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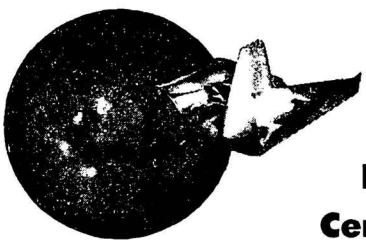

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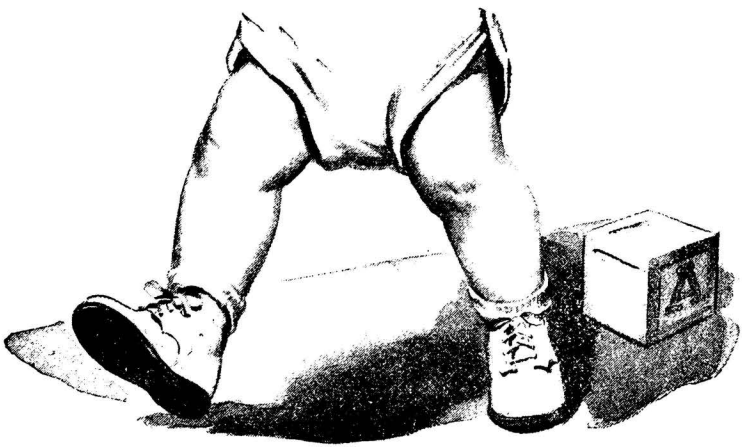

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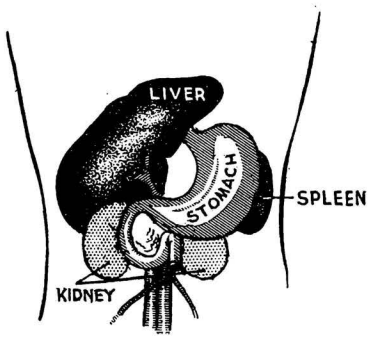

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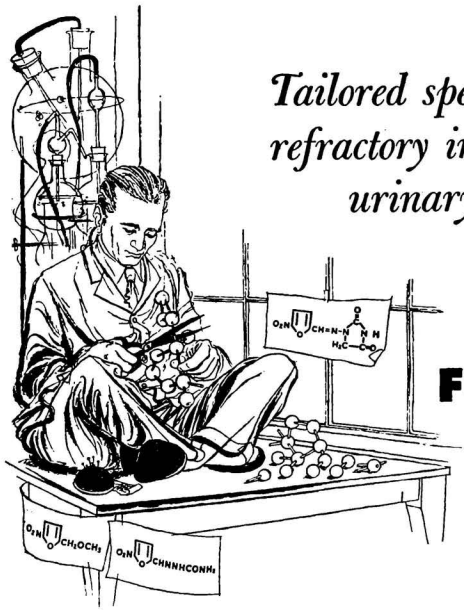

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Original Articles

DIHYDROSTREPTOMYCIN IN LEPROSY CASES IN THE ARMED FORCES OF THE PHILIPPINES

A Preliminary Report *

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V. Luna General Hospital (AFP)

Maj. D. M. Garduño

Two decades ago, chaulmoogra oil and its derivatives were standard treatments for leprosy, just as neosalvarsan and bismuth were to syphilis. In this atomic age, penicillin is to syphilis as cortisone is to rheumatoid arthritis, chloromycetin to typhoid, and dihydrostreptomycin and sulphone to leprosy.

It is undeniable that, with the time-honored chaulmoogra oil, tedious years of treatment are necessary to attain amelioration and arrest of the ravages of leprotic infection. Now, within a relatively much shorter period, modern therapy can produce the same degree of improvement and earlier health rehabilitation.

In 1951, the *Journal of the Philippine Medical Association* publish an article on dihydrostreptomycin in an early case of cutaneous leprosy in the AFP. A follow-up one year after the patient was discharged as an arrested case of leprosy revealed that he had remained clinically and bacteriologically negative.

Dr. Jose O. Nolasco, chief pathologist of the Culion Sanitaria has confirmed my diagnosis of lepromatous leprosy of the serial histological sections of the first case mentioned. Had my first case turned out to

* Read before the scientific meeting of the Manila Medical Society on 16 June 1953 at the V. Luna General Hospital, Kamias, Q.C.

be a tuberculoid masquerading as a lepromatous, good results reported would have been nullified and attributed, not to the action of dihydrostreptomycin, but to a spontaneous regression often observed among tuberculoid cases.

There should be no room for doubt as to the anti-leprotic action of dihydrostreptomycin. Drs. Erikson and Johannsen of Carville Leprosarium reported in the *Journal of American Medical Association*, in 1951, encouraging and successful results with this antibiotic in some leprosy cases. Dr. B. M. Saenz of Cuba, in an article in the *Archives of Dermatology and Syphilology*, in 1952, reported beneficial treatment of lepra reaction with dihydrostreptomycin. Dr. Jose N. Rodriguez, in 1952, tried dihydrostreptomycin in a number of lepromatous cases at the Cebu Sanitaria, and reported very encouraging results.

This is a preliminary report on 36 leprosy cases treated with dihydrostreptomycin, alone and in combination with promin (Dextrose sodium sulfonate) and PAS tablets.

TYPE OF LEPROSY

Out of the 36 cases, 19 were lepromatous, 16 were tuberculoid, and 1 was neural. This classification was based on clinical manifestation, bacteriological findings, and histopathological pattern. Almost all the cases were early. The yearly physical check up in the AFP have contributed to the early detection of leprosy cases.

AGE GROUP AND DURATION OF ILLNESS

The youngest in the group is 19 years old, and the oldest 64 — giving an average age of 41 years. The duration of illness before treatment was started ranged from as early as one month to as late as 7 years, giving an average duration of illness of 3.6 years. This information is tabulated as follows:

TABLE 1 — *Age Group*

Below 20 years	Above 20 years & below 30 years	From 30-40 years	From 40 above	Average Age
1	20	14	1	41

TABLE 2 — *Duration of Illness*

1-2 months	3-4 months	5-6 months	Below 1 year to 1 year	2-3 years	4-7 years	Ave. Duration of Illness
10	6	3	9	4	4	3.6 yrs.

CLINICAL MANIFESTATIONS

Leprosy, like syphilis, is acquired by contact. By a strange coincidence, the pathogenesis of the two diseases bear a striking similarity. The primary lesions of syphilis — its dermal manifestations, the syphilides; the early lesions of leprosy — the depigmented areas, the pinkish reddish

macules, and the anesthetic areas — all these make their appearance after a successful systemic invasion has taken place (after a short incubation period of 10 - 90 days for the former, and 6 months to 30 years for the latter.)

Again, like syphilis, the clinical manifestations of leprosy are protean in character. To illustrate a few cases:

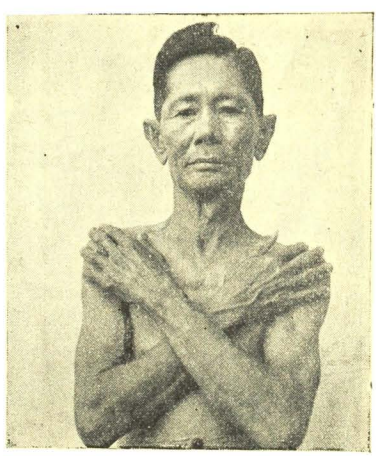
Case 9 (D S group). A sailor had a spot of anesthesia above the right knee, dotted with a mosquito-bite-like papule which was bacteriologically positive for M. leprae.

Case 6 (D S and Promin group). Another sailor was hospitalized for a bladder contracture, for which he was operated on. One month later, while recovering from the operation, he developed a discrete 10¢-size nodule on the left cheek. This was soon followed by reddish infiltration of both alae nasi; and several weeks later, by multiple nodules on the trunk and extremities. All the while, the left great auricular presented a tender and hard enlargement the size of an ordinary lead pencil. The nodule on the left cheek blossomed into a 3-inch diameter lupoid-like eruption, which ulcerated on the least trauma. In a few months, the left great auricular had enlarged to the size of a thumb.

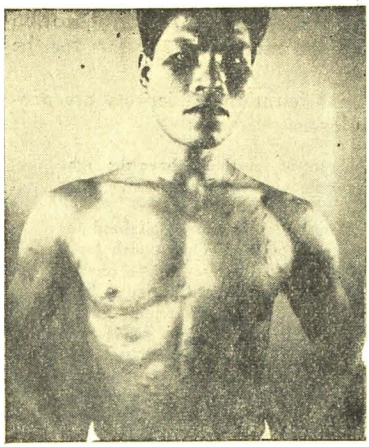
Case 2 (D S and Promin group). A Philippine Military Academy cadet had verrucosé and eczematous-like eruptions on the left palm and left knee, both lesions being anesthetic, fungus, and acid-fast free. The regional ulnar nerve and common peroneal nerve were moderately enlarged. This case recovered uneventfully, with a one-year essentially negative follow-up.

Case 7 (D S group). Another soldier exhibited a ringworm-like lesion on the nape of neck, which was negative for fungus and acid-fast, but positive for sensory disturbance.

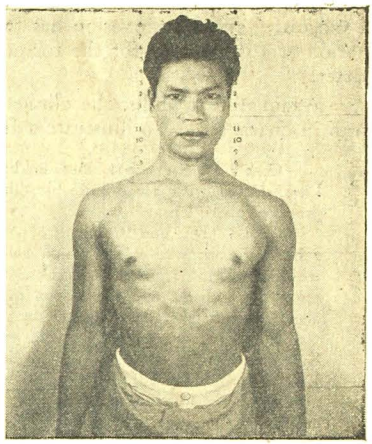
Before Treatment
Lepromatous Case 4 DS group



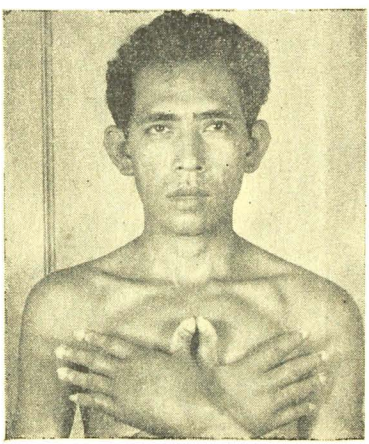
After Treatment
Lepromatous Case 4 DS group. CRS. Negative after 1 yr. and 3 mos. hospitalization.



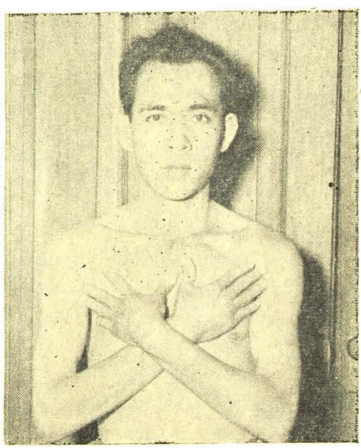
Before Treatment
Lepromatous Case 7 in DS-PAS group.



After Treatment
Lepromatous Case 7 in DS-PAS group. After 6 months hospitalization. MMRS. Still positive bacteriologically.



Before Treatment
Lepromatous Case 17 DS group.



After Treatment
Lepromatous Case 17 DS group. CRS after 10 months hospitalization. Negative bacteriologically.

Case 4 (D S group) and Case 5 (D S and Promin group). Two soldiers were hospitalized and discharged improved because of neuritis of lower extremities and slight foot drop; one to two years later, a second hospitalization revealed nodular eruptions on the face and different parts of the body, in addition to aggravation of neural disturbances.

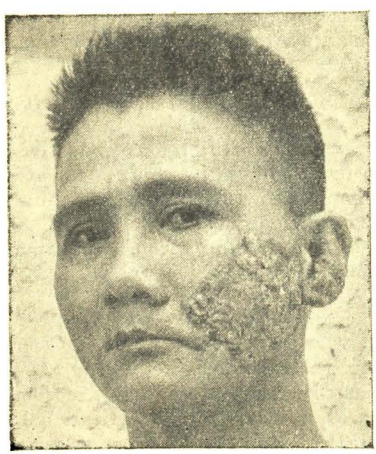
In almost all the cases, one or two of the nerve trunks, usually the great auricular or the ulnar nerves, are enlarged and tender; and the cases usually start with areas of anesthesia somewhere on the extremities, followed sometime later by a depigmented area or a pinkish macule.

Case 3 (D S and Promin group). In addition to scattered areas of reddish infiltrations, neuritic and joint pains, this patient presented muscular atrophy of the interossei of the left hand and contracture of two digits on admission.

Lepra Reaction: Lepra reaction, as we know, is the reactivation of latent lepra lesions and the activation of new lesions, associated with varying degree of systemic manifestation. There were instances of lepra reaction which have hastened the resolution of leprotic lesions. On the other hand, persistent and refractory lepra fever was observed to have aggravated the disease.

Leprologists both here and abroad have recommended the temporary suspension of the anti-leprotic medication in the presence of lepra reaction, and the institution of supportive and symptomatic treatment.

Five cases in the D S group, and one in both D S and Promin groups and D S and PAS groups, who had moderate lepra reaction at the start recovered pari passu with the regression of the leprotic lesions. Only one case in each of the D S and PAS groups developed lepra reaction in the course of treatment, and both of them recovered uneventfully.



