows.

The infected urine soon sets up secondary tuberculous ureteritis. Ulcerative lesions go hand in hand with fibrotic changes and resulting scars, strictures, stiffenings, shortenings of the ureter. Soon, too, if not concomitantly, or preceding the ureteric changes, the bladder becomes involved with tubercle formation, break-down, caseation, ulceration, fibrosis extending into the submucosa and muscular wall leading eventually to contraction and diminished bladder capacity. The fibrotic changes impair the efficiency of the opposite ureteral orifice, which may then allow a reflex of infected bladder urine up the opposite healthy ureter and even up the corresponding kidney. One of my recent patients (M.F.) has shown this clearly in the intravenous urogram.

The pathogenesis and morbid anatomy of tuberculosis of the kidney are true mirrors of the clinical picture. Indeed, learning the pathology clarifies the symptomatology, tells one what to expect. This brings us to a consideration of the actual diagnostic means at our disposal.

Most important is the history of a previous or existing tuberculosis in the lung, intestine, throat, or genital organ. Careful inquiry usually reveals a certain percentage of patients with past history of hemoptysis or pleurisy or radiologic evidence of lung lesions in the near past. In the history of the present illness, the most important, not to say pathognomonic, picture is urinary frequency with pyuria and hematuria (which may be microscopic) usually in a young adult or one below middle age. Hematuria is an early sign of newgrowth of the urinary tract, and a late sign in prostatism; but, when it comes hand in hand with pyuria and frequency in a predisposed patient, urinary tuberculosis is a safe bet in the presumptive diagnosis. Frequency without hematuria is an early sign of prostatism, but frequency with hematuria is typical of urinary tuberculosis (Young). Frequency both by day and night and burning on urination are first symptoms in 80% of patients (Hinman).

The physical examination may be negative or merely suggestive, unless T.B. lesions of the genital organs are found. A rectal examination for the prostate and vesicle is important. Costo-vertebral soreness maybe noted. X-ray of the lungs must be taken.

The urine examination will reveal an acid urine and albumin with pus cells. Gross blood is not common, but microscopic hematuria is almost constant. The presence of the tubercle bacilli in the urine sediment constitutes a positive diagnosis. The difficulty lies in the finding. Several points must be remembered. The urine should be collected with due care to prevent contamination by smegma bacilli (cleaning of

prepuce, or better, catheterization); concentration methods before acid-fast staining, and especially repeated and patient search through many slides. The intermittency of the discharge of bacilli from kidney lesions is well known. The urine examination must then be repeated several days as long as negative smears are obtained. The guinea pig test, while more sensitive than the smear, is now slightly discredited (Hinman) for avian strains of the tubercle bacilli are not pathogenic to guinea-pigs. In the United States cultural methods have been shown to be more accurate, but they require highly specialized technical skill which is not universally available. Only a few institutions like the Brady Urological Institute at John Hopkins, can pride themselves in the bacteriological aspect of this diagnostic work. There, culture for tubercle bacilli in the urine has been found to be productive of a high percentage of positive results, with the guinea pig test a close second. Dr. Pio de Roda, lately of the Institute of Hygiene, recently successfully recovered the tubercle bacilli after innoculating monkeys with smear-negative urine from one of my patients. Pelz (1936), in fact, quotes the following figures from European clinics: microscopic smear yields 72%; guinea pig test 94%; and cultural methods (Loevenstein method or modification) 98% positive findings. The smear, then, with acid-fast staining remains the routine method of searching for the elusive tubercle bacilli in the urine. A word of warning must be interposed here. The negative smear cannot and should not deny the diagnosis of renal tuberculosis for reasons already well known. More commonly in these instances other clinical or instrumental findings will support the diagnosis. As in the diagnosis of malaria, a positive smear is a consolation in the presence of equivocal symptomatology; but, in case of a negative smear, the burden of proof still rests with the clinician.

Before instrumentation a plain x-ray of the urinary tract (kidney-ureter-bladder or K-U-B film) should be taken. In the rare presence of renal calcification (0.5%) the calcium shadows may make the diagnosis, though usually they merely confuse the diagnostician.

Cystoscopy should then be done. The nature of urinary complaints (frequency of urination and painful urination) should make one rather more gentle than usual, and in fact rather more prone to provide better anesthesia (spinal, sacral, or intravenous) than the usual methods (local anesthesia) commonly employed in routine cystoscopies.

Diminished bladder capacity, increased vesical irritability, tubercles, ulcerations, or granulation tissue are typical. In short, the cystoscopic picture of vesical involvement in renal tuberculosis is so characteristic that oftentimes, as in one of my cases, the diagnosis has been made with these findings as starting points, and despite the continuously negative smear. The tuberculous lesions are more common in the trigone near the ureteral orifice; the "golf-hole" or gaping ureteral orifice is a common finding at this stage.

During the cystoscopy the crucial test of recognizing which of the two kidneys is involved, is made through the ureteral catheters. The segregated kidney urines will reveal the unilaterality or bilaterality of the tuberculous involvement (albumin, pus, red cells, smear for T.B.) as well as the functional ability of each kidney. This is most important in the supposedly sound side, for nephrectomy for unilateral renal tuberculosis is the treatment of choice. Hinman warns against, and does not resort to, retrograde pyelography in renal tuberculosis (danger of pyelovenous back-flow,

miliary spread, infecting sound kidney); but Young and the majority of urologists perform routine retrograde pyelographies without ill effects. In my small group of cases I have not seen any detrimental results after the bilateral retrograde pyelography.

After the plain K-U-B film is made and before cystoscopy or retrograde pyelography, it is usually customary to make an intravenous (or subcutaneous) excretory urography. Often this is the only other examination possible; for cystoscopy may be difficult or ureteral catheterization impossible because of trigonal distortion or obliteration of the ureteral orifice markings. I have had the satisfaction several times of being able to make a positive diagnosis of renal tuberculosis from the intravenous urography films alone. In one recent case the smear of bladder urine was negative, ureteral catheterization impossible; and the diagnosis rested solely in a small ulcerative lesion of the upper calyx ("moth-eaten"). The nephrectomy specimen in this case was grossly and histologically positive for caseous tuberculosis.

In conclusion: renal tuberculosis is but a localized manifestation of a constitutional disease. Urinary frequency with hematuria and pyuria in an individual, usually a young adult, with the stigmata of tuberculosis past or present, should arouse the suspicion of renal involvement. The finding of tubercle bacilli in the urinary sediment confirms the diagnosis. The finding of tubercle bacilli from one or both segregated kidney urines determines the laterality of renal involvement and incidentally outlines the treatment to be followed. The x-rays, including the excretory and retrograde pyelographies give additional proof by furnishing the anatomical basis of the diagnosis. A negative smear is never conclusive. Cystoscopy is mentioned last, because when bladder signs of the disease are present in their typical picture, the disease has already advanced beyond the confines of one kidney.

ILLUSTRATIVE CASES

The following cases are mentioned briefly to show how the diagnosis was arrived at, and the difficulties encountered:

P.G.H. 421620—H.A., f.m., aged 50. Bladder frequency and pain on urination, pyuria and hematuria for two years; treated for cystitis without relief. Cystoscopy: tuberculous bladder with ulcers, twice fulgurated under a wrong diagnosis of interstitial cystitis. Ureteral catheterization impossible; intravenous urography: ulcerative lesions left upper calyx. Urine twice negative for acid-fast. Nephrectomy. Histological: ulcero-caseous t.b. of left kidney. Recovery.

P.G.H. 416679—S.E., 9 yrs., f.s. Frequent painful urination of 3 years duration with chills and fever, with bloody urine, later an enlarged right kidney. Cystoscopy: tuberculous cystitis. Retrograde pyelography of right shows extensive pyonephrosis. Pus oozing from right ureteral orifice. Acid fast not found in bladder urine, but only staphylococcus. Nephrectomy, right. Histological: T.B. kidney with secondary pyonephrosis. Recovery.

P.G.H. 426204—R.J., 25 yrs., f.s. Father had died of P.T.B. Frequent urination, terminal dysuria, pyuria, hematuria, large low right kidney with pain. Urine negative for acid-fast. Cystoscopy: ulcerative t.b. of bladder. Right kidney obstructed to catheter. Left kidney normal by retrograde pyelography with good function. Right nephrectomy. Recovered. Biopsy-caseous t.b. rt. kidney.

P.G.H. 52643—L.M., 22 yrs., f.s. Strong history of P.T.B. in mother; chronic laryngitis, chronic P.T.B., bilateral, emaciation. Two years frequency, hematuria, pyu-

ria. Cystoscopy: bladder tuberculosis. Rt. ureter cannot be catheterized. Left kidney shows t.b. in smear. Retrograde pyelography left: ulcerative t.b. Intravenous pyelography: rt. hydronephrotic with filling defects in the lower pelvis. Left: ulcerative t.b. Too advanced bilateral involvement. No operation.