Lupoid-like lesion of Case 6 in DS-Promin group. Very resistant to treatment. SIS.

The slight to severe neuritic and joint pains, the varying degrees of fever and chills, the anorexia, nausea and vomiting, headache, extreme malaise, the kerato-conjunctivities, which were observed in lepra reaction cases in this study have responded dramatically to dihydrostreptomycin even during the first month of treatment.

LABORATORY FINDINGS

The lepromatous cases showed positive smears for M. leprae ranging from 2 plus to 4 plus. Two tuberculoid cases gave a 1 - 2 plus positive smears. Smears were taken from the skin and nasal septum. The Wade method of skin smears was practiced. Six negative smears taken from a clinically negative case at monthly intervals were sufficient to establish an arrested case.

CBC and urinalysis were essentially normal before and after treatment. The sedimentation rate was normal in most of the cases, and slightly to moderately elevated in those cases with lepra reaction.

Serology: All cases were negative for Kahn.

Biopsy: Two histological sections of nerve tissues were unsatisfactory, as they showed uncharacteristic findings. Almost all the biopsies were from the skin at the border of the lesion and from the normal skin. The diagnosis of tuberculoid was based on the findings of perivascular round-cell infiltration, collection of round cells and epitheloid cells around glands and follicles, in addition to the presence of macrophages, histiocytes, etc., all in accordance with Wade's criterion of tuberculoid leprosy histo-diagnosis. A lepromatous pattern was based on the presence of giant cells and foam cells, the lepra cells of Virchow, with or without acid fast organisms, the globi in the tissues, in addition to perivascular, periglandular, perifollicular round cell, and epitheloid infiltration.

RADIOLOGIC CHEST FINDINGS

Five cases presented minimal fibroid to exudative tuberculous lesions radiologically, with repeated negative sputum for acid fast. Four cases showed findings compatible with chronic bronchitis. The rest of the cases were diagnosed radiologically healthy chest. All those with chest findings cleared up after treatment, with the exception of two cases with exudative tuberculous lesions.

MODE OF TREATMENT

The 36 patients were divided into 3 groups — namely, the D S group of 20 patients to whom only dihydrostreptomycin was administered; the D S and Promin group of 6 patients on whom a course of dihydrostreptomycin was followed by promin (dextrose sodium sulfonate) injections; and the D S and PAS group of 10 patients to whom dihydrostreptomycin was given simultaneously with PAS tablets (para amino salicylic acid).

In the D S group, each patient consumed an average of 60 grams of dihydrostreptomycin, divided into 0.50 gram daily, and given in two intramascular injections. In the D S and Promin group each patient was given an average of 66 grams of dihydrostreptomycin, in the same manner as in the first group. Into each patient, an average of 103 ampules of promin were shot intravenously, following the course of dihydrostreptomycin. In the D S and PAS group an average of 71.2 grams of dihydrostreptomycin was given in two courses — the first course lasting 120 days, and after an interval of 2 months, followed by a second course of 60 days in uniform daily dosage of 0.50 gram, in addition to a simultaneous per orem of 437.1 grams of PAS per patient.

Intradermal injections of dihydrostreptomycin from 10 grams to 15 grams (20 — 30 doses) supplemented the intramascular injections when lesions like nodules and thickened infiltrations persisted in their positivity bacteriologically.

Supportive treatment like vitamins, 5% dextrose solution, amigen in dextrose, sedatives, etc., were instituted whenever indication demanded.

CUTANEOUS LESION CHANGES

Representative skin lesions observed among the 36 cases and their response to treatment are described as follows:

1. Macules, pale, hypo-pigmented, 2 cm. — 10 cm. diameter, mostly oval in shape, non-elevated borders, completely anesthetic, usually negative for M. leprae, located on the extensor surfaces of extremities, face, and trunk, not more than one or two in number. Slight to moderate regression.

2. Pinkish macules with fading center and raised outer zone, dotted with reddish, minute papules with gyrate borders at times, anesthetic and acid-fast free, location and number as in (1). Very amenable to dihydrostreptomycin alone, or in combination with promin or PAS. From marked regression to complete regression.

3. Reddish, glossy, elevated welt-like nodules, oval or circular in shape, definitely circumscribed, from 2 cm. — 5 cm. in diameter, nonpruritic, usually non-anesthetic and acid-fast negative; had to be followed with promin injections to attain complete resolution.

4. One type of lesion seldom observed in leprosy cases and found in one case in the D S and PAS group is described as having a peculiar thickly-mottled elevated pinkish to reddish, moderately pruritic infiltration on the anterior and posterior chest, abdomen and neck thighs and forearms; the face and ears had a pinkish diffused infiltration; the skin smears were strongly positive for M. leprae and histologically suggestive of the lepromatous type. Marked regression, but remained positive.

5. Diffused, thickened, erythematous, edematous, glossy infiltration with subcutaneous indurations on the ears, extremities, and trunk; and when observed on the face, presented the classical leontiasis. Amenable to dihydrostreptomycin alone and in combination with PAS or promin. From moderate to marked regression to complete regression.

6. Various-sized nodules scattered on the face and trunk, rising from a surrounding infiltrated skin or from apparently normal skin, strongly acid-fast positive. Slight to moderate regression observed.

7. Lupoid-like lesion found on the cheeks. Very resistant to treatment. Slight improvement observed.

8. Verrucose and eczematous-like lesions found on the palms and extensor surface of thighs and legs. When the lesions are bacteriologically positive, they are more responsive to treatment with dihydrostreptomycin alone than when negative, in which case promin has to be followed after the antibiotic to obtain clearing up of the lesions.

In the cases that finally regressed in the first three months of treatment with dihydrostreptomycin, the lesions appear to have worsened, and soon start regressing on the fourth month of treatment.

NEUROLOGIC CHANGES

All the cases had varying areas of anesthesia; two had digital contractures; and four had slight to moderate muscular atrophies of the hands, forearms and legs. Eight cases with lepra reaction, which manifested neuritic pains, were alleviated and completely relieved during and after treatment. One early case of tuberculoid had complete recovery of sensory disturbance; and five had slight to moderate diminution of areas of anesthesia, especially after intradermal injections of dihydrostreptomycin. No change was observed in the digital contractures and muscular atrophies.

DRUG REACTION

Drug reaction due to dihydrostreptomycin — dizziness, headache, tinnitus, or eight nerve involvement — was not observed. There was freedom from acute dermal reaction, like dermatitis exfoliativa. No signs of secondary anemia or agranulocytopenia were noted during or after promin therapy. Tendency to increase in weight, improvement of appetite, and general feeling of well-being during and after treatment and observation period were very evident.

GENERAL RESULT OF TREATMENT

In the D S group, of the 6 lepromatous cases, 5 resulted in complete regression of skin lesions, clinically and bacteriologically negative; 1 in marked regression of skin lesions but still positive bacteriologically after an average of 14.1 months hospitalization; of the 13 tuberculoid cases, 11 had complete regression, CRS, also bacteriologically negative; and 2 became SIS, slightly improved skin lesions after an average of 7.8 months hospitalization: 1 neural case presented no improvement after 8 months confinement.

In the D S and promin group, out of the 4 lepromatous cases, 1 became clinically and bacteriologically negative, CRS; 1 SMRS, slight to moderate regression of skin lesions, 2 SIS, slight improvement of skin

lesions, and these last three (3) had remained smear positive after an average confinement of 13.2 months.

The 2 tuberculoid cases in this group had complete clearing up of the skin lesions, CRS, and remained bacteriologically negative after an average of 16.5 months' hospitalization.

In the D S and PAS group, out of the 9 lepromatous cases, 2 had complete regression of skin lesions, CRS, as well as negative bacteriologically, after an average of eleven months of hospitalization; 3 had slight to moderate regression of skin lesions, SMRS, although remaining positive bacteriologically after an average confinement of 10.6 months; 2 had moderate to marked regression of skin lesions, MMRS, and negative bacteriologically; 1 had marked regression of skin lesions, MRS, and negative bacteriologically; and 1 had worsening of skin lesions, WS, and remained positive — these last four cases, after hospitalization of nine, six, eight months respectively. One (1) tuberculoid case had slight to moderate regression of skin lesions, SMRS, and remained bacteriologically positive, after eight months' confinement.

Combining the results of the three groups and the average amount of drug administered to every member of each group, I prepared the following tables:

TABLE 3 — *DS Group*

No. of Cases	Type	Ave. Amt. Drug Per Patient	Clinical Results	Bacteriology	Average Hospitalization	Percentage
5	Lepromatous	60 gms Dihydrostreptomycin at 0.50 gm daily into 2 IM injections.	CRS	Negative	14.1 mos.	16.6 %
1	Lepromatous		MRS	Positive	14.1 mos.	3.3 %
11	Tuberculoid		CRS	Remained Neg. 1 case Pos. to Neg.	7.8 mos.	36.6 %
2	Tuberculoid		SIS	Remained Neg.	7.8 mos.	6.6 %
1	Neural		No change	Remained Neg.	8 mos.	3.3 %

Total 20

DS and Promin Group

1	Lepromatous	66 gms Dihydrostreptomycin plus 103 amps PROMIN	CRS	Negative	13.2 mos.	3.3 %
1	Lepromatous		SMRS	Positive	13.2 mos.	3.3 %
2	Lepromatous		SIS	Positive	13.2 mos.	6.6 %
2	Tuberculoid		CRS	Remained Negative	16.5 mos.	6.6 %

Total 6

DS and Pas Group

2	Lepromatous	71.2 gms Dihydrostreptomycin plus 437 gms PAS	CRS	Negative	11 mos.	6.6 %
3	Lepromatous		SMRS	Positive	10.6 mos.	10 %
2	Lepromatous		MMRS	Positive	9 mos.	6.6 %
1	Lepromatous		MRS	Negative	6 mos.	3.3 %
1	Lepromatous		WS	Positive	8 mos.	3.3 %
1	Tuberculoid		SMRS	Positive	8 mos.	3.3 %

Total 10

Legend: MMRS — Moderate to marked regression skin lessions
W S — Worsening skin lesions
CRS — Complete regression skin lesions
MRS — Marked regression skin lesions
SIS — Slight improvement skin lesions
SMRS — Slight to moderate regression skin lesions

Consolidating the clinical results:

CRS — Complete regression of skin lesions, negative clinically and bacteriologically, from positive to negative, in 8 or 26.6 percent of 19 lepromatous cases.

MRS — Marked regression of skin lesions, negative bacteriologically (positive to negative) — 2 cases or 6.6 percent.

CRS — Complete regression of skin lesions, negative clinically and remaining bacteriologically negative, in 13 cases or 43.3 percent of 16 tuberculoid cases.

SMRS — Slight to moderate regression of skin lesions, regardless of whether lepromatous or tuberculoid, and positive bacteriologically — 5 cases or 16.6 percent.

SIS — Slight improvement of skin lesions, all types — 4 cases or 13.3 percent.

No change — No improvement — 1 case or 3.3 percent.

WS —Worsening of skin lesions, — 1 case or 3.3 percent.

FOLLOW UP

Nine cases were followed up from 6 months to 1 year after discharge; and they were found to have remained under control, clinically and bacteriologically negative.

Eighteen cases, who had been sent to their units physically fit, were not heard from eight (8) months to two (2) years after being discharged from the hospital; and they are presumed to be well. Otherwise, they would have been re-hospitalized, with the exception of one case of tuberculoid type who was readmitted because of recurrence of skin lesion, 4 months after discharge.

The remaining nine cases are still hospitalized.

COMMENT

The results obtained from the 36-patient group as a whole, namely 26.6% of complete regression of skin lesions, clinically and bacteriologically negative, among the lepromatous cases; and 43.3% complete regression of skin lesions among the tuberculoid cases, after a relatively short period of dihydrostreptomycin and its adjunct treatment — these results, together with our observation, were encouraging and promising. They could not have been surpassed, much less equaled, by chaulmoogra oil or its derivatives.

Whether other and more effective combinations of anti-leprotic drugs may be found, or are already found, only time and their results will tell.

Would it be preferable to give dihydrostreptomycin alone or in combination with some other drugs? Table III seems to show that better results may be obtained with dihydrostreptomycin alone than with dihydrostreptomycin course of injections followed by promin, or dihydrostreptomycin simultaneously with PAS.

It would be difficult to say what would be the optimum dosage of dihydrostreptomycin, PAS, promin or any sulfone when administered as an anti-leprotic. Individual weight, allergenic reaction, and intestinal absorption would have to be considered. Whether the uniform daily dosage of 0.50 gram of dihydrostreptomycin, the total dosage of 60 grams, or 90 grams, the continuous single course, or the interrupted two courses are adequate, inadequate or excessive, only the results would be the best guide.

It would have been very informative and revealing had dihydrostreptomycin been combined simultaneously with chaulmoogra oil or its derivatives, and with each of the different sulfones available in the market — namely, the diasone, diamedin, sulphetrone, etc. — or with an izoniazid; and had these different combinations been tried on groups of equal number of tuberculoids and lepromatous cases of practically the same age of infection. The reason for this latter precaution is obvious. Early cases are found to be more favorably responsive to treatment than late or advanced cases.