P.G.H. 432246—M.F., 24 yrs., m.s. Frequency, hematuria, and pyuria for one year. Chronic P.T.B., chronic cervical adenitis, chronic epididymitis. Cystoscopy: ulcerative t.b. of the bladder. Ureteral catheterization impossible. Intravenous urography-ulcero-caseous t.b. right kidney, bladder and left lower ureter. Urine twice positive for acid-fast. Nephrectomy. Histology: T.B., right kidney. Recovered.

Outpatient—R., 46 yrs., f.s. Chronic asthmatic; hematuria and pyuria for 2 years. Urine twice positive for acid-fast. Cystoscopy: Normal bladder. Right kidney catheterized, normal; left cannot be catheterized. Intravenous pyelography refused (asthmatic). Retrograde: Right kidney, normal; advised left nephrectomy.

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THE PRESENT TRENDS IN THE DIAGNOSIS AND TREATMENT OF CANCER*

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CANCER is commonly defined as a local rebellion of a group of discontented cells within that commonwealth of working cells which form the human body. The rebellious cells throw off all restraints; and, if the local riot be not promptly checked by heroic measures, it may develop into a generalized invasion which destroys the whole commonwealth. In short, cancer is a local uprising. It is a disease of cells rather than of the organism as a whole. Hence, it occupies a unique position among the countless diseases that afflict mankind.

The term *cancer* is derived from the Latin word for *crab*. The dilated veins around a tumor made the ancient people conceive the idea that they bore the same resemblance to the outstretching legs and claws of a crab. Physicians usually use the term *cancer* in a general sense meaning any malignant growth from epithelial or connective tissue origin, carcinoma and sarcoma alike, although the term genetically speaking, means only the epithelial growths. In this paper cancer refers to malignancies in general.

Malignancy is a universal cell potentiality, so we find cancers in all vertebrate species and even in the insects. Plant tissue also shows local overgrowths with some of the features of malignancy. Because cancer is a universal cell property, it affects every cell in the animal body. There seems to be no cell — at least in the human body — which is incapable of excessive proliferation. Even bone cells and cerebral ganglia may be released from long quiescence and become malignant.

Dr. James Ewing of New York, America's foremost cancerologist, says that cancer is a group entity like inflammation and consists of many diseases rather than of one single disease. The conception of cancer as one single disease dates back to the 19th century; and, from the result of the investigations and observations at that time, many theories were formulated. Well known among them are the irritation theory of Virchow; the parasitic theory of Febriger; the virus theory of Rous; the embryonal theory of Conheim; the heredity theory; and, more recently, the theories on hormones and vitamins. You all know that anyone of these theories cannot explain the cause of all cancers in the different parts of the body as long as cancer is considered as one single disease.

It was only in 1935 that Ewing conceived the idea of cancer as a group entity. He supported his view by animal experimentations and the discovery of various carcinogenic agents. Ewing believes that, as typhoid, tuberculosis, and pneumonia

* Read in the monthly conference of the National Research Council in November, 1940 at the auditorium of the Institute of Hygiene.

are separate inflammatory diseases, so squamous cell carcinoma of the lip, adenocarcinoma of the stomach, and osteogenic sarcoma of the femur are separate and distinct diseases under the clinical entity of cancer. Their etiology, clinical manifestations, prognosis, methods of diagnosis, and treatment are completely distinct from one another, as the etiology, clinical manifestations, prognosis, methods of diagnosis, and treatment of typhoid are distinct from those of tuberculosis.

This new concept of Ewing has reconciled all the existing theories without conflicting with any one of them, and it has produced a radical change in the modern trend of cancer research. Chemists, physicists, biologists, and pathologists, instead of working on a basis of a single cause of all cancers, are now busy investigating the different malignancies separately. The very complex cancer etiology has become less complicated, and greater attention is now given to the other phases of the cancer problem, especially in diagnosis and treatment.

The Causes of Cancer

Recent investigations have divided the etiology of cancer into two phases: the causal genesis and the formal genesis. The causal genesis consists of the *extrinsic cause* or the provocative factor that initiates the growth of cells to malignancy. Examples of this extrinsic cause are very familiar to us — the carcinogenic agents, irritants, irradiations, hormones, avitaminosis, viruses, etc., which are all under constant study of researchers all over the world. The formal genesis is the *intrinsic cause* or growth-controlling factor within the cells that incites the cancer cells to proliferate even in the absence of the causal factor. Unfortunately we still know nothing of this intrinsic factor of cancer.

The study of numerous types of malignant tumors after prolonged transfer in animals or after periods in tissue culture has established the fact that the malignant state has become a fixed character of the cell; and the type, the tendency to characteristic histologic arrangement, growth rate, invasiveness, and general behavior are more or less constant for each individual tumor even after passage thru hundreds of hosts. A point of fundamental importance to be deduced from this study is that the malignant state once established is in no way dependent to the factors responsible for initiating the process.

In typhoid or tuberculosis, once the causative organism is destroyed or removed, the inflammatory process stops and the lesion is cured; but in cancer the removal of the exciting factor like virus does not stop the proliferation of the cancer cells.

Exhaustive studies of the mammalian cancers have disclosed a complete lack of evidence of the infectious nature of the disease. It can be transmitted only by grafts or tumor cells, and the resulting tumors are formed entirely by the multiplication of the introduced cells. The cells of the host do not become malignant even with this intimate contact with the cancer, though it supplies blood vessels and supporting stroma. While animal parasites, bacteria, or virus may incite malignancy, they appear to play no part in the continuation of the process.

The carcinogens or carcinogenic agents are believed to start a tissue process tending to develop into a malignant state; but, once malignancy is established, the agents appear to play no further role in maintaining the state. It is often erroneously believed that the hydrocarbons and related compounds as benzopyrine and methylcholanthrene are the only carcinogenic agents; but there are other compounds which

have the same carcinogenic property—such simple chemicals as arsenic, chloride of zinc, and such physical agents as X-ray, radium, and ultra-violet light rays. Parasites may act as carcinogenic agents as illustrated by malignant changes which may take place around tapeworm cysts of the liver or associated with *Bilharzia* infection of the bladder. Tuberculosis of the skin, syphilitic lesions of the mouth, and the virus infections of warts may also serve as carcinogens. Causative agents of cancer, as a matter of fact, are as numerous and varied as types of malignancies.

There is little indication that hormones have carcinogenic properties in the same way as the chemical agents mentioned above; nor do any of them produce a very definite effect on the growth of cancer cells. But certain interesting points have been established. Cancer of the breast may be induced by repeated systematic injections of estrogen, but it is important to note that this result is obtainable only in animals from families with a known cancer tendency. With great difficulty and after prolonged excessive doses, cancer may be induced in non-mammary tumor strains of animals. Male mice which rarely ever show cancer of the breast under strogen treatment will show such tumors, but again only if they come from a strain in which the females have a mammary tumor tendency. These facts led Lacasagne to conclude that estrone did not have a direct carcinogenic action; but that, indirectly, it developed the natural potentiality of that particular cell group composing the mammary gland.

The inoculation of Shope virus into domestic rabbit develops papilloma, but the active virus cannot be recovered from the lesion. However the papilloma persists and shows a tendency to progress into malignancy. This seems to justify the opinion that the Shope virus represents another carcinogenic agent having no other association with the eventual malignant condition than the chemical agents, the tubercle bacillus, or a variety of other agents which are known to act in an actual capacity.

The part played by heredity has probably been the most actively investigated branch of cancer research. The experiment of Maud Slye of Chicago on pedigree mice is a convincing proof; but, as man can never be pedigreed, controversial points arise as to how much of heredity is taking part in human dissemination. It is now known that only the predisposition to cancer, not the disease itself, is inherited. The most recent discovery—a very important one—is that the tendency to develop cancer is not a general character but confined in each strain of animals to a definite organ or tissue type. Lung tumor families, mammary tumor families, sarcoma families, leukemia families, etc. have been segregated and studied. In the same way, Macklin has shown definite segregation of types of cancer in human families. Also in general support of the part played by heredity in man are the new findings about cancer among identical twins. In about 50% of instances in which cancer has occurred in such individuals, it has affected both of the twins; it has developed at about the same time; it has appeared in the same organ of the same histological type; and, in a number of instances, it has been in the same portion of the same organ.

In certain mammary tumors the inherited tendency is transmitted by the female more often than by the male. Mice from a high tumor strain nursed by foster mothers of a low strain develop cancer much less frequently than their litter mates nursed by their own mother. There is some evidence that the reverse is true—that is, that mice of the low strain fostered by mothers of a high strain, will show an increase in their cancer rate.