According to some leprologists, impressive results may be obtained with any form of anti-leprotic therapy when started on the downward trend of the parabolic curve of the course of the disease, whereas on the upward curve, when the disease is at its height, discouraging therapeutic failure is bound to be encountered. Clinical manifestation, sedimentation rate, and duration of illness are not adequate to forecast the downward trend, the upward trend, and the plateau line.

Are there dihydrostreptomycin-resistant M. leprae just as there are dihydrostreptomycin-resistant tubercle bacilli? The difficulty of culturing M. leprae makes it impossible to answer this question.

If dihydrostreptomycin could produce dramatic results in cases of lepra reaction, why does lepra reaction develop during dihydrostreptomycin therapy? In a similar manner, dihydrostreptomycin is used ef-

fectively against T.B. meningitis. Yet T.B. meningitis was observed to have developed during this antibiotic therapy. The action is paradoxical and defies satisfactory explanation.

The number of cases in this report are so few — 36 when it should have been 100 or more if there were that number available in the army ward — to warrant conclusive observations to justify the claim, or insinuation of a claim, that dihydrostreptomycin alone, or in combination with any drug, is an effective anti-leprotic remedy.

SUMMARY

Thirty-six cases of leprosy — 19 lepromatous, 16 tuberculoids, and 1 neural — were divided into three groups. Dihydrostreptomycin was administered exclusively in the DS group, in combination with promin in the D S — Promin group, and with PAS in the D S — PAS group.

The average amount of dihydrostreptomycin given to each patient was 60 grams in the DS group, 66 grams in the DS — Promin group, and 71.2 grams in the D S — PAS group. The daily dosage was 0.50 gram for an average period of 4 months to 6 months. An average of 103 ampules of promin and 437 grams of PAS were administered to each patient.

Out of the 19 lepromatous, 8 acquired the status of CRS (complete regression of skin lesions, bacteriologically negative); two (2) MRS (marked regression skin lesions); two (2) MMRS (moderate to marked regression skin lesions); and one (1) W S (worsening of skin lesions). Out of the 16 tuberculoids, 13 became CRS, one (1) SMRS (slight to moderate regression of skin lesions); two (2) SIS, (slight improvement skin lesion); and the neural case showed no change.

A follow-up of some of the cases revealed that they had remained under control even 6 months to 1 year after they had been discharged from the hospital, with the exception of 1 tuberculoid case which showed recurrence of skin lesions.

Further experimentation on the leprotic action of dihydrostreptomycin — either alone or as an adjunct to the sulfones, PAS, or izoniazid — should be carried out to confirm or disprove the encouraging results obtained in this study.

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PATHOLOGY OF OLD AGE *

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The subject assigned to me, "Pathology of Old Age," is as misleading as it is controversial. For this reason, I propose to change it "Structural Changes in Old Age."

Broadly, the word "Pathology" gives the impression that there are changes peculiar and characteristic of old age, and that these changes are abnormal or pathological. The fact, though, is that many of these morphological changes commonly attributed to old age can be seen in various conditions in relatively younger individuals. For instance, towards the latter part of the Japanese Occupation, when everyone was on the verge of starvation, we saw in relatively young bodies autopsied by us changes comparable to those seen in, and described as characteristic of, old age.

We have to bear in mind that, in the development of an individual, two factors are in constant play — namely, regeneration or evolution, and degeneration or involution. These changes vary only quantitatively from birth to death. It is obvious, however, that during infancy, the evolutionary changes are more preponderant than the degenerative; and the reverse is true in senescene and senility. The involution of the bronchial clefts in fetal life, the closure of the ductus arteriosus and hypogastric vessels in infancy, and the atrophy of the thymus in childhood are just few instances of degenerative changes in early life.

When structural changes are thus seen in old people, the questions that naturally come up, and which are most difficult to answer, are: How much of these changes are directly attributable to old age, and how much are due to the usual and normal wear and tear of cells and tissues brought about by conditions other than *aging*? In other words, how much of these changes are physiological and how much are pathological?

Without wishing to tread on controversial grounds, much less to attempt to explain the mechanism or philosophy of these changes, I wish to limit myself to the presentation of the demonstrable structural changes as we commonly see them in autopsies of old persons. It may be stated at the outset that there is a great variation in the degree and speed of changes in different organs. The female gonads, for instance, are the most labile of all the organs — the ovaries presenting the most striking changes during sexual maturity and in old age. On the other hand, it is interesting to note that the senile testicles maintain a more or less steady weight and size, although functionally impaired.

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These conspicuous anatomic and functional changes in the sex organs, which are relatively easily measured and observed (cessation of menstruation, loss of libido, etc.), have led many to think that the gonads occupy a pivotal position in the senescent changes that follow their cessation of function. It is now certain that the gonads and/or their hormones do not in any manner affect the life span of an individual. Prolongation of youth or life itself by gonadal preparations is "a mirage, a product of wishful thinking."

It is our common observation, too, that structural changes of old age are often more conspicuous among the relatively well-to-do and educated than among the poor. Could this be due to the fact that the body machine in the former class has been subjected to more stress and strain, to more insults and abuses, to more careless use and upkeep?

Let me now describe briefly the most important organs that show senescent changes.

(1) Heart — The heart is reduced in size and weight, although occasionally it is normal or even slightly enlarged. Most often, the heart is smaller and brown in color (brown atrophy), with a decrease in the elasticity of the valves and an increase in the thickness of the endocardium. Frequently, calcified atheromatous patches are seen in the valves and in the root of the aorta as well as in the coronary vessels. Many hearts show a gelatinous and edematous fluid in the epicardium, frequently called edema ex-vacuo. Histologically, the muscle fibers are seen to be atrophic and with yellowish lipochrome granules at both poles of the nucleus. Many hearts, too, show focal areas of fibrous scarring, possibly due to coronary sclerosis, although there may be no associated cardiac symptoms during the life of the individual.

(2) Blood Vessels — There is a notable decrease in the elasticity of the blood vessels, especially the aorta. There are usually plenty of atheromatous patches with calcification anl also ulcerations, especially towards the end of the aorta as it bifurcates into the iliac vessels. It is difficult at times to imagine how a roughly ulcerated rigid aorta could have allowed the passage of blood through it without producing thrombosis.

(3) Lungs — The lungs are frequently collapsed, with areas of atelectasis here and there. It is very seldom that we find lungs which are entirely free from bronchopneumonic changes, which at times are microscopic in size. The usual finding is a disruption of the atrophic elastic tissue framework of the lung, giving rise to senile emphysema.

(4) Liver — This organ is invariably reduced in size, dark-brown in color, and oftentimes very finely granular. On histologic examination, the liver cords and cells are reduced in size, with an apparent or actual increase of connective tissue framework.

(5) Spleen — The spleen in all cases is atrophic, with a wrinkled, thickened capsule. The atrophy is due to the diminution in the lymphadenoid tissue, giving the impression of increase of the connective tissue stroma. Extensive sclerosis of the arterioles is usually more marked, and appears much earlier in the spleen than other organs. The pulp of the spleen is almost acellular. The Malpighian bodies are inconspicuous.

(6) Pancreas — There is only a minimal decrease in the size of the pancreas. There is, microscopically, a decrease in size of the acini and islands of Langerhans, which are also apparently reduced in number. More striking is the great thickening of the arterial walls and infiltration of the framework of the organ with fat.

(7) Kidneys — The kidneys usually show a progressive reduction in weight after the fourth decade, most often due to structural involution of the renal blood vessels. The kidneys usually show depressed areas of arterio-sclerotic infarcts. There is usually diminution in the thickness of the cortex. On histologic examination, there are still many well-preserved glomeruli and tubules, so that there are usually no clinical evidences of renal failure.

(8) Thymus — Usually this is very small, frequently reduced to a small fibrous mass. There is extensive atrophy, and the lymph-adenoid tissue may even disappear. The Hassal's bodies are also degenerated and calcified. There is likewise an extensive thickening of the arteries and extensive fibrosis.

(9) Thyroid — The thyroid frequently shows atrophied follicles, with little or no colloid, surrounded by dense interstitial fibrosis. The arteries are almost occluded by sclerosis.

(10) Adrenals — The adrenals are frequently reduced in size and, on section, cholesterol deposits are almost absent. Their cells are atrophied and there is increase in the delicate connective tissue framework.

(11) Testicles — The testicles frequently maintain their normal size and weight. Under the microscope, there is seen extensive interstitial fibrosis, thickening of the basement membrane of the tubules, and diminution of the calibre of the seminiferous tubules. Occasionally these are unduly dilated. Spermatogenesis is usually absent, the tubules at times being lined by a layer or two of the primitive cells. The interstitial cells of Leydig are fairly preserved.

(12) Ovary — The ovaries are invariably small, atrophic, and fibrous in consistency; and on section hardly any follicles are seen. Remnants of corpus fibrosum are conspicuous. A good number of ovaries show follicular cysts of variable sizes.

(13) Uterus — The uterus is also atrophic, with a relative increase of fibrous connective tissue. The endometrium is likewise atrophic, with only a few glands and distinctly cellular stroma remaining. The blood vessels are greatly thickened, hyalinized, and/or calcified, with obliteration of the vascular lumen in some cases.

(14) Prostate — The prostate is either normal in size or atrophic, with an increase in interstitial tissue.

(15) Brain — The brain is usually smaller than normal, with deep sulci and narrow convolutions. The ganglion cells of the cerebrum are usually atrophied, with pigment and lipoid accumulation.

(16) Skin—The skin in old age is usually wrinkled and inelastic, due to the disappearance of the elastic fibers from the deeper layers of the dermis. Histologically, there is atrophy and disappearance of these structures.

In conclusion, structural changes in the various tissues and organs of the body, as noted above, do not necessarily run *paripasu with* functional derangement A notable example of this is the apparently normal brain in mentally deranged individuals, and extensive structural changes in the brain of apparently normal, mentally balanced individuals.

This lack of relationship between structural and functional changes may be explained by the fact that most organs are endowed with tremendous reserve power and immense margin of safety. An individual, therefore, is only as old as he feels. His senescence and senility depends on how well he has taken care of the body-machine, and later, how well he has adjusted its performance to its capacity. As our youth has been, so is our senescence and senility! A new car may be made to run uphill on the third gear; three or four years later, the same car may not do the same stunt under similar conditions — it may do so on the first year.

One has to admit that, as years roll by, a person's activities must be correspondingly adjusted to his age, the capability of his body. It is only when this relationship between function and capacity is disturbed that one is justified to discuss "Pathology of Old Age."

SURGICAL PROBLEMS IN THE AGED *

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There is a common impression that it is more risky to submit an elderly person to the knife than a younger one. To the internist, "greater risk" means arteriosclerosis, thrombosis and embolism, nutritional deficiencies, and cardio-renal status. To the surgeon it means lowered resistance to infection, lability of renal function, decreased blood flow and blood volume, and dehydration — not to mention the reaction of an elderly person to anesthesia and his peculiar behavior after operation.

The truth is, though, that the physiologic age of the patient does not necessarily correspond to his chronologic age. This has been proven time and time again by successful operations in patients over 80 years of age (8.5% mortality in 47 patients of 80-100 age group).

Due to arteriosclerosis, the circulatory system of an elderly person is less resilient than that of a younger one. Response to hemorrhage of operative procedures is very slow. Sudden drops in the blood pressure are not compensated right away, and bleeders cannot be controlled readily by retracting the cut ends of the arterioles. Sometimes, for example, after the prostatic adenoma has been enucleated, the raw surface of the prostatic capsule continues to bleed, despite all known methods of hemostasis as though the blood vessels in this region were arteriosclerotic.

The brain and the myocardium are susceptible to hypoxia, which occurs in a hypertensive or arteriosclerotic patient when the blood pressure suddenly drops during the operation. In vital organs which are used to receiving their quota of blood at high pressure, the loss of elasticity of the sclerotic blood vessels prevents the compensatory mechanism that otherwise operates in such an emergency in the younger individual.

Renal filtration, which is the first phase of urine formation, is also adversely affected by the lowered blood pressure in a hemorrhagic state. In the kidney of the aged, due to the concomitant nephrosclerosis, even short periods of slow blood flow may produce a renal shut-down and anuria. Advancing age apparently lowers renal reserves, to some extent, after a severe operation, even if preoperative tests of renal function show them to be normal.

* Read at the Symposium on Problems of Aging during the annual meeting of the Philippine Medical Association, April, 1953.

The hazard of slackening blood flow through the veins of the extremities is well known to predispose to thrombosis, with the ever-present danger of embolism. Thrombosis has also been known to take place in the brain postoperatively. I recall a patient who, 24 hours after a bilateral, one-sitting pyelolithotomy, developed a cerebral thrombosis.

In old age, there is usually a lack of correlation between symptoms and signs, there may be no complaints subjectively, although the most serious pathology is progressing. Typical examples are those of perforated, gangrenous appendicitis in old people, in whom there is none of the typical right iliac pain, nausea or vomiting, fever or leucocytosis, marked abdominal rigidity and tenderness usually associated with this disease in younger individuals. This may lead the surgeon to become unduly optimistic, and so postpone the operation until it is too late.

Nobody knows whether such lack of subjective symptoms or somatic reaction in the aged is due to hypofunction of the pituitary or of the adrenal cortex. Nobody knows either whether it is purely a mental reaction, one of stoicism or resignation to the vicissitudes of life, dulling the patient's sensibilities even to pain.