The information gathered from these various experiments appears to be unanimous regarding the theory that the basic cause of cancer is an intracellular alteration. But although the process mutation itself of the cancer cell is clear, the initial impulse is still a mystery. There is nothing in the cell itself which the microscopist can discern or the chemist demonstrate as an agent producing this primary alteration by which the orderly arrangement of the cells becomes autonomous of increasing and disorderly growth.

Our knowledge of the extrinsic factor (causal genesis) that leads to advances in preventive lines has increased, but it is probable that curative methods will be materially advanced only by the further understanding of the intrinsic factor (formal genesis). Unfortunately, however, the formal genesis, the intrinsic factor, the core of the cancer problem, appears to lack an appeal to workers; and it has evoked little discussion or consideration.

The Trend in Cancer Diagnosis

Cancer more than any other disease needs clinical and laboratory data to establish a diagnosis. Unfortunately all tumors have an insidious onset, and cancer is a disease that gives very few early symptoms. Yet it requires early diagnosis if it is to be cured. Roentgenography and fluoroscopy as x-ray methods of diagnosis have improved in the last few years with better means of interpretation of x-ray films. The recent introduction of tomography, especially in cancer diagnosis, has solved the great difficulty in detecting the new growth of the lungs and other visceral organs.

When surgery was the only recognized treatment for malignant disease and when cases coming for treatment were practically all of advanced and obvious character, there was but very little need for pathological diagnosis based on examination of biopsy material. However, with the addition of x-ray and radium to the armamentarium of the practitioners treating cancer and with the early appearance of the patients for treatment often with lesions that cannot be definitely diagnosed clinically, the importance of pathological diagnosis has become much greater. By biopsy we mean at present the removal of tumor cells or tissue and sometimes entire nodule for the purpose of histological diagnosis. With the new concept of individualization in cancer, the value of a definite histological diagnosis becomes more important for the prognosis and treatment of the individual cases.

The well-known surgical and punch biopsies are always in use everywhere. Much improvement has been accomplished in the line of sectioning tissues for biopsy, as instruments for internal examination such as the cystoscope and proctoscope have improved techniques for biopsy taking.

The recent introduction of aspiration biopsy at the Memorial Cancer Hospital of New York has made an earlier diagnosis easily possible. This method consists of aspirating tumor cells from a solid mass such as breast and lymph nodes. Its advantages are the simplicity in performance and the slight traumatization. The disadvantages are that it is difficult to tell whether the material obtained came from the tumor itself or from the adjoining tissue, and the pathologist has to have experience as cytologist to decide on small clusters or separate cells in making a diagnosis.

The routine use of the rush frozen section method in the pathological labora-

ories of the Mayo Clinic is another step towards the improvement in cancer diagnosis. Here, the surgeon, on opening the abdomen and meeting a suspicious growth, cuts a section of the lesioned part from the viscera; and, in 3 to 5 minutes, the pathologist, using a well practiced staining technic, reports to the surgeon the kind of tumor and its grade if it is malignant. With this information obtained in so short a time, the surgeon in the operating room can decide then and there the method of treatment to be followed.

The microscopic grading of cancer introduced by Broders of the Mayo Clinic in 1920 is now well recognized and used extensively in most of the cancer clinics of the United States. Broders' classification is based on the degree of differentiation of the cancer cells from the tissue of origin. It consists of four grades. Grades 1 and 2 are highly differentiated, slow growing, with few mitotic figures, less prone to metastasis, and are more successful for enucleation and extirpation by surgeons. The anaplastic grades 4 and 3 are less differentiated, fast growing with many mitosis, and prone to metastasis. They are poor surgical risks but are ideal cases for a successful cure by radio therapists. Although there are some exceptions to this rule and some limitations in the procedure and technic, there is no doubt that the knowledge of the grading of cancer suggesting its affinity to metastasis, its prognosis, and its radio sensitivity or resistance of the cells, is a very valuable information to modern surgeons and radiologists. This information gives them a better point of orientation in the treatment of cancer. Their understanding of the character of the cells they are trying to extirpate or to destroy gives them confidence in planning a better line of cure for the benefit of the patient.

It is a common practice in all cancer clinics of America and Canada to devote much time in the localization and diagnosis of malignant growths. Surgeons and radiologists, like pathologists, are devising special methods and instruments for accomplishing this purpose. The use of cystoscope, proctoscope, gastroscope, and peritoneoscope are more frequent nowadays and even aspirating tube for the uterus is commonly used for biopsy examination in dispensary clinics to take the place of a major D. & C. operation.

Many serological tests which are strongly recommended by their originators, are now in use in some American clinics; but they are positive in at most about 80% of the cases and only after the tumor has attained a considerable size. The value of this test to detect a positive result in early malignancies is still doubtful.

The Trend in Cancer Treatment

The treatment of cancer has three phases: (1) the preventive treatment, (2) the curative treatment (3) the palliative treatment.

1. The Preventive Treatment

The preventive treatment is the most recent, as it is based on the new concept of the nature of cancer. American clinics make use of statistics in this treatment. The well known multiplicity of causes of cancer together with the discovery of various carcinogenic agents, enable the social workers and statisticians to compile data regarding the probable causal genesis or extrinsic factor of the different malignancies. Data regarding cancer are now collected, tabulated, and analyzed; and,

although cancer is definitely known to be neither infectious nor contagious, it can be reported and prevented.

The importance of cancer was recognized recently from the following statistical findings: In 1900, heart disease topped the causes of death in America followed, in the order named, by tuberculosis, accidents, pneumonia, nephritis, hypertension, and cancer. At present or 40 years after, cancer is occupying the second cause of deaths while tuberculosis dropped to the seventh place. This is very interesting and significant, not only to the American people, but also to us. It shows conclusively that an infectious disease like tuberculosis can be controlled and its incidence lowered by proper sanitary and social measures.

The rapid increase of cancer in the last 40 years has presented a real problem to the epidemiologist and statisticians. Is the rise in cancer death rate absolute or relative? Statistics have shown also that during the same period of time the life span or longevity of the American people has increased considerably from 52 to 65 years. Consequently the number of old people of the cancer age—between 50 to 70 years — has increased proportionately. But, although this may explain the higher incidence of cancer patients and cancer death rate in the last 40 years, it is still the consensus of opinion at present that cancer is on the increase.

Life Table of Filipinos. The recent statistical compilation on the longevity of the Filipinos for the last 20 years, — put out by Drs. Antonio G. Sison, H. Lara and M. Herbosa in 1938 — shows that the life span of our people has increased from 27 to 50 years. Can this increased longevity explain the larger number of cancer patients in our hospitals today — a fact which has probably influenced the establishment of an institute for malignant newgrowths? The same problem and condition may arise in our country as those found in the United States.

The science of epidemiology for many years was limited to the study of epidemics and only comparatively recently has it been extended to include other diseases and even other conditions not essentially morbid like cancer. A study of an epidemic or an acute disease is easier than that of a chronic disease, as the search for the source of infection may be limited to short periods of time. In a chronic disease like cancer the sources of the disorder may cover a lifetime.

With this new trend in the cancer control, the preventive treatment of cancer has been introduced. The practicability of such measure is easily seen. If the evidence warrants the assumption that women with uterine tears are more apt to have cancer of the cervix than others the repair of such tears becomes a preventive measure. If the unclean mouth is the precursor of oral cancer, frequent visits to the dentists is indicated. If statistics show that the high incidence of cancer is due to some habit like the frequent epitheliomas of the cheek among our people due to *buyo* chewing, educational measures may be devised. These examples of statistical records have made epidemiologists play an important role in searching for the causes of cancer in order to decrease its prevalence. At the present time statistical and epidemiological methods are being used extensively in huge programs for cancer control. The mass education of the people and the proper information of private practitioners in detecting precancerous lesions and early cancers are of utmost importance. The people must be convinced by treated cases that cancer is completely curable, but it must be attended to in its early or precancerous stage.

2. The Curative Treatment

The well known curative value of x-ray, radium, and surgery has stood the test of time. Until now there is no other accepted method for sterilizing cancer. Much progress has been made and is being made in radio-physics with experiments on animal cancer to find out the appropriate tissue dose or tumor dose. The technique involves the choice of high voltage roentgen rays, heavily filtered and with a long target skin distance. The problem of radiotherapists is to find an adequate dose that will effectively destroy the cancer cells without injuring the skin and the normal cells of the stroma seriously. The importance of preserving the stroma for a successful healing in cancer irradiation was recently proven by researches in this field. The interstitial irradiation has not given the results which at one time were expected. The combined application of radium and roentgen rays has a limited field of usefulness. The use of radium alone, particularly interstitial irradiation, has been largely abandoned in favor of external irradiation with high voltage roentgen rays or the radium pack.

The determination of the radiation effect (R. E.) in histological sections by Ewing and Steward of the Memorial Cancer Hospital of New York is a very helpful information to radiotherapists in obtaining the proper tumor dose, not only by exact physical calculations, but specially by the biological result of the roentgen rays on the tumor mass. The biological effect of irradiation is considered very essential at present in radiation therapy.

Surgery has been the prominent method of treatment of cancer from time immemorial; and surgeons have been active in investigations, the results of which improved their therapeutic resources and surgical technic. Many procedures of operation have been improved and new technics have been devised. The recent advances in biopsy diagnosis by the rush frozen method, the use of aspiration biopsy, the introduction of the grading of cancer, the advancement of anaesthesia, and the simple means of giving blood transfusion by blood banks, have made the surgeons more certain and determined in their operation and more confident in their results. Surgery has made a great deal of headway; and, with the tendency to group specialization, it has produced very successful and wonderful results.

Radiosensitivity does not always mean radiocurability, so a combination of surgery and radiology or vice versa is much in use. This closer coordination of treatment is the result of very careful deliberation among surgeons, radiologists, pathologists, and internists. Since, as Ewing said, "cancer is a problem," its diagnosis and treatment are not decided by only one man. In all general hospitals and even in county hospitals in America, at present, a cancer clinic is organized as a unit in which all malignancies are decided by the deliberation of the so-called Cancer Board, irrespective of the department to which the patient is assigned. In these meetings usually, twice a week, the Cancer Board decides a definite pathological diagnosis with the grading of the malignancy, its prognosis is considered, and a plan of treatment is approved for each individual patient. This coordination in diagnosis and treatment of cancer has achieved a higher percentage of cure or 5-year survival.

3. The Palliative Treatment

The palliative treatment of cancer is the most crowded field in its therapy. Hundreds and hundreds of drugs, colloidal preparations, biological substances, vita-

mins, hormones, and physical agents as cold, claiming curative values have appeared and disappeared as fast as they have failed in the rigid test of observation and statistics. Any substance or procedure in the treatment of cancer is considered successfully curative after obtaining a high percentage of a 5-year cure in comparison to surgery and irradiation. The treatment must be able to extirpate or destroy malignant cells to fulfill this requirement. However, as many substances in the body metabolism have shown their influence in the growth of cancer cells, especially hormones and vitamins, their palliative value in the treatment of cancer becomes obvious.

The recent investigation by Kinoshita in producing primary carcinoma of the liver in rats with a vitamin B deficiency by feeding them with butter yellow and rice, has led many researchers to claim the curative value of vitamins in cancer. It is interesting to note in this experiment that when the rats are fed with bread or when yeast and vitamin B extracts are administered at the same time with butter yellow, no cancer of the liver is produced. This experiment shows clearly that avitaminosis, vitamin B deficiency, is just a predisposing factor to cancer but not a true cause.

Hormones have just the same influence as vitamins in carcinogenesis and in treatment. The formation of cancers of the uterus during the proliferative phase of the endometrium and the action of folliculin injection in cancer of the breast in selected strains of mice are strong evidences in demonstrating the influence of hormones in cancer production. From these observations, some cancer clinics advise the sterilization of young married women suffering from cancer of the breast; or testosterone extract is administered to neutralize the strong effect of the ovarian hormones. The value of these palliative procedures or of the administration of vitamins and hormones as adjuvant treatments with surgery and irradiation is obvious.

In 1939, Drs. Fey and Smith of the Temple University of Philadelphia introduced the refrigeration treatment for cancer. The patient was placed in a special room; and, with a refrigerating apparatus, his body was kept continuously at a constant temperature of 80° F. for from one to four days. Cold was also applied locally to the tumor. This greatly relieved for longer intervals the suffering even in advanced cancer cases the pain of which could not be alleviated with snake venom or morphine. The authors, however, have not proved the curative effect of this treatment, for many of the cases they treated were in the advanced stage.

The Recent Advances

The recent discovery of the cyclotron by Lawrence of California, who received the Nobel Prize for it, has given a new ray of hope in cancer therapy. The direct bombardment of the growth by the fastest neutron rays emanating from this apparatus and the injection of radio-active substances produced by these rays in cases of leukemia are still under biological study and observation. Cancerologists are quite optimistic about the results they have so far obtained.

The present era means the convergence of all the trends in cancer to a well integrated study of the subject. We in this country are very fortunate that, because of the humanitarian initiative of His Excellency, the President of the Commonwealth, Manuel L. Quezon; and through the untiring efforts of the Dean of the College of Medicine, University of the Philippines and Director of the Philippine General Hospital, Dr. Antonio G. Sison; a cancer institute called the Institute of X-Ray and

Radium Therapy has recently been established and is beginning to function to provide accommodation, facilities and medical treatment for patients in the Philippines suffering from malignant diseases. As cancer is now discovered in all countries of the world irrespective of race, color, or climatic conditions, our country becomes a rich field for research studies along this line. Our observations, statistics, and investigations will surely be very interesting to cancerologists abroad as malignant manifestation of cancer in a tropical country.

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Special Article

ADDRESS OF THE PRESIDENT OF THE MANILA MEDICAL SOCIETY

JOSE Y. FORES, M.D.

Director, St. Luke's Hospital, Manila

My Colleagues, Ladies and Gentlemen:

It is in a spirit of humility and gratitude that I appear before you this afternoon to accept the leadership of men whose prestige in the medical profession has been one of the symbols of our culture and progress as a nation. I am confident that you share with me the feeling that we are favored by Divine Providence to survive the catastrophe and destruction wrought by this war in order to carry on with the sublime mission to rebuild this country of ours so that, once more, we could hold our heads high and be proud to be the bastion of civilization and democracy on this side of the Pacific. Let us regard the ruin and devastation around us as a stimulus to greater efforts towards the improvement of the health of the masses. Let us not allow personal losses to be either a source of discouragement or an incentive to advance ourselves materially. Let the courage, integrity and resourcefulness of our co-members during the siege of Manila be an inspiration for more constructive endeavors. Those brothers of ours who, in one way or another, have shown their patriotism are not bemedalled but their deeds and sacrifices will forever serve as an inspiration for all of us.

The responsibilities of the members of the medical profession in this era of reconstruction are many and varied. Either directly or indirectly each and everyone of us can contribute to the national welfare. I will mention four of these vital tasks which our colleagues should consider: (1) the responsibility of the old masters to the young practitioners; (2) our responsibility for the medical enlightenment of the public; (3) proper relationship between doctors and nurses; and (4) the responsibility of the physicians to the hospital.

In this era of rapid scientific changes, our older men who lead in their various lines of specialization should train younger assistants—in order that the latter may continue their work. Hesitancy in this regard has been very marked in various local institutions. Our younger talents should be molded by the experience and training of the older men. Our professors cannot live forever. It would be short-sighted, indeed, to ignore the potentialities of younger practitioners. Let us give them more and better chances, open laboratories for them, impregnate their minds with the value of comradeship, of honesty in their undertaking, and, above all, instill in them the value of their profession to the community. A monumental task for our older

¹ Delivered at the Inaugural Meeting of the Manila Medical Society, January 12, 1946, at St. Luke's Hospital.

specialists will be to bequeathe their achievements to those who seek to perpetuate their career. Let us encourage both governmental and private institutions to stimulate the growth, expansion and proper orientation of the youthful members of our profession. Our youth are aware of the future but unless geared properly to the right goal, they will be a national loss. It is our responsibility to guide and inspire them.

This war has been the most devastating of all wars — laying out its ruinous effect over almost three-fourths of the world's area, yet the development and progress of science during the past six years has been considered to be from ten to twenty years beyond expectation. Medicine and surgery have made continuous strides. New wonder drugs and chemicals, different instruments and appliances have appeared and are now available for our use. Experiments and clinical reports have been promising as far as control of cancer and tuberculosis are concerned. We should be aware of all these innovations. We should adopt a series of programs sponsored by our Society to depict the march of medicine. Radio broadcasts and the newspaper should be utilized not only to encourage and disseminate research but to inform the masses of our scientific progress. We Filipino physicians should initiate this plan. Leaflets and radio propoganda, which assumed a major role in this war, should be utilized for the benefit of science. It is appalling to consider how many cases of cancer have been brought to our attention in a grade IV stage and how many cases of tuberculosis have been reported for our treatment in an advanced stage. This sad situation can be remedied only with an effective health information and educational campaign.