Resistance to infection diminishes with age, presumably due to atrophy of the spleen, bone marrow, lymph tissues, and other structures concerned with immune processes. But it may be a clinical misnomer for an actual exacerbation of pre-existing latent infection not discovered before operation. This flare-up may appear to overwhelm the patient, and produce the impression that he has no resistance.

The poor vascularity of the organs of the aged, supposedly from sclerotic changes, may also be taken as the reason for low resistance to infection. On the other hand, this poor vascularization delays healing, which is dependent on blood flow.

In the aged, fractures are notoriously slow in healing, callus formation may not take place, and calcification of bones is very poor. The nutritional state of the patient, which is known to be poor in old age, may also have a relationship with poor resistance to infection.

However, the unfavorable effect of hypoproteinemia and hypovitaminosis C on the maturation of fibroblasts should not be overlooked. The latter conditions are frequent in old age. For the individuals in this group are peculiarly subject to poor appetite, resulting from ill-fitting dentures, sedentary life, and constipation.

Accuracy of diagnosis in the aged plays a great part in the adequate planning of the operative procedure. To this end, the surgeon should exhaust efforts in preparation for the operation, in order to insure smooth convalescence. Such careful preparation will enable the surgeon to meet the exigencies of the operation and to avoid exploratory procedures. It will also give the anesthetist a guide for his choice of anesthesia.

Occasionally an aged patient with a suspected or proved heart disease may have to undergo a major surgical operation. The evaluation of his cardiac status from the standpoint of surgical risk is difficult. The fundamental principles that we have followed and found practical involve the patient's exercise tolerance. Obviously, an old man who can

walk about three blocks and up a flight of steps to the doctor's office without manifest dyspnea or anginal pain is a good surgical risk.

We have learned to rely on these two important symptoms: dyspnea and anginal pain. Dyspnea on effort indicates myocardial insufficiency. Its evaluation depends on how much effort is necessary to produce it, and whether other factors like age, weight, anemia, asthma or tuberculosis of the lungs are contributory.

The actual distress manifested after effort is more significant than pulse or respiration rate. Patients with no exercise tolerance should not be operated upon except under extreme situations. Such patients usually have signs and symptoms of congestive heart failure.

The factor necessary to tilt the balance one way or the other will depend on the indication for the operation. (Is removal absolutely necessary for survival?) Insignificant electro-cardiographic findings, functional murmurs and arrythmias, and other remediable cardiac disorders should not deter the surgeon from performing a necessary operation.

Preoperative care is necessary part of the surgical management of an elderly patient. Most unfavorable results or fatal outcomes of surgery may be the result of a faulty preoperative preparation. Metabolic or endocrine disorders, like diabetes mellitus or hyperthyroidism, should be reduced to as near normal level as possible. Cardiac decompensation, azotemia, pulmonary disease, and foci of infection should be corrected.

Even with normal blood counts and hemoglobin levels, elderly surgical patients usually have a significant deficiency in blood volume. For this reason, hematocrit and specific gravity determinations of the blood are necessary; and preoperative transfusions may help prevent the occurrence of shock during operation.

Hypoproteinemia, dehydration and electrolyte imbalance require no further discussion. Over-enthusiasm in pushing intravenous fluids must, however, be guarded against.

Parenteral administration is best given intravenously, since hypodermoclysis of electrolyte-free glucose (5% dextrose in water) in a patient suffering from dehydration, salt deficiency, or shock (low physiological reserve) may produce oliguria, anuria, or circulatory collapse. The mechanism is that of withdrawal of fluid from the plasma and interstitial fluid compartments to allow absorption of the administered fluid. Hyaluronidase, when used with hypodermoclysis, is likely to intensify this possible reaction.

Generally, elderly patients require less than 4 grams of salt, and about 1,500 cc. of fluids intravenously; for their lower metabolic rate require much less fluid for elimination of waste. Recent knowledge of the dangers of over-administration of salt and water in such patients has decreased the frequency of pulmonary and cardiac complications (edema, hypostatic pneumonia, acute cardiac failure and dilatation, etc.) On the other hand, there is a tendency to rush acute emergencies to the operating room before dehydration and shock have been corrected. Old individuals are very susceptible to blood volume changes, because of their poor vasomotor compensatory mechanism and because of the inability

of their hearts to increase their rate and output. A few hours of preoperative hydration and relief of shock may mean the difference between a favorable and fatal outcome.

The choice of an anesthetic agent depends considerably on the nature of the operation and on condition of the patient. Whatever anesthesia is used, it should provide for the minimum of derangement of the physiological processes in the body. Elderly patients require relatively smaller doses of premedication and anesthetic agents. All too often, routine pre-anesthetic doses have resulted in patients becoming so drowsy on the operating table that they require hardly any general anesthetic. Prolonged deep anesthesia is undesirable, and abnormally low blood pressures are detrimental. Hypertension during or after the operation is less to be feared than repeated hypotension, for the vital organs are quite sensitive to changes in oxygen tension.

The operation must be performed rapidly but gently; and if possible, a stage operation should be resorted to. The philosophy of radical surgery finds no application in the age group of eighty, at which stage life expectancy is not more than 5.44 years. A palliative operation often suffices in cases of cancer, bearing in mind the relative benignity of malignancies in old age.

The postoperative management of an aged surgical patient assumes considerable importance when we realize that it is during old age that most of complications occur. Patients in this age group usually have varying degrees of bronchitis, emphysema, or asthma. Deep postoperative analgesia for relief of pain, continuous Levine (nasal) tube suction, over-hydration, and over-administration of oxygen, with resultant shallow respiration and suppressed cough, are bound to affect a recumbent patient. They may even lead to pulmonary atelectasis, pulmonary edema, and bronchopneumonia.

To relieve pain, local block anesthesia (Efocaine,(R) procaine) or surface anesthesia (Diothane,(R) Americaine(R)) or small doses of mild analgesics may be used. The indwelling Levine tube, while preserving the integrity of the operated organ may promote atelectasis of the lungs by discouraging deep breathing and coughing necessary to expel secretions along the tracheo-bronchial tree. Pushing fluids, particularly in the presence of anemia and hypoproteinemia may, produce hypostatic pneumonia.

Early ambulation helps a great deal towards preventing a lot of complications, pulmonary, cardio-vascular, or gastro-intestinal. It also promotes appetite, intestinal peristalsis, and expulsion of gases and spontaneous voiding.

SUMMARY

With an intimate knowledge of the patient's cardiovascular and renal status, and of his nutritional, water and metabolic deficiencies, it is always possible to attain justifiably low mortality rates if the usual routine conservative surgical procedures are used in a rapid and expeditious manner (see Table I). In the postoperative course, early ambulation is

also to be desired, and over-hydration by intravenous route must be avoided. The injection of testosterone propionate is of great help to the anabolic processes, since this hormone is a protein sparer. Twenty-five to fifty mg. of this drug, administered intramuscularly every second day, may also enhance the morale of the patient. The will to live must be awakened or maintained, both before and after the operation.

TABLE I

Age Bracket	No. of Patients Operated on	Deaths	Mortality Percentage
60-69	316	13	4.1 %
70-79	244	14	5.7 %
80-89	39	2	5.1 %
90-99	8	2	25.0 %
100	1	0	0 %
Total	608	31	5.09 %

The causes of death in a group of 608 cases are listed as follows:

TABLE II — *Causes of Death*

	60-69	70-79	80-89	90-100
Hemorrhage	2	3		
Cardiac	2	3		2
Pulmonary	2			
Shock	1			
Lower nephron nephrosis	1			
Uremia	1	1		
Others	2	2		
Pyelonephritis			1	

It is clear that the higher age groups after 60 have a higher mortality rate than younger ones. All the factors explained at the beginning of this talk are probably present. Considering all the risks involved (strangulated hernia, gangrenous appendicitis, and perforated gastric ulcer) and the type of major surgery used on elderly people, one finds that these people are just as resistant to surgical trauma as younger ones, provided the latter is tempered with gentleness and speed, and bolstered by maintaining the fluid balance of the patient.

ALMOST FATAL PENICILLIN ANAPHYLACTIC-LIKE SHOCK REACTION

Report of a Case at V. Luna General Hospital, (AFP)

LT. COL. CONRADO B. ICASIANO, MC

Lt. Col. Conrado B. Icasiano

Penicillin is the most widely used and abused antibiotic today. This is principally because it is the most popular, the cheapest, and the easiest procured antibiotic in the market. Anybody can get from any drug store any form of penicillin preparation — inhalant powders, throat lozenges, tablets for oral use, and those given parenterally with or without doctor's prescriptions.

This indiscriminate use of penicillin is not without danger. Allergic reactions to penicillin have been reported with alarming frequency. Occasionally a dangerous and even fatal anaphylactic-like shock reaction occurs when penicillin is given parenterally.

A review of foreign literature reveals that such anaphylactic-like shock reactions have been observed quite frequently. The following are some of the many published reports. Cormia, F. E. and his coworkers, in 1945, reported a case of acute anaphylactic-like shock reaction due to penicillin. Their patient suddenly collapsed after an intramuscular injection of the drug. In 1946, a similar case was reported by W. J. O'Donovan and I. Klorfojn. Their case showed positive direct skin reaction. The first death (that of an asthmatic case) due to intramuscular injection of penicillin, however, was reported by G. L. Waldbott in 1949. It occured within a few minutes after the administration of 50,000 units of aqueous crystalline penicillin. This case, however, was not autopsied. In 1950, R. J. Burleson reported a case which developed severe prostration, dyspnea, tachycardia, hypotension and collapse 15 to 20 minutes after an injection of 200,000 units of sodium penicillin G, with 0.5 cc. of 1% procaine. Direct skin test reaction to penicillin was positive, but the reaction to procaine was negative. In 1951, R. Everett reported two cases of anaphylactic reactions following introduction of 30,000 units of sodium penicillin G, with ephedrine and gantrisin, into the paranasal sinuses. These two cases gave positive direct skin test reactions to penicillin only. In 1952, Curphey reported 2 cases of fatal anaphylaxis following injections of crystalline penicillin in two patients with bronchial asthma. One died within 5 minutes after receiving aqueous penicillin intramuscularly; and the other, within ten minutes after injection of penicillin and streptomycin. The chief pathological lesions obtained in these fatal cases of Curphey were distended lungs and marked dilatation of alveoli in the first, and extensive mucous exudate in small bronchi and alveoli in the second. In January 1953, Siegal et al reported 3 cases, with one death, of anaphylactic shock, due

to penicillin. The case that died was an asthmatic who had received 300,000 units of aqueous procaine penicillin because of an acute follicular tonsillitis. No autopsy was performed. At about the same time, P.S. Mayer et al reported six cases of penicillin anaphylaxis. Their patients developed anaphylactic-like shock reactions immediately after administration of aqueous procaine penicillin parenterally. One died, but five recovered. Four of the cases that recovered showed positive passive transfer skin test to penicillin, but negative to procaine. The case that died had been treated with penicillin because of persistent positive serology. Autopsy was not performed. Last May, Samuel M. Feinberg et al reported 9 cases of non-fatal and fatal penicillin anaphylactic reactions. Five cases died, and autopsy revealed insignificant findings and no other causes of sudden death. From the foregoing, it is evident that most anaphylactic-like shock reactions reported abroad happened when solutions of penicillin were given intramuscularly, and that fatalities occured mostly among asthmatic patients.

Reviewing most local medical literature since the liberation, I have not been able to find a single case showing any anaphylactic-like shock reaction due to penicillin. However, through casual conversation with Vice-Dean Arturo Rotor of the College of Medicine, U.P., last April 1953, I learned that there had been about five fatal or near fatal allergic reactions to penicillin, but which had not been reported. Another case was related to me by Dr. Ramon Angeles, President, Federation of Private Medical Practitioners. A few minutes after intramuscular injection of sodium penicillin G, his patient lapsed into severe shock, but eventually recovered. This incident happened at UST Hospital but was not reported. There may have been similar other cases, though they have not been reported; or if they were reported at all, I may have missed them in my search for actual records.

The present paper deals with a case of an almost fatal anaphylactic-like shock reaction to penicillin, which happened to a member of the personnel of the V. Luna General Hospital in her eagerness to treat an upper respiratory tract infection. For your information, this is the first case of anaphylactic-like shock reaction to penicillin that has actually occurred in this hospital since it started operation in 1945 — although numerous daily penicillin injections have been given both to hospitalized and dispensary patients. In spite of the apparent rarity of these cases, one cannot minimize the seriousness of such a reaction. Hence it would not be superfluous to emphasize the importance of the present case.

REPORT OF CASE

V.G., 42 years old, female, an army nurse assigned to the V. Luna General Hospital, was admitted for the 3rd time last Dec. 25, 1952, cyanotic, unconscious, and in a severe degree of shock. First hospitalized last 1949, for removal of a big sebaceous cyst at her back, she was appendectomized in 1951. On both occasions, she received a series of penicillin injections without untoward reactions. Last Nov. 1952, she had urticaria following a thiamine injection. No member of her family had asthma. One sister, however, developed skin rashes after injection of a combination of streptomycin and penicillin.

At about 8:00 P.M. on the night of 25 Dec. 1952, the patient, because of a two-week upper respiratory tract infection which had exacerbated a day before, requested a co-nurse to give her an injection of 200,000 units of sodium penicillin G. In less than five minutes, she complained of burning taste, intense headache, chest oppression, and dimness of vision. Then she became unconscious.