If the University is the onset of our learning, the incubation period should be in the Hospital. In the next ten years group clinics will be the tendency of hospitalization. The physician should know the functions and maintenance of these institutions. Economy of the operating room, the importance of the laboratory as well as the creation of perfect harmony and understanding among the personnel should also be the concern of every physician. Recommend improvements, submit criticisms and the ultimate result will be efficiency and better service to the patients. The relation between the physician and the hospital can no longer be taken for granted as a mere matter of routine. Let us remember that it is a consummation of many years of study and perfect planning.

Recently the Surgeon General of the U. S. Army was quoted as saying that of the wounded who reached Army hospitals 90% were saved. I invite your attention to the ratio between 45,500 doctors on one hand and 53,000 nurses and more than 600,000 orderlies and attendants on the other. It would be incorrect to conclude that this remarkably low mortality is solely due to chemotherapy and penicillin, to whole blood and blood plasma or to the application of sound surgical principles, without giving due credit to the value of nursing care. In Corregidor and Bataan, and with various guerrilla units, nurses have shown remarkable valor and efficiency. With these accomplishments we can no longer take the "let-alone" attitude towards our sisters in the profession. We should work for the advancement of their education to suit modern changes. We should be interested in their technique as well as in the orders we give. We should develop closer comradeship. "Loyalty goes both ways, doctors should stand by nurses as nurses stand by doctors."

The medical profession has a serious responsibility in the nation's program of

rehabilitating the masses. Four years of occupation by a brutal enemy has lowered living standards, resulted in general undernourishment and malnutrition. There has, consequently, developed a general susceptibility to all sorts of diseases. Physical weakness has contributed much towards the general apathy of our people. As medical men, it is our task to go to the forefront in developing a healthy race. The results of such efforts would be incalculable.

To summarize, we seek coordination in scientific efforts among members of the profession, in order that we may render the maximum of service to the great masses of the people and the country at large.

I thank you.

THE JOURNAL
OF THE
Philippine Medical Association

Published monthly by the Philippine Medical Association under the supervision of the Council.
Office of Publication, 547 Herran, Manila, Philippines

Devoted to the progress of Medical Science and to the interests of the
Medical Profession in the Philippines.

VOL. XXII

JANUARY, 1946

NO. 1

Officers of the Philippine Medical
Association, 1941 extended to 1946
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Signed editorials express the personal views of the writer thereof, and neither the Association nor the Journal assumes any responsibility for them.

Editorial

OUR REHABILITATION

Four years ago the most destructive war in history ravaged the Philippines. A horde of ruthless invaders took possession of this country and immediately launched a systematic overall plan of imposing their ideologies on our people and of severing completely the cultural bond which bound us with the people of the United States. To escape from the sordid effect of the enemy's obnoxious propaganda and imposition, the Philippine Medical Association deftly maneuvered and parried with the enemy to be out of its clutches: it suspended in January 1942 the publication of its official organ—the *Journal of the Philippine Medical Association*—to prevent its being used as a medium of propaganda.

Now the people of the Philippines are liberated! The bond of friendship between the Filipinos and the Americans is now even stronger and their relations much closer and happier. As soon as the smoke of battle in Manila had cleared up

and the American forces of liberation had completely put to rout the enemy and re-established our Commonwealth, the members of the Council of the Philippine Medical Association met and took stock of the tremendous losses of the medical profession in general and of the Association in particular. They discussed in detail the steps to be taken for the rehabilitation of the Association and its component societies.

As they deliberated, they could not but recall the heroic deeds of those members of the profession who died or were wounded while attending to the medical needs of the fighting forces as well as of the harassed civilians and of those engaged in the dangerous underground resistance movement; the pitiful conditions of the bulk of the masses during the latter part of the Japanese occupation — utterly destitute, maltreated, sick, starved, dying in great numbers due to malnutrition; the great wanton destruction and irreparable losses our medical institutions sustained—the deaths of some of our medical leaders, the destruction of hospitals, libraries, pathological museums, laboratories, and scientific records—all of which had set back the progress of medicine in our country.

The tasks ahead are heavy and numerous and complicated. But the future is bright because the people's morale is high. With the essential aid of the Americans and with a determination to succeed, the Filipino people are rapidly rebuilding their country on the wreckage of the war. Assured of substantial help from its colleagues in America, the medical profession here faces the future bravely despite the dire aftermath of a bitterly destructive war. The medical societies in the provinces, despite difficulties that are almost insurmountable, are exerting herculean efforts to rehabilitate themselves, as can be gleaned in our section "Society Activities" appearing elsewhere in this issue. The medical profession is deeply aware of its role in the reconstruction of our country; and, in playing this role, it has adopted as its slogan Sir William Osler's statement: "The master word in medicine is work." If we were able to survive those three dark years of extreme hardship and suffering, tribulation and despair, we can certainly also meet the challenge of the future.

As this issue of *The Journal* comes off the press after a lapse of four painful years, it joins our Government in expressing its profound gratitude to the Almighty and to the people of America for the liberation of the Philippines and for the blessings of democracy.

This is the beginning of a new year. It is also the beginning of a new era. *The Journal* greets and extends its best wishes for a prosperous new year to those who have made this issue possible; the members of the Philippine Medical Association; the numerous medical entities, which used to send us their exchange publications before the war; the medical clinics abroad our forced isolation from which during the Japanese occupation deprived us of our great source of inspiration and new medical knowledge; and last, but not least, our advertisers who have given us substantial material help.—A. S. F.

Miscellaneous

ABSTRACTS FROM CURRENT LITERATURE

ABSTRACTORS

Isabelo Concepcion, M.D.
Walfrido de Leon, M.D.
Felisa Nicolas-Fernando, M.D.
Carmelo Reyes, M.D.

The Progress of Therapy, editorial, J.A.M.A. 127: (March 10) 1945.

Physicians, listing the ten most important drugs used in medicine in 1910, chose them in the following order: (1) ether, (2) morphine, (3) digitalis, (4) diphtheria antitoxin, (5) smallpox vaccine, (6) iron, (7) quinine, (8) iodine, (9) alcohol, and (10) mercury. Just five years previously the Council of Pharmacy and Chemistry had been established to eliminate from medicine the shotgun therapy based on indiscriminate empirical remedies. Out of their efforts came such works as *Useful Drugs*. The same impetus brought about intensive revision of the United States Pharmacopeia, which today, along with *Useful Drugs* and *New and Non Official Remedies*, may be said to constitute the proved armamentarium of the physician.

Tremendous advancement has occurred in the field of therapy since 1910—so great indeed that it is almost impossible to list today ten individual remedies which might be said to be the ten most important or useful in medical practice. In an effort to determine what leaders in medicine might choose as most important in 1945 the editor of the *Journal* addressed a communication to some of the professors of medicine in leading medical schools. The largest number of replies put penicillin first. In considering penicillin, however, other antibiotic drugs were added. Certainly the sulfonamides come exceedingly close from the point of view of their application under a wide variety of circumstances. At least five of the physicians consulted placed morphine first on the list of important drugs, yet many added to morphine the names of some of the barbituric and derivatives. Ether still merits a place on any list of important drugs, but today the anesthetist has access to nitrous oxide-oxygen, cyclopropane, ethylene, local anesthesia and continuous caudal anesthesia as well as the basal anesthetics injected directly into the blood. Digitalis still holds a place among the most important remedies. The diphtheria antitoxin in 1910 is now supplemented by innumerable antitoxins and vaccines established as specific against certain infections. New on the modern list are blood plasma, whole blood for transfusions, gamma globulin and all other substances derived from blood. Little was known in 1910 of the products of glands. Today the life-saving properties of insulin, liver extract, estrogen and male sex hormones, adrenal and thyroid are unquestioned. Little was said in 1910 about vitamins, but the vitamins must be included in any significant list because of their specific virtues in cases of established deficiencies such as rickets, scurvy, pellagra, and beri-beri. Questionable on any modern list would be the arsenamines. If penicillin develops as is anticipated in the treatment of syphilis, the arsenamines may go far down on any list of important remedies. Since malaria appears to be the most widespread of all diseases on the face of the earth, the quinine of previous generations must be assisted by quinacrine and other specific antimalarial remedies.

A 1945 list of the most important remedies might be:

1. Penicillin and the sulfonamides and antibiotics.
2. Whole blood, blood plasma, and blood derivatives.
3. Quinine and quinacrine (atabrine).
4. Ether and other anesthetics, morphine, cocaine and barbituric acid derivatives.
5. Digitalis.
6. Arsenamines.

7. Immunizing agents and specific antitoxins and vaccines.
8. Insulin and liver extract.
9. Other hormones.
10. Vitamines.