The events came so rapidly that, when she was seen by her companion who had given her the injection, she was cyanotic, almost pulseless, and breathless, with frothy mouth and imperceptible pulse. At the emergency room, she was observed to have puffy face and neck, swollen lips and eyelids. No blood pressure readings could be obtained.

Immediate rescusitory measures were then instituted. These included injections of adrenalin, ephedrine, benadryl, nikethamide, plasma blood, dextrose, and oxygen inhalation.

At 9:30 P.M., or about an hour and a half later, her blood pressure began to rise gradually but steadily, from 70/40 to 150/80 at 11:45 P.M. At this time, her temperature was 38.4°C, her pulse 104, and her respiration 20; but the latter was occasionally observed to be irregular and jerky. She was very restless, moaning frequently, and had to be given several injections of sodium penthotal to quieten her. She had to be catheterized to urinate.

On the morning of the 26th Dec. 1952, she was observed to be in deep coma, with the following objective findings: (a)-Both pupils were miotic, not responsive to light; (b)-Eyelids puffy, fundus examination, however, was normal; (c)-No cervical rigidity; (d)-No reaction to touch, pain, or temperature; (e)-Reflexes absent — (biceps, triceps, pattelar, and babinski). Lumbar puncture was performed, and a clear fluid was obtained, with 200 mm pressure and a normal cytology and chemistry. CBC revealed 3.4 million RBC, 17,450 WBC, with a differential of 73% polys, 10% small lymphocytes, and 17% eosinophiles. Blood chemistry and urinalysis were within normal limits.

In view of her deep coma which was thought to be due to a greater degree to cerebral edema, concentrated human normal serum albumin (25%), in doses of 100 cc. every 4 hours around the clock, was administered. Fortunately, 4 hours after administration of the first dose, her pupils began to react to light. From here on, she continued to improve. Soon she was able to move, she regained her consciousness, and in about a week, she was up and walking.

Her recovery was uneventful until about 10 weeks later, when complaining of a severe sore throat, she went to consult one of our EENT specialists who, after a careful examination, prescribed "Pondets" for her. Not knowing that Pondets are penicillin throat lozenges, she took one in her mouth; and in less than 10 minutes, she felt a burning taste, flushing of face, thick and tense sensation of her skin, heaviness of the head, dizziness, palpitation, and metallic coughing. Her blood pressure rose to 180/90. She was given 50 mg of Benadryl and after about two hours, all symptoms disappeared.

A week after this incident, a direct intradermal skin test was performed, using the smallest amount (less than a drop) of sodium penicillin G in proportion of 200 units per cc. In less than 3 minutes, a four plus skin reaction was obtained. This was shown by the presence of a wheal and flare. The wheal, which was amoeboid in shape, was more than 5 times the size of the control.

There were other accompanying symptoms like flushing of the face, thickened sensation of the skin, heaviness of the head, cough, and palpitation. These symptoms subsided 30 minutes later, but the skin reaction persisted longer. From here on, the patient continued to improve and was discharged from the hospital recovered.

Last June 11, 1953, as a follow up, I again performed another direct intradermal skin test, using 40 units of sodium penicillin G per cc. A four plus skin reaction was again obtained 5 minutes after the injection. This four plus skin reaction consisted of 13 mm amoeboid shape wheal, with moderate erythema of 15 mm. The control was 5 mm wheal with hardly visible erythema. The only accompanying systemic symptom this time was the slight itching of the throat with occasional cough.

COMMENT

This case is made of record for the first time, to emphasize to the medical profession that penicillin, though a very potent antibiotic, can cause serious and even fatal allergic reactions. Then, too, in view of the present popularity of Penicillin among both medical practitioners and laymen, there are considerable reasons for predicting that, in the course of time, there will be more persons sensitized to it. Therefore, more similar incidents are bound to be encountered.

Considering the serious manifestations and the grave complications attending such an anaphylactic-like shock reaction, were this to happen in a private clinic, a dispensary, or the home of a patient where medical practitioners are handicapped by lack of emergency resuscitative equipment and medicinals, more fatalities will be expected. The prestige, professional knowledge, and ability of the physicians will likely be jeopardized if such reactions occur .

What, then, is the medical profession to do to limit, if not entirely prevent, such dreadful incidents? Experiences from published reports, and the present case, have offered the following valuable suggestions:

(1)—A careful and complete history of every case is imperative, with special emphasis on allergic history both personal and familial, before penicillin is prescribed or administered. It must be remembered that anaphylactic-like shock reactions will occur, if ever, to any person who has never received penicillin previously, and that most fatal cases reported have occured among asthmatic patients. Likewise any history of other types of penicillin reactions, like dermatitis, purpuric spots, or urticaria must be clearly obtained, analyzed, and carefully evaluated.

(2)—Immediate direct skin test must be given every patient, especially those who are allergic or asthmatic, prior to subsequent administration of penicillin. The value of this precaution cannot be overemphasized. Experience has shown that most patients who are potential anaphylactic reactors give immediate positive skin reactions.

This fact was corroborated by the cases of Cormia, Everett, Burleson, O'Donovan, Mayer, Seigal, and by the present report. If smaller doses of 100-200 units give negative results, larger doses of 3000 to 5000 units, or even higher, may be tried.

(3)—The intermittent use of penicillin gums, mouth, and throat lozenges, and topical applications like ointments and solutions must be discouraged, if not entirely condemned; for there is no doubt that such repeated courses of penicillin therapy increase sensitization and may therefore, result in increased cases of anaphylaxis.

(4)—The cautious method of giving parenteral penicillin must be adopted. This maybe done first by giving small doses, perhaps 100 to 200 units of penicillin subcutaneously, and followed 30 minutes to one hour later, by the full dose if no untoward reactions occur.

(5)—Safety measures in the technique of penicillin injection must be taken. This can be done by giving penicillin injections only at the outer surfaces of the arms, so that when necessary, tourniquets can be applied proximal to the site of injections. Ampules of Adrenalin solution (1:1000), Ephedrine and Benadryl must also be readily available.

In conclusion, let past experience and the present case be a reminder, and a stern warning, to those who would use penicillin indiscriminately. The importance of publishing records of similar cases in the future cannot be overlooked. For, very clearly, they would benefit others, by serving as useful criteria in formulating necessary therapeutic as well as prophylactic measures, which are consistent with local needs and conditions.

SUMMARY

A case of almost fatal anaphylactic-like shock reaction, due to sodium penicillin G, that happened to a member of the V. Luna General Hospital personnel (AFP) is reported. Direct intracutaneous skin testing eleven weeks after the incident revealed markedly positive reaction. This is the first case reported in this hospital, in spite of the countless injections of penicillin given both to in- and out-patients.

Similar cases reported abroad are reviewed. There are reasons for believing that similar cases are increasing in number and frequency. In view of similar occurrences reported abroad, and the present one, suggestions are offered to minimize, if not entirely prevent, such unpleasant, almost fatal reactions.

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MENARCHIAL POSTOPERATIVE ACUTE HYPOPARATHYROIDISM AND ACUTE HYPOTHYROIDISM

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Any thyroid surgeon will not consider postoperative acute hypoparathyroidism a rare incident or accident. It occurs more often during one's early days in thyroid surgery, and rarely during his mature days with the knife. The tetany that is observed is familiar to many, and the immediate correction of it by calcium therapy is impressive. Whether this symptomatology is the result of removal or trauma to the parathyroids, directly or through it's vascular supply, is open to question. Many cases of it have been found in males and females — and, among the latter, unrelated to menarchial period.

The occurrence of postoperative hypothyroidism, chronic in character with the unforgettable facies of a myxedema, is not rare. Many of the above cases have been corrected during the active course of the sequelae — with calcium, hormonal extracts, and lately, with A.T.S. - 37. And when they were corrected, especially the hypoparathyroidism, it is not unusual, in the follow up, for the signs and symptoms of the disease to disappear even in the absence of medications, the belief being that the body, the gland, or both have been able to adjust themselves to the demand of the organism.

The occurrence of acute postoperative hypoparathyroidism, apparently precipitated by menstruation, does not seem to have been recorded or reported locally. Likewise the development of acute postoperative hypothyroidism is rarely mentioned in foreign literature. In fact I have found cases of it in older rather than in recent literature.

The relation of these hypohormonal manifestations has not even been recorded. In the 826 thyroid operations done at the Phil. Gen. Hosp. that I have reviewed, acute postoperative hypoparathyroidism, though not common, is not rare either. Its close relationship to menstruation has never been appreciated nor mentioned. In the same series I noticed one personal case, and I have not even reported it formally, of acute postoperative hypothyroidism not related to menstruation.

This paper is on a case which I am labeling "Menarchial postoperative acute hypoparathyroidism and acute hypothyroidism." And I am presenting it in the hope that it may stimulate you to think; and that, after this paper has been discussed, I may be able to clarify the problems involved.

A female, married patient was admitted to the charity ward of the U.S.T. Hospital. After a not unusual pre-operative preparation, a bilateral subtotal thyroidectomy was done. Nothing eventful was noted during the first postoperative day, except slight febrile reactions. She had her voice.

On the 3rd postoperative day, she menstruated; on the 4th day, symptoms of tetany set in; and on the 5th day, the patient became apathetic and mentally confused. At the same time she developed anuria. Because the patient had been receiving, since the operation, adequate doses of sulfathiazole, the chief of the urology section and others entertained the possibility of sulfa anuria, even in the face of normal N.P.N. and the absence of sulfa crystals and RBC in the urine and leucocytes. EKG determination was done, and the findings were compatible with those of hypocalcemia, confirmed by low blood calcium level. The patient was still febrile, and blood cholesterol determination showed 400. An internist suggested giving cortone; and after it was given, the fever went down, only to go up again.

I became as confused as the patient. Certainly I did not believe this to be sulfa anuria. The characteristic appearance of the patient — dull, apathetic, indifferent, somnalent, immobile, and to all appearances dead, except that there was still pulse and respiration — this was the dominant feature. Could this not be acute hypothyroidism like the case that I saw at the Philippine General Hospital? If this was acute hypothyroidism, with all the signs and symptoms of low B.M.R. as the characteristic appearance and cholesterol level insinuate, why the fever? I could not explain the fever in the light of my diagnosis; and in the absence of obvious focus of infection, I gave a therapeutic test of thyroid extract and the patient improves and recovered miraculously.

I placed a question mark in my title because then, as now, there were discordant notes in my data and in the interpretation of my data. I cannot reconcile the febrile reaction, in the absence of a detectable focus of infection, with the impression of acute hypothyroidism.

This patient was followed up for 6 months after discharge. One month later, with administration of thyroid and parathyroid extract, she got well, symptom free, and needing no more medications. Menstruation no longer precipitated the symptoms of acute hypoparathyroidism and acute hypothyroidism.

What is the relation of the thyroid and parathyroid with other internal secretions such as gonads, adrenals and anterior pituitary? In the light of our knowledge of physiology, can we explain what has happened? What is the practical application of this observation?

I am ready to be corrected by competent endocrinologists in the following belief: that the anterior pituitary secretes both gonadotropic and thyrotropic hormones, so that when gonadotropic hormones function as in menstruation, there is likewise a concomittant thyrotropic hormones stimulating the thyroid to function; but because the latter has been partially removed, or out of gear as it was in this case, the recent thyroidectomy manifestations of hypofunction and hypothyroidism supervenes.

Hence, the observed symptomatology and miraculous correction of it by the administration of the extract.

Why then the apparent autocorrection of such maladjustment later, when the extracts are no longer given and there are no manifestations of malfunctioning? It is possible that, whatever thyroid tissue is left, and after it has recovered from trauma, it is adequate to meet the body needs. Why the apparent positive effect of ACTH on the symptomatology, or fever manifestations at least? Does adrenaline have a positive effect on thyroid function, and is it now possible that the ACTH through the adrenals whipped the remaining thyroid to work more. Anuria is no more than a picture of a low BMR.

There may still be missing and loose links in the chain of this case and its interpretation — hence the question mark and the excuse for requesting your contribution.

What is the practical value of this paper? Is it one of those reports on a rare case or rare observation? Probably that is one. It is also a challenge to a clear endocrinological conception. As for me, thyroid operation being an elective one, I would hesitate to perform one just before or during menstruation.

CONCLUSION:

1. Postoperative acute hypoparathyroidism is rare.
2. Postoperative acute hypothyroidism is rarer still.
3. I have not seen, or heard of, or read about any case of Menarchial postoperative acute hypoparathyroidism and acute hypothyroidism.
4. Thyroid surgery being an elective one, would it be advisable not to perform one just before or during menstruation?

Special Articles

THE PUBLIC HEALTH ASPECT OF THE FOA-PHILCUSA PROGRAMME IN THE PHILIPPINES *

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Secretary of Health

Juan Salcedo, Jr., M.D.

Acting Governor Arenas, Miss Philippines,
Dr. DeLien
Dr. Marcos Corpus
Dr. Alfonso Concepcion
Reverend Father Santiago Guanlao
Other officials of the Province of Tarlac

My friends:

I am profoundly grateful for the privilege of joining you today. This is an occasion which I regard highly and am very happy about, because if offers me the opportunity to share with you what I consider to be the significance of this important event, and to give you some information on the public-health movement now going on in our country.

I attach great significance to the inauguration of the Maria Clara Memorial Chest Center for the following reasons:

First, it opens a service necessary to protect and promote the health of the people of this province.

Second, it is a sign that your provincial officials have accepted a public-health programme which their constituencies need, and that they are willing to support that programme.

Third, it demonstrates the people's increasing regard for health as their business, and their willingness to actively participate and invest in it.

Fourth, it is another proof that the Department of Health has been carrying on its programme to improve the health of our people, a programme encouraged and given full support by the Administration under His Excellency, President Elpidio Quirino.

Fifth, it is a tacit recognition of the importance of high standards or levels of health to the success of our present economic development programme, for which reason FOA (formerly the MSA) and PHILCUSA are jointly giving substantial assistance to such public-health projects as the one which we are now inaugurating.

* Address delivered during the inauguration ceremony of the Maria Clara Memorial Chest Center at Tarlac, Tarlac, on August 19, 1953.

Finally, although this is not closely nor intimately connected with the inauguration of the Tarlac Chest Center, it is in nonetheless significant because I know you selected this date, August 19, in grateful and patriotic remembrance of an immortal Filipino who dedicated his life in the service of his people, the late President Manuel L. Quezon, whose birthday anniversary falls today; he who died from the disease this Center is now dedicated to control for the people of Tarlac province.

And now, my friends, I should like to talk about the public-health movement which is now going on in the country. This movement is THE PUBLIC HEALTH ASPECT OF THE FOA (formerly MSA)-PHILCUSA PROGRAMME IN THE PHILIPPINES. You are all aware, I am certain, that while the main programmes of the FOA and PHILCUSA are in the fields of economic development, these agencies, nevertheless, recognize that the success of such programmes will depend greatly on the state of health of the people and of the communities.

I need not elaborate on the importance of good health to the success of any economic development venture, because I know you are fully conscious of it. It must be stressed, however, that in our country the natural resources from which the economic development projects will be directed abound in health hazards which are both actual and potential. In this connection, therefore, I shall merely repeat what I have often quoted, namely: "Economic development starts with health and stops with disease."

The public-health aspect of the FOA-PHILCUSA programme in the Philippines has several components, namely:

1. Malaria Control
2. Rural Health Units
3. Community Water Supply
4. Hospital Rehabilitation
5. Schistosomiasis or "Snail Fever" Control
6. Laboratory Rehabilitation
7. School Health
8. Public Health Education and Information
9. Public Health Training
10. Tuberculosis Control
11. Rehabilitation of the Philippine General Hospital

I am going to talk only very briefly and point out the objective of each of these health aspects. Toward the end I am going to give the exact figures of the dollar and peso assistance given to these projects by FOA-PHILCUSA as of June 30, 1953.

1. *Malaria Control.* To paraphrase an old saying, malaria is not the last but the one straw that is breaking the camel's back in the way of economic development, particularly in hinterlands or virgin areas where immense wealth is lying untapped and unexplored. Even in many parts of open areas now utilized for agriculture, malaria is still endemic.

We know of several economic ventures which have failed because of malaria. Obviously, malaria has to be eradicated, or reasonably placed

under control, if we are to obtain the maximum returns from our agriculture, and if we are to open up new resources for more wealth. For this purpose, we have activated as of today a corps of 22 malaria-control units scattered all over the country.

These units have already reduced the incidence of malaria considerably and are making the opening of new lands safe for the settlers. In addition to actual field malaria-control measures, we are also constantly undertaking investigations on more practical, effective, economical, and permanent measures of control. To this project, FOA-PHILCUSA has provided, as of June 30 this year, $1,888,791.92 in commodities and ₱1,934,810 for the local operating expenses.

2. *Rural Health Units.* In order to strengthen the health services, particularly in rural areas, we are establishing rural health units to provide preventive and curative services to the people in those areas. Each rural health unit has a complement of one doctor, one public health nurse, one midwife, one sanitary inspector, and one clerk-driver. Each unit is provided with a vehicle to allow for a greater coverage of the people in their respective areas.

The target for 1953 is 81 of these units. As of this day, 56 of these units are already out and operating in their respective areas. You have two of these units in the province of Tarlac, one already operating in the municipality of Capas and the other being readied to operate in Anao. As of June 30 this year, FOA-PHILCUSA has given assistance, to the amount of $560,000 in commodities and ₱677,580 for the local operating expenses, to this project.

3. *Community Water Supply.* In many parts of the country, particularly in remote rural areas and even in some of the *poblaciones*, the supply of good and potable water is inadequate. The lack of sufficient potable water is the principal cause of many of the diarrheal diseases. This project provides for the construction, in 1953, of 355 deep or artesian wells and 200 shallow or dug wells, and the development of 200 springs as sources of water supply for domestic consumption. The priority bases for the selection of the areas or communities where the wells are to be constructed are the absence of safe and adequate water supply and high death rates. There are now ten (10) sanitary engineers, recently graduated from a pre-service training from the Department of Health, who are making a survey of suitable sites for the construction of these wells. FOA-PHILCUSA has provided for this project as of June 30 this year, $1,018,500 worth in commodities, and ₱1,594,010 in local counterpart.

4. *Hospital Rehabilitation.* The physical facilities, including equipment, in practically all of the government hospitals are below desirable standards for adequate and efficient hospital services and care. There are new, modern, and more serviceable items of equipment which our hospitals do not have.

The hospital rehabilitation project is designed to equip our government hospitals with as many pieces of this as they need and can usefully utilize or operate. Furthermore, the project aims at expanding or in-

creasing the facilities in these hospitals to desirable standards within their ability and means to support. Thirty-six (36) of our 80 government hospitals have already received assistance and the provincial hospital here in Tarlac is one of the recipients.

For this project, $1,577,094.83 in commodities and $918,865 in local counterpart, have been provided by FOA-PHILCUSA as of June 30 this year.

5. *Schistosomiasis or "Snail-Fever" Control.* This is a disease which, like malaria, is debilitating, and is common among individuals engaged in agriculture. It is prevalent in many of the provinces of the Visayas, Mindanao, and even the southern tip of Luzon. Our farming methods and practices are conducive to contracting this disease. There are as yet no known effective measures of preventing the disease. The same can be said of the curative or remedial measures.

The disease is, however, a real menace to our farmers; and it is incumbent upon us to find measures of control to safeguard the farmers against it. For this purpose, a pilot project is now being set up in Leyte. From the results of the studies and surveys already made, the work of investigation to determine the control methods is well laid out and clearly defined. They will be closely tied up with present farming practices and methods and with environmental sanitation generally.

For this project, FOA-PHILCUSA has provided assistance as of June 30 this year $19,000 in commodities and ₱139,774 in local counterpart.

6. *Laboratory Rehabilitation.* In order to step up our production of vaccines, sera, and other biologicals which are essential for the prevention and control of many of the communicable diseases, we have taken steps to rehabilitate the Serum and Vaccine Laboratories at Alabang. FOA-PHILCUSA has assisted in this rehabilitation measure with $205,000 in commodities and ₱103,700 in local counterpart.

7. *School Health.* It is recognized that the children who are now in schools will furnish the bulk of the manpower for the country in the years ahead. The state of their health in the future will be greatly influenced by the measures which are taken at this stage to protect, maintain and promote it. A large percentage of the children who are now in the schools are harboring intestinal parasites which undermine their health and strength. Many of them are suffering from defects which can permanently be handicapping in their later years.

The school health programme is designed to recognize the various diseases and defects common among the school children, to treat these diseases and to correct these defects, or otherwise to see to it that the children go through the whole period of schooling free from diseases likely to undermine their health and affect their growth and their full physical and mental development to adulthood. For this program, FOA-PHILCUSA has provided $596,030.26 in commodities as of June 30, this year. It has not, however, received any peso assistance from FOA and PHILCUSA. The peso part of the operation of the programme is

drawn totally from the 50-centavo voluntary contribution from each pupil.

The operation of this programme was transferred to the Department of Education on July 1st this year. Let me urge all parents, however, to remit promptly the voluntary contributions of their children in schools, so as not to hinder its effective prosecution. I am making this appeal, not only because I should like to support the Department of Education, but also because it is inherently the duty of the Department of Health to protect and safeguard the health of all the people including the school children.

8. *Public Health Education and Information.*—The Education of the public in matters of health, including elementary knowledge about healthful living and practices, can lend itself greatly to the reduction of preventable diseases and in the improvement of the health of the individual and the community. An enlightened community in matters of health will easily accept, and may even demand, programmes and services likely to improve and promote its health. People in such communities are likely to be more ready and willing to pay for such programmes and services.

Health education for the public is an integral part of any health activity. This project which is now in effect, with the help of FOA and PHILCUSA, is designed to expand and strengthen the public health education phase of the total health programme. As of June 30 this year, $68,000 in commodities and ₱116,990 for local operating expenses have been provided for this project.

9. *Public Health Training.* Any or all of the several public health projects or activities can succeed only if we have the personnel, particularly the technical personnel, adequately prepared and trained and are competent to do their work. All the equipment, apparatuses, and other facilities will be of little avail; public health techniques, methods, and procedures will not yield their maximum results, if the men who use them or perform the work are not technically competent. As the saying goes, "not the gun but the man behind it" wins the war.

Cognizant of this fact, we have given due importance to the training of public-health personnel. Those who are being recruited for the service are first made to undergo a pre-service training. Those who are already on the job and do not have the opportunities to catch up with the latest trends and developments are made to undergo in-service training.

This project is, likewise, receiving FOA and PHILCUSA assistance. As of June 30 this year, $101,000 in commodities and ₱43,795 in local counterpart have been provided for this project.

10. *Tuberculosis Control.* I have placed tuberculosis control next to the last of my topics for three reasons. First, it is the project of which you are now a beneficiary by virtue of the establishment of the Tarlac Chest Center which we are now inaugurating. Second, tuberculosis is still our No. 1 public health problem both in terms of sickness

and deaths. And finally, this last of the health projects is not really under the Department of Health.

Based on random surveys, approximately from 1,000,000 to 1,500,000 people have pulmonary tuberculosis, and about 35,000 people die from it annually, entailing an annual loss to the country of not less than ₱807,000,000. Worse still, the great majority of those who are sick of, or who die from, the disease are in the most productive age period in life.

FOA-PHILCUSA has provided for the tuberculosis control project, as of June 30 this year, $325,000 in commodities and ₱218,185 for local operating expenses.

1. *Rehabilitation of the Philippine General Hospital.* I have included this project in this report, although it is not under the Department of Health, because it is among the health projects assisted by FOA and PHILCUSA. As of June 30 this year, it has been assisted with $530,000 in commodities and ₱374,785 in local counterpart.

The eleven (11) aspects of the public-health programme of the FOA-PHILCUSA in the Philippines, which I have just enumerated and briefly discussed, have received assistance, as of June 30 this year, a total of $6,888,417.01 in commodities and ₱6,122,494 in counterpart funds for operation and other expenses.

I should like you to view with me now these various projects in their totality. They are well-planned, well-rounded, and well-integrated. More important, they are basically sound and practical. While their immediate objectives are geared to the present programme of total economic mobilization, they are also long-term plans with adequate and necessary provisions for adjustments so that we can continue them according to our own facilities and resources when the assistance from FOA will have terminated.

As I close, I should like to think that my talk has caused you to reflect on the meaning and significance of what I have told you. I believe it should mean much to all of you, for it is vitally important to our country. When any of our countrymen fall victim to diseases which can be prevented or cured, he is bound to be a liability not only to himself and to his family, but to his community and to the country as well. If we are to rise, as we ought to, from sub-standard conditions; if our country is to be prosperous, stable and secure, it is incumbent upon all of us to be fully aware that we can realize all of these only — and I must underscore ONLY—if we evolve a citizenry that is physically, mentally, and emotionally strong and healthy.

These are the meanings of our serious efforts to improve the health of our people. They are the fundamental reasons that the present administration is giving its full support to the public health activities of the Department of Health. It is part of the Government's concerted programme of positive action to make our people strong, productive, prosperous, happy, and secure.

THE CONTROL OF TUBERCULOSIS *

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Sixto A. Francisco, M.D.

Members of the Philippine Chapter
of the American College of Chest Physicians,
Friends, Ladies and Gentlemen:

The biggest and most pleasant surprise that I have ever experienced in my life was on May 16, 1952, when a big delegation of our fellow-members headed by Dr. Jose B. Avellana and Dr. Fidel R. Nepomuceno came to my humble home, where I was confined for several weeks from a double fracture of the leg, just to inform me of my election as the President-Elect of the Philippine Chapter of the American College of Chest Physicians. My Colleagues, I, who had never even dreamt of seeking the Presidency of this organization, knowing fully well that there are other distinguished local Chest Physicians more deserving of said position, some of them much older members of our society than myself, had every reason to feel pleased and surprised. Greatly encouraged by this challenge from my colleagues, I determined to get well and within six months I was once more on my feet.

Last April, after the Pan Pacific Tuberculosis Conference, I was suddenly taken ill and had to take leave outside the country upon medical advice. It was the time when elections of the Chapter were about due, so I requested the President, Dr. Carmelo P. Jacinto, to call for the election of the 1953-1954 officers, but it was agreed that the elections would take place upon my return. My Colleagues, I regret to have caused the delay of the elections, and the inauguration of the new officers.