Physicians of long experience will answer at once to defend iron, iodine, alcohol, mercury and even aspirin. Actually the choice of the most important remedy depends on the condition with which the physician is confronted. For malaria there is no question about the value of quinine or quinacrine; for asthma, epinephrine or aminophylline would seem most important. For amebic dysentery emetine, chenicafon or carbarsane would be the choice. If the patient just happened to have post-prandial indigestion, baking soda might be considered the sovereign remedy. One of the experts put common table salt as number 4 on his list and glucose as number 5.

So great then has been the advancement of therapy that the choice of the ten most important remedies in medicine would baffle any assemblage of experts. The physical therapists might well question the entire list. The surgeons and authorities in the field of cancer would have ideas seriously varying from those of the internists. All physicians may well take great pride in all that medicine has accomplished in the past quarter century!—A. S. F.

Hemolytic Transfusion Reactions due to RH incompatibility (Manifestation of sensitivity to the RH factor many years after immunization by pregnancy), by L. E. Young and D. H. Kariher.

Routine cross matching of donor's cells with recipients' serum for demonstration of acquired isoagglutinins is inadequate.

The occurrence of hemolytic transfusion reactions due to RH incompatibility in three women emphasizes the following points:

- (1) Serious hemolytic reactions may follow transfusion without causing chills, fever or other dramatic symptoms or signs.
- (2) Sensitivity to the RH factors once it is acquired, may persist for many years, probably for life.
- (3) RH incompatibility is often unpredictable by any sort of *in vitro* matching test.
- (4) Prevention of such reactions consists only in always giving RH negative bloods to RH negative patients.

An RH negative patient who has a minor transfusion reaction if given another transfusion of RH positive blood may have a more violent reaction which could prove fatal.—A. S. F.

The Value of Penicillin in the Treatment of Empyema, by J. W. Hirshfeld et al. J. A. M. A., 127, 1945.

Unlike the sulfonamides, penicillin is not inhibited by pus or other products of tissue destruction. This property of penicillin has led some workers to treat empyema by aspiration of pus followed by instillation of penicillin when causative bacteria are susceptible to penicillin. The authors summarized their observation as follows: Use Penicillin:

1. To cure small empyema without localization, lung sequestrums or bronchial fistulas.
2. To make large empyemas smaller.
3. To tide over a critically ill patient until he can be operated on safely.

They cited 13 cases, selected from those they have treated with penicillin at the City of Detroit Receiving Hospital to illustrate those points.

They commented that those responding to penicillin are chiefly the cases that have been detected relatively early when the pus is thin and those in which none of the complications described are present. By means of penicillin and aspiration a large empyema can often be transformed into a small one that the lung can obliterate more quickly after rib resection. If the patient becomes afebrile and the fluid decreases in amount, becomes sterile on culture and resembles the penicillin that was injected, satisfactory progress is being made.—F.N.F.

Biologic Value of Soy Protein, editorial, J.A.M.A. 127: 279 (Feb. 3) 1945.

The possibility, emphasized by the war, that the large quantities of soybeans raised in the United States might provide human food which could be substituted for more expensive or less readily available nutrients ordinarily consumed has received attention in the present national emergency. The dry seeds contain about 34 per cent protein; as some 216,000,000

bushels was produced in 1944, this legume represents a tremendous reserve of food protein, provided it is physiologically available in the body. In a recent experimental study (Cahill, W. M., Schroeder, L. J., and Smith, A. H.: *J. Nutrition* 28: 209 [Sept.] 1944) comparison of the net retention of nitrogen by adult human subjects when soybeans provided the protein with the same values when whole egg was the main protein of the experimental diet was measured. Soybean protein in three forms was studied: as whole cooked, field beans, as commercial low fat soyflour and as a prepared soybean milk. The true digestibility of the protein in the 3 products was 90.5, 94.0 and 89.6 per cent respectively when compared to whole egg protein. These values are somewhat lower than those for food proteins of animal origin but superior to those usually observed with other legume protein. With respect to the biologic value of soybean protein, the values were 94.5, 91.7 and 95.3 per cent respectively, indicating that, tested under the conditions used in the experiment, soybeans in the forms employed can be considered an excellent source of protein in adult human nutrition.

In view of the current enormous production of soybeans in the U. S. its national nutrition, as far as protein is concerned, is amply safeguarded against any extensive emergency. Likewise, in the occasional instances in which usual food protein is not well tolerated, the soybean offers additional possibility of diet therapeutic adjustment with respect to protein nutrition.—F.N.F.

Treatment of Vincent's Angina with Sulfathiazole, by Lt. Comds. William W. Manson and I. T. Craig (MC) U.S.N.R. *J. A.M.A.* 127: 277 (Feb. 3) 1945.

The presence of Vincent's organisms in the smears taken for microscopic study should not be a basis for diagnosis (for these are frequently found in normal mouth) of Vincent's angina in the absence of clinical symptoms and signs, but when a patient is seen who has a sore throat, elevated temperature, a membrane on the throat or tonsil with a necrotic tonsillar ulcer and a smear showing numerous fusiform bacilli, and *Borrelia*, it can definitely be stated that the Vincent's organisms are the cause of the conditions.

The authors cited Linton (Linton, C. S.: *Treatment of Vincent's Angina of the Tonsil*, *J.A.M.A.* 123: 341 [Oct. 9] 1943) who reported 4 cases treated with sulfathiazole dissolved on the tongue, and his results were very satisfactory; the treatment time on the average has been cut from 10 days to 72 hours. The treatment consists of a 0.50 Gm. sulfathiazole tablet dissolved on the tongue every 2 hours during the day and 2 such tablets dissolved in the same manner every 4 hours at night. Lesions cleared up in 96 hours after beginning treatment.

The authors reported a series of 36 cases treated by the method described. The total dosage in these cases being 18 Gm. The milder cases received forty-eight hours of treatment for a total of 12 Gm. Results were very satisfactory. Average sick days were 3.75.

The results have been so satisfactory that the authors have adopted this method as the routine treatment of all cases.—A.S.F.

SOCIETY ACTIVITIES

Philippine Medical Association.—The Council met for the first time since the liberation on August 18, 1945 at the St. Luke's Hospital, immediately after the banquet the Association gave in honor of Dr. José C. Locsin, newly appointed Secretary of Health and Public Welfare. The abstract of the minutes is follows:

1. The Council appointed Dr. Antonio S. Fernando Secretary-Treasurer, vice Dr. C. D. Ayuyao, who died August 18, 1944. Dr. Fernando expressed his willingness to serve again in this position but called attention of the Council to the fact that all the records, equipment, publications, bank books, and the Library of the Association had been completely destroyed during the Battle of Manila, February, 1945.

2. The President, Dr. De Dios, submitted the following report of his activities during the Japanese occupation:

REPORT OF THE PRESIDENT OF THE PHILIPPINE MEDICAL ASSOCIATION FROM JANUARY 2, 1942 TO JULY 1945.

During the Japanese occupation, the Philippine Medical Association did not have any social or scientific meetings. In those days I was told several times by someone to reactivate the medical societies in the Islands as the Japanese officials wanted the medical societies to be active. But knowing the peculiar habits and rules of the Japanese people and the oppressions and hostilities imposed on the Filipinos, it was very dangerous for the members to associate with the Japanese officials. I, therefore, decided not to have any meetings or gatherings to which the Japanese would participate.

In December 1943, a conference on medical sciences was held in Manila. I, as president of the Philippine Medical Association, was appointed member of the different committees. A tea party was proposed to be given by the Philippine Medical Association in honor of the invited guests from Japan. I immediately opposed the proposition as I considered it a disloyal act of the Philippine Medical Association to the American Medical Association to which our association is affiliated, to honor the Japanese officials. Besides, I wanted to avoid the Japanese from having any access to our association. Then I proposed that the tea party be given by the medical profession in the Philippines, and it was accepted.

I, as president of the Philippine Medical Association, was invited to several conferences and public hearings on certain medical problems. In view of the abnormal conditions, I was unable to call a meeting of the members of the council for consultation; so, whatever I expressed in those conferences, was of my personal opinion.

When the American forces liberated Manila from the enemies, I immediately tried to contact other members for the purpose of organizing a general meeting of the physicians living in and around the vicinity of Manila for the reopening and resumption of the activities of the Philippine Medical Association and of its component societies. The first meeting was held in San Lazaro Hospital in which an open forum took place with speeches of General Valdes, Dr. José Guidote and Major O'Brien. Dr. Valdes, the then acting secretary of Health and Public Welfare, had enlightened the members on certain medical problems.