The topic of my address is "The Control of Tuberculosis." Much has been said and written about the problem of tuberculosis in the Philippines. In previous inaugural meetings of the Philippine Chapter of the American College of Chest Physicians, the Honorable Secretary of Health, Dr. Juan Salcedo, Jr., who was then the Guest Speaker, dwelt at length on the various phases and extent of the problem of tuberculosis in our country, and has particularly emphasized its socio-economic aspect.

The conditions obtaining in the Philippines with regard to the tuberculosis problem are not unique. The last Pan Pacific Tuberculosis Conference has shown us how similar are the difficulties found among most

* Inaugural address delivered after the induction ceremony at the Quezon Institute Conference Hall, August 20, 1953.

countries in the Pacific Area and Asia, so that a set of resolutions were formulated which were thought most suitable for implementation.

The Division of Tuberculosis of the Department of Health is gratified in the knowledge that the major resolutions of said Conference were already being implemented in a fundamental balanced program as follows:

1. Prevention of tuberculosis by two major weapons: (a) Health education, which is being conducted not so much by expensive printing of sparsely circulated written material, but by word of mouth, by loudspeakers, at barrio level; and (b) BCG vaccination. These two preventive services are being undertaken very extensively by field teams aided by UNICEF and WHO, and in a smaller scale in government chest centers and private institutions under government supervision.

2. Case-finding by X-rays. This is done in existing chest centers and by mobile X-ray units, of which the Division of Tuberculosis has three, one of these donated by UNICEF. With the aid of MSA/PHILCUSA, more chest centers and mobile X-ray units will be put into operation.

3. Laboratory facilities. Each government chest center is equipped with laboratory facilities to demonstrate tubercle bacilli, and to perform other routine examinations.

4. Hospital beds. This has not been given emphasis by the government program because of the great expense that would be needed for the benefit of relatively few. For public health purposes, it was felt that a limited budget is wiser spent in preventive measures and tuberculosis dispensaries. However, there are hospital beds set up specially for such cases receiving surgical treatment and collapse therapy, and under the MSA/PHILCUSA program the creation of tuberculosis wards in general hospitals in conjunction with chest centers, rather than building expensive separate sanatoria, will be encouraged.

Despite the existence of these basic services however, I have to candidly admit that the program of tuberculosis control, viewed as a whole for the country, leaves much to be desired. Not alone because insufficient funds are alloted for the TB fight, but because these funds, meager as they are, are divided among programs also divided, and among agencies, again, unfortunately divided.

I have recently returned from Japan where I had an opportunity to make some studies and observations on Japan's tuberculosis control program, the salient points of which I believe are so worthy of consideration that I must break a self-imposed reluctance to praise an erstwhile enemy nation in order to bring home the example of what solid cooperation between government and private agencies can do in the control of tuberculosis. Before the last war, the tuberculosis problem in Japan was as serious as is here, the TB mortality death rate was about 200 to 100,000 population. It seems incredible, but true, that during the past eight years, Japan has been able to implement a balanced National Tuberculosis Program so effectively and extensively that it is now yielding the de-

sired results. How did Japan do it? Is it because Japan has developed an elaborate and expensive tuberculosis program with ample TB funds available?

The present economy of Japan will not premit her to adopt and develop an expensive tuberculosis program, and in fact the annual 1953 tuberculosis budget of the Japan Antituberculosis Association is about 330,000,000 Yen or approximately $1,000,000, which is practically one-half the annual budget of the Philippine Tuberculosis Society, and twice as much as the budget of the TB Division.

The present National Tuberculosis Control Program in Japan is under the leadership, control, and responsibility of the Minister of Health and Welfare of the Japanese Government with the assistance and effective cooperation of several health agencies, among which are the Japan Antituberculosis Association, the National Institute of Nutrition, the Japan Medical Association whose active membership exceeds 60,000 physicians, and the Japan Chapter of the American College of Chest Physicians.

The problem of tuberculosis in Japan is fundamentally considered to be educational and nutritional. Hence, this aspect of the tuberculosis problem is given top-priority. Training Centers for Health Educators on tuberculosis were established in all prefectures, and thousands of these Health Educators, are now on detail in the Ministry of Education and given assignment in public schools throughout Japan. The Japan Anti-tuberculosis Association under the direction of the Minister of Health and Welfare and with the assistance and cooperation of the Japan Chapter of the American College of Chest Physicians gives a three months course on tuberculosis, in which BCG is included, three times a year for physicians, public health nurses, and X-Ray technicians. Moreover, courses on tuberculosis are included in the curricula of the medical colleges in Japan. The purpose of these courses is to make available efficient tuberculosis workers among physicians, public health nurses, and X-Ray technicians, who are in the first line of attack in the tuberculosis campaign.

The National Institute of Nutrition, cooperating with the Ministry of Agriculture, assures the masses of an adequate supply of foodstuffs. Through years of research, this Institute has evolved cheap but balanced meals for the people.

The next phase of the tuberculosis problem that is being given second priority is the socio-economic, in which Japan possibly excels other countries in the East. There are several pieces of social legislation such as the Daily Security Law, the National Health Insurance, and others, which look after the welfare not only of the employees but of their immediate families. Moreover, there is the so-called "family's allowance for the children" where a certain amount for each son or daughter of minor age is provided.

The preventive phase of the tuberculosis problem is given the third priority. Hand in hand with the extensive and intensive health education campaign are practical demonstrations in community and rural

health centers, giving emphasis on the importance of outdoor recreation. In Tokyo along, there are no less than one hundred big parks provided with playground facilities and either botanical or zoological gardens. All these parks are generally full of people especially during week-ends, who indulge in mass gymnastics rather than merely on competitive athletics. Hiking, swimming, golf, tennis, and hunting are among those outdoor sports that are being indulged by others. As the result of this systematic physical exercise, the present generation of the Japanese people are noticeably different from those of the past; they have better physique, are taller, and present an ideal picture of health. An example of the present young generation of Japanese is the 19 year-old girl, Miss Kinuku Ito, whom Japan chose as her candidate for Miss Universe this year. In beauty, stature, figure and personality, Miss Ito can compete with anyone, and in fact she placed third among more than 100 contestants for Miss Universe recently.

Adequate rest and sleep are necessary as preventive measures against tuberculosis. In this respect, Japan is strictly observing limited amusement hours. All night clubs, cinema houses, theaters, etc., with the exception of a few patronized by foreigners, are closed at 10 o'clock in the evening. All Japanese officials and employees are expected to have at least 7 to 8 hours' sleep at night during the working days of the week.

To increase or raise further the bodily resistance, mass BCG vaccination is given to all newly-born and young children and adults who are tuberculin negative reactors. The TB workers in Japan do not only mutually cooperate with each other in implementing BCG vaccination, but there is effective teamwork among them. For instance, the Japan Antituberculosis Association with its 46 branches all over Japan has been in-charge, for the government, of the Research and Production of BCG since 1925, when a strain of BCG was brought back to Japan by Doctor Shiga who had received it from Doctor Calmette of the Pasteur Institute in Paris. From the year 1940, BCG inoculation began to be made among army and navy men. Since 1942, the vaccination of the fluid BCG became one of the policies of the administration and was generally used for the primary school graduates before employment.

The capacity of the dried BCG vaccine produced at present amounts to 67,340,000 doses, and the tuberculin solution 50,400,000 doses. In this connection, it may be of interest to mention that BCG vaccination is now made compulsory by a Japanese legislation, and that Japan has exceeded any other country in the world in the number of people who were already vaccinated with BCG to a total of no less than 30,000,000. It seems significant that the dramatic drop in TB mortality in Japan took place during this period, and more significant still that the decrease in mortality occurred only within the age groups where BCG vaccination was extensively applied.

The fourth priority is the medical and curative aspect of the tuberculosis problem. This is the logical sequence, because if any of the three control measures previously discussed fail, then the tuberculous case has to be treated and/or hospitalized. At present, Japan has a total number

of beds for tuberculous cases of 160,000 as against approximately 2,000 TB beds in the Philippines, or 80 beds to every one in the Philippines. Japan has about 4 times the population of the Philippines so that they would still have 10 beds to every one in the Philippines. In the City of Tokyo alone, there are several sanatoria of 500 to 1,500 bed-capacity each, but none of those I have visited can be compared with our beautiful Quezon Institute in style of building, equipments and facilities, of the latest types imported from the United States of America, including medical supplies, X-Ray films, absorbent cotton and gauze, silver and China wares and even kitchen utensils. The sanatoria in Japan on the other hand, are provided with equipments such as hospital beds, surgical instruments, operating room supplies, laboratory equipments (especially microscopes) and even X-ray units of Siemen's type which are all made in their own country. Even antibiotics are manufactured in their country. I visited two antibiotic plants in the suburbs of Tokyo called "Meiji" and the other "Dauchi" which are manufacturing Penicillin and Streptomycin, having at present a monthly production of about one ton of Penicillin and one and a half tons of Streptomycin. There is also another Pharmaceutical Manufacturing Plant that is producing isoniazid. Much research and clinical trials on isoniazid have been done in Japan and their findings coincide with those of other TB researchers, as already reported; accordingly to the Research Institute for Tuberculosis functioning under the Japan Antituberculosis Society, the best result so far has been obtained with the use of isoniazid in combination with streptomycin and PAS.

The number of beds for TB cases has also been augmented with the establishment of TB wards or TB pavilions and operating rooms for chest surgery in practically all General Hospitals, government or private, throughout the country.

In each of the 46 Prefectures, there are Health Community Centers, an important activity of which is the Chest Clinic and Mobile X-Ray Units. These TB Units operate with the Prefectural sanatoria which are maintained and operated by each Prefecture with a population of 1,000,000 or more. Thus the total number of beds available for TB patients throughout the country in these 46 Prefectural sanatoria, National Government and privately owned sanatoria and in TB wards of General Hospitals, exceeds 160,000 in 1952 which may reach a grand total of 200,000 in 1953.

Operated and maintained by the Japan Antituberculosis Association is "The Research Institute for Tuberculosis" located in Tokyo, with 260 staff members. This Research Institute for Tuberculosis was started in April 1940, in the Hoseiyan Sanatorium of the Association and since then it has expanded so much that it had move to its present location. The role which this Research Institute has played and continue to play in the National Tuberculosis Campaign of Japan is tremendous, particularly its Special Section in the study and production of BCG (liquid and dried) that is being used throughout the country.

Evaluation of Results in their Antituberculosis Campaign

Let us evaluate the effectiveness of the control techniques employed by the Japanese in their campaign against tuberculosis within a period of six years from 1947 to 1952.

1. In 1947, there was a total of 146,241 deaths from tuberculosis among a population of about 80 million. This was reduced to 70,499 in 1952 or more than 50%.

2. The death rate from tuberculosis in 1947 was 187.2 per 100,000 whereas in 1952 this was reduced to 82.1 per 100,000, a very significant fall to be recorded within a short period of six years.

Comparing this with our statistics in the Philippines, we have in 1947 a mortality rate of 164.70 per 100,000 and in 1952 we have on record 144.28 per 100,000 as our annual death rate from pulmonary tuberculosis.

3. Aside from the above statistical date which prove the effectiveness and success of their control measures against tuberculosis, we find among the present generation of Japan marked improvement in their physical condition as if they are taller, more active and healthier people than other Orientals. This yearly development of a well-balanced National Tuberculosis Program of post-war Japan at a cost of less than one-half of the total annual budget for TB work in the Philippines is certainly phenomenal and such success may be attributed to the following:

1. Extreme economy observed in the establishment, operation and maintenance of TB units.

2. Construction of less expensive buildings for sanatoria with more attention to simplicity and allowance to bed capacity rather than beauty and luxury.

3. Uniform and wide distribution of sanatoria throughout the country thereby providing adequate and effective institutional isolation of TB cases.

4. Systematic and effective program training of medical and paramedical personnel which are well distributed throughout the country.

5. BCG vaccination is universal in Japan and is accepted by the whole medical profession and recognized as a contributing factor in the fall of TB mortality as supported by statistics. Mass vaccination is backed up by proper legislation.

6. Effective campaign on health education and proper nutrition.

7. Improved housing condition and environmental sanitation.

8. Integration of tuberculosis control program with other public health services as seen in their health centers in every prefecture where a Chest Clinic with Mobile X-Ray Unit is a main activity.

9. As a highly industrialized country, Japan does not depend on imported equipments and supplies for their Chest Clinics, TB Wards, and sanatoria, hence, they can afford to establish and maintain such institutions not only in big cities but down to the remote communities all over the country.

10. Rivalry or personal jealousies do not exist among the different agencies engaged in health work whether governmental or private. On the contrary, mutual understanding and close cooperation prevail between the Ministry of Health and Welfare with the Ministry of Education and Ministry of Agriculture. The same cordial relations also exist between these governmental agencies and the Japan Antituberculosis Society, the Japan Medical Association and the Japan Chapter of the American College of Chest Physicians.