Concerning the property on Taft Avenue of the association, the council was able to transfer the mortgage from the Philippine National Bank to a private individual, otherwise, this property would have already been sold in public auction by the bank. In view of the precarious condition in 1941 and in the early part of 1942, the association failed to pay the bank several monthly installments and interests. The bank had sent me several letters demanding the payment of back installments and interests. Then the members

of the council had made certain efforts by collecting little amount from themselves in order to pay the interests, but as the condition was getting worse the members of the council stopped their contributions. The bank continued to send me strong letters demanding immediate payment. At this critical situation, the council decided to sell the property, but nobody wanted to buy it for over P12,000.00, which was the obligation of the association to the bank. The next step taken by the council was to transfer the mortgage to another party. The council was unable to find any person who could accept the mortgage on the property for P12,000.00. I finally approached my brother who, on my behalf, accepted the mortgage under the same conditions imposed by the bank. Since the transfer, the monthly installments and interests were not paid by the association.

Other properties of the association as the library, journals, scientific papers and records were burned or lost. Some of these scientific papers and records are essential for the holding of annual conventions and for the continuance of publication of the Journal of the Philippine Medical Association. The gathering of necessary records is made more difficult by the death of our secretary-treasurer, Dr. Conrado D. Ayuyao. I have requested Dr. Antonio S. Fernando to gather some records and other data which may serve as guide for the proper management and activities of the association.

The war is over, but the work of the Philippine Medical Association to resume its activities and revive its component societies is just beginning. Our association should advise the officials of the different component associations to resume activities as soon as possible so that we can hold our annual convention in the near future. The members of the Philippine Medical Association are far behind in medical progress for the last three years and to keep pace with this progress, we have to establish communications with other medical centers in other countries and to hold frequent scientific meetings. Thru our association we can ask help from other people for the speedy rehabilitation of our medical association. We are very fortunate that at this hour of supreme effort, we have with us Dr. Jose C. Locsin as Secretary of Health and Public Welfare, who knows very well our problems and is very much interested to improve the economic and social conditions of the medical profession.

Respectfully submitted by,

(Sgd.) DR. VICTORINO DE DIOS,
President, Philippine Medical Association

3. The Council decided to hold the next Annual Meeting in Manila, the date tentatively set was May, 1946.

4. The Council approved a motion to resume the publication of the Journal starting with the January 1946 issue.

5. The Council, on behalf of the Association, unanimously approved the following Resolution congratulating Dr. José C. Locsin on his appointment as Secretary of Health and Public Welfare:

RESOLUTION CONGRATULATING DR. JOSE C. LOCSIN,
NEWLY APPOINTED SECRETARY OF HEALTH AND PUBLIC WELFARE

WHEREAS, the President of the Philippines has recently appointed Dr. José C. Locsin Secretary of Health and Public Welfare, which appointment was readily confirmed by Congress;

WHEREAS, this appointment is a just and official recognition of his high merits to assume this elevated position in the high councils of the Government as well as a well-deserved appreciation of his long and brilliant service in the different executive and legislative branches of public service in the past;

WHEREAS, Dr. Locsin has won the admiration and respect of the medical profession for his great concern and keen interest in the varied problems of State Medicine; and

WHEREAS, Dr. Locsin has endeared himself to the members of medical associations for his labors to bring about their unity, harmony, welfare and advancement;

THEREFORE BE IT RESOLVED, by the Council of the Philippine Medical Association, in meeting assembled, to extend, as it hereby extends, its hearty congratulations to Dr. José C. Locsin and its best wishes for his successful administration."

With regard to the help which the American Medical Association will extend to the Philippine Medical Association the following letter is published for the information of our members:

"AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street,
Chicago 10
Nov. 16, 1945

Dr. A. S. Fernãdo,
Maternity and Children's Hospital,
2134 Oroquieta, Manila, Philippines.
My dear Doctor Fernando:

I am very greatly pleased to have your letter of October 29.

Doctor Paullin, immediately after his return from a tour of duty in the Pacific area, forwarded to me a long statement based on his conversations with Dr. Sison and others associated with him, which will be presented to our Board of Trustees at its meeting to be held here the last of this month.

Doctor Paullin regrets that he did not have opportunity to see you and Doctor De Dios as he had intended to do. His statement to be submitted to the Board of Trustees was rather comprehensive and was intensely interesting. It was quite evident that Doctor Paullin was greatly impressed by what he saw and heard while he was in Manila.

Our Subscription Department informs me that the Journal for the years 1942 to 1945 inclusive has been reserved and will be forwarded to you as soon as necessary postal service has been reestablished.

In the meantime I am giving instructions that two copies of The Journal be sent to you as secretary of the Philippine Medical Association each week and that two additional copies be sent to Dr. Antonio G. Sison, Dean of the College of Medicine, University of the Philippines, for the university library.

We have the promise of some bound copies of the Journal of the American Medical Association and copies of one or more other scientific medical publications which, as soon as we can secure them and the postal service is available, will be forwarded to you or to whomever you may designate for the medical library in Manila. There will be no charge for one year for the four Journals to be forwarded to you and Doctor Sison nor will there be any charge involved in forwarding the bound copies of The Journal and copies of other periodicals made available to us by Dr. Peter Bassoe, a distinguished neurologist of Chicago, whose death occurred about a week ago.

With most cordial good wishes, I am

Very truly yours,

(Sgd.) OLIN WEST
Secretary."

The Manila Medical Society.—This society met for the first time since the liberation on August 25, 1945. Drs. H. Lara and Jose Y. Fores were sworn in as President and Councilor, respectively. Dr. J. Estrada, the out-going President, made some remarks.

The Society held its first scientific meeting at the North General Hospital on September 15, 1945. Dr. Kuhns, a Colonel of the Army, Medical Corp, read a paper entitled: "Infectious Hepatitis." At the business meeting, Dr. Paulino Garcia and Dr. Luis F. Torres, Jr., were elected temporary Vice-President and Secretary-Treasurer, respectively, to serve until the regular election was held.

The second meeting was held at the St. Luke's Hospital on October 6, 1945, with Lt. Col. Hartwell as guest speaker who read a paper on "Healing Process of Surgical Wounds and Burns."

At the November meeting the regular election was held, the results of which were as follows:

President Dr. José Y. Fores
Vice-President Dr. Fè del Mundo
Secretary-Treasurer Dr. Luis F. Torres, Jr.

Councillors:

Dr. C. P. Manahan
Dr. J. Z. Sta. Cruz
Dr. Paulino Garcia
Dr. L. Pardo
Dr. S. Francisco
Dr. J. Guidote

The December meeting was held at the Philippine General Hospital with Brig. General J. I. Martin (M. C.) as guest who spoke on "Recent Advances in Army Medical Practice During the War with Special Reference to Mediterranean Theatre."

The Cavite Medical Society.—The President of the Society, Dr. Teodorico A. Jimenez, reported that he successfully evaded sure death in the hands of the Japanese by hiding in the mountains. He called the first meeting of the Society on September 30, 1945, after the liberation; and it continues to hold meetings twice a month since then, taking advantage of the presence of American physicians in the Cavite Navy Yard Hospital, who addressed them on different subjects. On October 28, 1945, the Society started to publish a short bulletin. At the meeting of September 30, the following papers were read:

1. The causes and effects of ill-health among the Filipino people during the three years and four months of Japanese occupation in the Philippines—Dr. Lazaro Udazco.
2. The skin diseases prevailing among the Filipinos during the Japanese regime—Their symptoms and treatment—Dr. José N. Rosal.
3. Treatise on some of the latest developments in the medical field and modern methods of treatment instituted—Dr. Eugene L. Spohn, Commander, Cavite Navy Yard Hospital Base.

On October 14, the papers were the following:

1. Sodium pentothal anesthesia.—Dr. Pacifico T. Arca.
2. Progress of health and sanitation in the City of Cavite.—Dr. Leo M. Carson, Chief Medical Officer, Seaplane Base Cañacao.

On October 28, the following doctors presented the scientific papers:

1. Dr. Jesus C. Tranquilino: Unusual types of typhoid infection in the Philippines.
2. Dr. Laureano D. Bautista: On the new aspects of tuberculosis.
3. Treatise on modern medical discoveries—Commander Piper, Senior Medical Officer, Cañacao Seaplane Base Hospital.

The Laguna Medical Society.—The President of the Society, Dr. Ricardo Raymundo, in his letter of October 19, 1945 reported to the P. M. A. that "the Laguna Medical Society was already reorganized and since the liberation of the City of San Pablo on April 8, we have had four meetings at which many interesting papers were read by American Army doctors and local medical practitioners; the former, on their experiences in the use of the "miracle drugs"; namely, penicillin, the human plasma, and the sulfa-drugs, while the latter, on their experiences during the Japanese occupation."

The La Union Medical Society.—The Society according to its President, Dr. Tirso Coronel, was reorganized on October 31, 1945 at the meeting held in Bacnotan. It has 16 members in its roll. The officers of 1941 were requested to continue holding their offices until December, 1945, when an election will be held.

The Nueva Ecija Medical Society.—On November 18, 1945, this Society was organized with the following newly-elected officers:

President	Dr. Rafael Teopaco
Vice-President	Dr. Melquiades R. Ronquillo
Secretary-Treasurer	Dr. Herminia Castelo-Sotto
Councillors:	Drs. Jose A. Vidal, Peregrin de Guzman, Carlos V. Villaroman, Gregorio Borja, Patrocinio V. Giraldez, and Irineo Rodriguez.

There were 18 members registered.

The Bohol Medical Society.—This Society, according to its acting Secretary, Dr. V. de la Serna, was reorganized on November 19, 1945, with 13 members in its roll. The Society approved a "resolution extending its most cordial congratulations to Dr. José C. Locsin upon his appointment as Secretary of Health and Public Welfare." Another resolution approved was to request the American Medical Association, thru the P. M. A., to send some recent medical publications to the Society.

The Davao Medical Society.—The first meeting was held on July 29, 1945, reactivating the Society, with vice-president Dr. Ebro presiding in place of the former President Dr. Juan Santos Cuyugan, who was killed by the Japanese. On August 5, Capt. Salinger spoke on "Clinical aspects and therapy of malaria and amebiasis". On August 12, Major Anderson spoke on "Newer Aspects of Sulfa Drugs and Penicillin." On August 19, Major H. Hodgins addressed the Society on the subject "Public Health". The Society reported several casualties among the members during the Japanese occupation.

The Mindoro Medical Society.—This new Society was recently organized with the following officers: Dr. Jose Villegas, president; Dr. Mariano L. Ylagan, vice-president; Dr. Emilia M. Cerrea-Luna, secretary-treasurer; Drs. Francisco S. Infantado, Prisco S. de Joya, Rodolfo A. Ignacio, Abelardo Bunag, Jacinto Leviste and Felix C. Alegre, councillors.

A NEW SOCIETY OF SPECIALISTS ORGANIZED.—The "Philippine Ophthalmological and Otolaryngological Society" was formally organized on November 25, 1945, at the organization meeting held at the North General Hospital, Calle España, Manila. The purposes of this Society "shall be to promote the science and art of Ophthalmology and Otorhinolaryngology and the betterment of public health as well as to promote the practice of these specialties in the Philippines."

Almost all of the eye, ear, nose and throat specialists in Manila and a few from near-by provinces attended. Those old in the practice were also present, like Dr. Victor Sevilla and Dr. Aristeo R. Ubaldo, and their participation in the organization lent much enthusiasm to those present. It is in the Constitution of the Society the provisions to build a library with the so-called "library package service," particularly for the benefit of members in the provinces; the holding of bi-monthly meetings; the encouragement of research by granting awards to highly meritorious contributions to these special branches of medical science; the giving of short practical post-graduate courses to young specialists on timely subjects by members who are considered most qualified; the active participation, as a distinct and separate section, in the Annual Meetings of the Philippine Medical Association.

NEWS ITEMS

[Physicians are requested to send for this section news items of interest to the profession.]

LOCAL:

Dr. Hans Meyer petitioned the President of the Philippines on August 15, 1945 "to recommend to the Board of Medical Examiners that I be granted a licence to practice medicine as an exceptional case" . . . The Chairman of the Board of Medical Examiners in his endorsement of August 24, 1945 and the Secretary of Health and Public Welfare in his endorsement of August 30, 1945, recommended to the President that because of the requirements of the existing law his petition be denied.

Dr. Hans Meyer is one of the eleven German Jew physicians who took the Board examinations in 1939 the results of which were not released by order of the Court of First Instance of Manila in its decision in Civil Case No. 55524, entitled "Dr. Pedro Gil, petitioner, vs. Martin R. Cruz, Manuel Ramirez and Manuel Quisumbing as members of the Board of Medical Examiners, respondents.

Drs. Hilario Lara, Walfrido de Leon and Agerico B. M. Sison enplaned for the United States recently as guests of the Rockefeller Foundation. They will stay there for several months.

On October 19, 1945, Captains Conrado B. Icasiano and Gustavo U. Reyes of the Philippine Army, went to the United States to take a course in Tropical Medicine.

Paulo C. Campos copped first place in the physician examination given by the board of medical examiners in Manila on August 14, 16 and 18, 1945. A total of 99 candidates passed in the examination. The first five highest who passed were as follows: Paulo C. Campos, Buenaventura Angtuaco, Cesar de Padua, Rodolfo Madlangasacay and Alejandro C. Reyes. Clarita M. Mercado was the topnotcher in the preliminary physician examination, according to report.

The Philippine Pharmaceutical Association celebrated last month its silver anniversary.

Mr. Perry Burgess, of the Leonard Wood Memorial Organization and the American Leprosy Foundation of New York, after an inspection trip to Culion Leper Colony, recommended that a new center be established in the province of Bulacan for the care, treatment and study of leprosy to replace the existing colony at Culion. The reason seems to be that it would be much easier to obtain qualified physicians and experimental workers if the leprosarium is at Bulacan rather than its present location.

Radiologists of the United States Armed Forces and Filipino civilian radiologists organized in July 1945 the Manila Roentgen Ray Society with the aim in view of fostering scientific relationship. It has now 40 members.

The United States House of Representatives passed December 19 and sent to the Senate a compromise deficiency bill which included \$1,000,000 for public health program in the Philippines. Part of this money may be used for leprosy work.

Tuberculosis has increased twofold and one Filipino dies of the disease every fifteen minutes due to overcrowding, malnutrition and poor health education, Director of Health Arenas was reported to have stated.

FOREIGN:

Edward Stitt Awarded Medal in Tropical Medicine.—A gold medal and an honorarium of \$500 for outstanding service in the field of tropical medicine were presented February 5 by the American Foundation for Tropical Medicine to Rear Admiral Edward R. Stitt (MC) retired, formerly Surgeon General of the U. S. Navy. The presentation was made on behalf of the Foundation by Col. Richard Pearson Strong, (MC), director of Tropical Medicine at the Army Medical School, Washington, D. C., last year's recipient of the Award and the person for whom the medal was named. The medal and honorarium were established in 1944 by the Winthrop Chemical Company. Known as the Richard Pearson Strong Medal and bearing a profile of Colonel Strong on its face, it is to be awarded annually for distinguished service in tropical medicine. In conferring the Award Colonel Strong declared that "Admiral Stitt is an exponent of scientific truth in his medical publications and reviews. His leadership, inspiring example and devotion to work in the field of tropical medicine through many years have justly won for him the epithet of 'Father of Tropical Medicine in the United States.'" In 1913 he wrote the first American text book of tropical medicine. Among other positions held by Admiral Stitt are those of Surgeon General of the U. S. Navy from 1920 to 1928 and professorships

in the schools of Tropical Medicine at Georgetown University, George Washington University and the University of the Philippines. The principal speaker at the presentation meeting at the University Club, New York, was Maj. George C. Dunham, (MC) of the Office of the Coordination of Inter-American Affairs, who spoke on "Tropical Medicine and International Relations."

The Second Pan American Congress of Ophthalmology was held in Montevideo on November 26, 1945. The President is Dr. H. S. Gradle and the Executive Secretary is Dr. Moacyr E. Alvaro of Brazil. Subjects on the program included diagnosis and therapy of pre-glaucoma, gonioscopy, evaluation and mechanism of destructive effects of ocular hypertension, need of early operation in glaucoma, duration of medical therapy in glaucoma. Also surgery of strabismus and heterophoria; contact lenses; trachoma.

The Kellogg Foundation, according to Dr. Gradle, offers 25 fellowships for post graduate studies of the specialty.

Sir Buckston Browne, a genito-urinary surgeon, died at the age of 94. He gave the Royal College of Surgeons in 1911 \$500,000 for an institution where surgical problems could be investigated. Also gave it \$25,000, the interest on which provides an annual dinner at the College of Surgeons for Members and Fellows. Lord Moynahan stated that Browne took his place for all time among the "immortal benefactors."

The Academy-International of Medicine and Dentistry (suite 101 Liberty Bldg., Topeka, Kansas) initiated, according to Dean A. G. Sison of the College of Medicine, University of the Philippines, a campaign for medical publications to be donated to the library of this College.

The College of Medicine has already accepted the formal offer made by Dr. George T. Pack to "donate an entire medical library through the efforts of the American Physicians."

The 1945 Nobel prize for physiology and medicine has been awarded to Sir Alexander Fleming, discoverer of penicillin, and two of his co-workers, Dr. Ernest Boris Chain and Sir Howard Walter Florey. The three will share equally in the prize, which amounts to about \$30,000.