Concluding Remarks

With no other particular disease have the health authorities and the medical profession been squarely face to face with utmost difficulty than tuberculosis. The delegates of thirty countries within the Pacific area assembled in Manila on April 18, 1953, recognized that tuberculosis is still a major medical problem in most of them and that there is a need for a periodic evaluation of the effectiveness of different methods of tuberculosis control. The WHO admits that no standard plan of tuberculosis control can be formulated which will fit every country even among the underdeveloped areas but it recommends international pooling of information so that such control techniques found effective in one country may be of great interest to neighboring countries and to the rest of the world. So when a neighboring country like Japan has recently demonstrated during a comparatively short period of time and within a minimum cost possible, such effective control technique which has yielded the most desired results, there is really something there that is worth considering as a "food for thought."

The Philippines has for the past 40 years made a valiant effort to combat its tuberculosis problem, but there are meager indications that the disease is losing ground so that the goal for its control appears still remote. Let us honestly ask ourselves these questions: Do the effects of the 40-year-old campaign for the control of tuberculosis run counter to the efforts exerted and to the tremendous amount of money already spent? Or is the implementation of our admittedly fine antituberculosis plan practical, economical, systematic; and does it get the adequate financial support, the necessary cooperation, and mutual understanding among all the official and non-governmental health entities or agencies that are engaged in this campaign? The correct answers to these questions will place us on a solid footing enabling us to put our National Tuberculosis Campaign on more effective strategic ground. The results, no doubt, shall be more satisfying and lasting.

My friends, the Philippine Chapter of the American College of Chest Physicians has a decidedly important role to play in the solution of the problems outlined above. You have elected me to guide the affairs of this organization for this coming year, and I tremble somewhat at the great responsibility imposed upon me.

My friends, I wish to state here and now my unequivocal policy — that of working for sincere, honest and harmonious relations among all TB workers in the Philippines. Personal differences of opinion will always exist (otherwise, this already dull world of ours would be duller still). But, as a man who has devoted the 30 best years of his life to serving people collectively, rather than individually, I maintain that one man, or a few men's whims and ideas should be submerged in the more important pool of public welfare.

I alone cannot succeed. My hands are powerless without yours to lend them strength. My voice alone is feeble without yours to lend it volume, so that in the aggregate expression of our mutual desires the first round in the successful fight against tuberculosis will have been won, which may eventually lead us to final victory.

ACKNOWLEDGEMENT

To Dr. Regino G. Padua, Acting Secretary of Health, for his recommendation which was approved by Malacañan to consider my trip to Japan official; to Dr. M. Takabe, Delegate from Japan to the Pan Pacific Tuberculosis Conference in Manila last April, who furnished me with important information and statistical data on the tuberculosis problem in Japan; to Dr. Takeo Tamiya, President of the Japan Medical Society with 60,000 physicians as members, who made the necessary contacts and appointments for me with famous Japanese scientists and pharmaceutical firms; and to Dr. Hideo Kumabe, Managing Director of the Japan Antituberculosis Association with 46 branches throughout Japan, whom I have interviewed on the present activities of the Association, specially as to its relationship with the Ministry of Health and Welfare in the national campaign against tuberculosis, — to all of them, my sincere thanks and profound gratitude for having made possible the preparation of this inaugural address.

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Editorial

WHAT SEPTEMBER 15 MEANS TO US

September 15, 1953 is a memorable date to the medical profession in this country. For on this date, the Philippine Medical Association celebrates two outstanding events in its life: its founding 50 years ago, and secondly, the first observance of Philippine Medicine Day.

In accordance with Proclamation No. 407 of His Excellency, President Elpidio Quirino, on September 2nd, every 15 of September of every year shall be known as the "Philippine Medicine Day". That is as it should be. For this date marks the birth of the Philippine Islands Medical Association, the first national medical association founded in our country.

During the last 50 years, this organization has made substantial contributions to the science and practice of medicine. This is a cause for self-congratulation, not only on the part of every medical practitioner in this country, but on the part of every Filipino as well. The Proclamation of His Excellency follows:

"BY THE PRESIDENT OF THE PHILIPPINES
Proclamation No. 407

DECLARING THE FIFTEENTH DAY OF SEPTEMBER OF EVERY YEAR AS PHILIPPINE MEDICINE DAY.

WHEREAS, national progress and prosperity depend to a large extent upon a healthy citizenry; and

WHEREAS, to produce a healthy citizenry, it is necessary that the masses realize the importance of availing of the services of the medical profession, the mission of which is to safeguard, maintain and promote the health of the people;

NOW, THEREFORE, I, ELPIDIO QUIRINO, President of the Philippines, by virtue of the powers vested in me by law, do hereby proclaim the fifteenth day of September of every year as Philippine Medicine Day.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the Republic of the Philippines to be affixed.

Done in Honolulu, Hawaii (for Manila, Philippines), this 2nd day of September, in the year of Our Lord, nineteen hundred and fifty-three, and of the Independence of the Philippines, the eighth.

(Sgd.) ELPIDIO QUIRINO
President of the Philippines

By the President:
(Sgd.) MARCIANO ROQUE
Acting Executive Secretary"

The medical profession is deeply grateful to President Quirino for this proclamation. For it is bound to focus the attention of our people, if only once a year, on the importance of medicine to their health and well-being — alleviating their pain and suffering and building up a strong, happy, and progressive citizenry.—A.S.F.

President's Page

OUR INTERNATIONAL RELATIONS

A. S. Fernando, M.D.

With the founding of the United Nations and of one of its instrumentalities, the World Health Organization — of both of which the Philippines is a member-nation — our Association will do well to be ever-conscious of our growing responsibilities in the fulfillment of our duties to foster closer relation with international medical bodies. Because of this, we should: (1) have trained and capable men to participate actively in international medical conferences; (2) hasten as much as we can the improvement of our medical agencies, both government and private, in order that they may catch up with the progress of the more enlightened countries of the world in medical science and practice, in the administration of health agencies, and in the recognition of the vital importance of medical research in the progress of any country.

As a member of these international organizations we are expected to be able to offer substantial contributions to the solutions of many complex and difficult problems pertaining to the people's health and its socio-economic implications.

It will be remembered that, as early as 1908, the Philippine Medical Association initiated the founding of the Far Eastern Association of Tropical Medicine; in 1947, it became a member Association of the World Medical Association; and in 1950, it initiated the First Southeast Asia Medical Conference. With regards to the WHO, we are extremely proud that my immediate predecessor as President of the P.M.A., Dr. Juan Salcedo, Jr., was given the highest honor that that Organization can bestow — the Presidency of the WHO last year; and that Dr. Regino G. Padua, Undersecretary of the Department of Health, was given the first chairmanship of the first session of the Western Pacific Regional Committee Meeting of the WHO held in Geneva in May 1951, and of its second session held in Manila on September of the same year. The Pan-Pacific Tuberculosis Conference, sponsored jointly by the World Health Organization, the Department of Health of the Philippines, and the Philippine Tuberculosis Society, was held in Manila last April, 1953; and the Eighth Pacific Science Congress which will be held in Manila in November this year.

It can, therefore, be seen that the Philippines is participating more and more in international activities in connection with medical science and health. It behooves us to exert greater and greater efforts, if we are to live up to the role that we must play henceforth.

Antonio S. Fernando, M.D.

Miscellaneous

ABSTRACTS FROM CURRENT LITERATURE

ABSTRACTORS

Honoria Acosta-Sison, M.D.
Mariano M. Alimurung, M.D.
Jose R. Cruz, M.D.
Felisa Nicolas-Fernando, M.D.
Trinidad P. Pesigan, M.D.
Porfirio M. Recio, M.D.
Antonio M. Samia, M.D.

REVIEW OF THREE HUNDRED FIFTY THREE CASES OF PREMATURE SEPARATION OF THE PLACENTA. By G. F. Fisher. Am. J. Obst. and Gynec., 1953, 65:257.

Ablatio placenta in the Charity Hospital of New Orleans during the ten year period of 1942 to 1952 secured in 353 instances giving an incidence of 1:226. It was more frequent in multipara than in primipara. The maternal mortality was 1.1%. In all the four mothers who died, eclampsia was associated with the ablatio placenta. The babies were stillborn in 40.3%.

As to treatment, cesarean section, mostly of the low type, was used in 159. When vaginal delivery was contemplated, pitocin by intravenous drip was used to speed up labor and delivery.

The following conditions were associated with the ablatio placenta.

1. Toxemia, mostly in the form of pre-eclampsia in 37.6%.
2. Pain was present only in 33.33%.
3. Ligneous consistency of the uterus was found in 104 cases or in less than 30%.
4. Shock occurred in 10.4%.
5. Trauma was present only in 4.2%. Examples of this were cough, falls, coitus, rectal examination, attempt at external manual rotation of the occiput. One case resulted from a transabdomino-intrauterine tap for the relief of hydramnios, and one followed a tetanic contraction of the uterus after an injection of ½ cc. Pitocin.
6. Anemia and undernutrition was found to be an etiological factor of ablatio placenta.

COMMENT. In the Philippine General Hospital from July 1945 to December 1951, there were 107 cases of ablatio with an incidence of 1:249. Though many cases showed toxemia in the form of hypertension and albuminuria none had eclampsia. The mortality was as high as 7½ percent caused mostly by severe hemorrhage. It is well to bear in mind that manipulations such as external version and transabdominal uterine tapping as the author mentions may cause ablatio placenta.—H.A.S.

DIET AND ATHEROSCLEROSIS. By Dr. Lester M. Morrison. Annals of Internal Medicine 37:6, Dec. 1952, p. 1172.

It has been established by several observers that high fat content in the diet is an important factor in the causation of atherosclerosis. The author distinguishes the terms atherosclerosis and arteriosclerosis. By atherosclerosis is meant a condition in which the intimal and medial coats of the affected artery are involved with lipid, fatty or atheromatous plaques. In such a condition there is narrowing of the arterial lumen

and consequent impairment of the circulation in the affected area with resultant damage in the myocardium or cerebral tissue. In the arteriosclerotic artery on the other hand, there is calcinosis in its medial coat with little or no narrowing of the arterial lumen and hence no impairment of circulation in the affected area. It is estimated that 85% of lesions in the coronary and cerebral vessels are due to atherosclerotic or lipid-containing lesions.

It is now the consensus that atherosclerosis is a disease of lipid and/or lipoprotein metabolism rather than the result of old age as had been formerly taught.

Morrison found that by subjecting patients with atherosclerosis (coronary thrombosis and myocardial infarction) to a low fat low cholesterol diet with a daily intake of 20-25 gm. plus 75 mg. cholesterol there was marked reduction in the mortality rate. The serum cholesterol levels fell from a mean level of 312 mg. to 220 mg. after 3 years of dietary control; and the total serum lipids fell from a level of 840 mg. to 571 mg.

Morrison cites that in Norway in the war years of 1940-1945 when there was low fat consumption in the form of butter, milk, cheese and eggs there was correspondingly a reduction in deaths from coronary atherosclerosis by as much as 31 per cent. During the same war years there was a drop in deaths from cerebral arteriosclerosis and renal arteriosclerosis by as much as 50 per cent and the reduction of the mortality from the above causes have been attributed to the severe dietary restriction of fat and cholesterol and to the coincident reduction of calories. In England there was observed a decrease of mortality from diabetes mellitus in patients of over 45 years by as much as 50 per cent. The reduced mortality attributable to the low fat intake was due rather to the decreased incidence of complicating vascular disease in the form of atherosclerosis. In other countries like England, Wales, France, the Scandinavian countries, Sweden, Finland and Denmark there was observed a correlation between low death rate from coronary and generalized arteriosclerosis and low fat intake. In Italy, Coppo noted high incidence of coronary atherosclerosis (thrombosis) among population who consumed high fat diet in the form of pork products at each of the three daily meals.

The author concludes that high fat and cholesterol intake is correlated with the incidence of death from coronary atherosclerosis.—H.A.S.

THE DISTURBANCE OF THE NORMAL BACTERIAL ECOLOGY BY THE ADMINISTRATION OF ANTIBIOTICS WITH THE DEVELOPMENT OF NEW CLINICAL SYNDROMES. By David T. Smith, M.D., F.A.C.P. Annals of Int. Med. 37:6, Dec. 1952.

The human body has a normal flora which work for its own good. Penicillin acts specially on the gram-positive cocci. But prolonged use of penicillin may accelerate the growth of organisms normally found in the body like Candida albicans and Pseudomonas aeruginosa which will give rise to disease. Streptomycin is more effective against gram negative bacilli than gram positive cocci, and occasionally severe or even fatal infections with cocci occur during streptomycin therapy. Practically all bacteria are eliminated by the simultaneous administration of both penicillin and streptomycin or aureomycin.

Prolonged administration of a combination of penicillin and streptomycin can cause secondary myotic infection. The prolonged use of antibiotics which includes aureomycin, chloromycetin, terramycin besides penicillin and streptomycin, may not only cause mycotic infections but will cause avitaminosis specially of the vitamin B complex and in the non formation of vitamin K.

The author makes the following conclusions:

1. Prolonged therapy with penicillin suppresses or eliminates gram-positive bacteria and stimulated directly or indirectly the multiplication of gram-negative bacilli.
2. Prolonged therapy with relatively large doses of streptomycin may suppress the gram-negative bacilli and stimulates the growth of gram-positive cocci. This effect is not so constant as the reversed one induced by penicillin therapy.

3. The prolonged administration of both penicillin and streptomycin simultaneously, or of aureomycin, chloramphenicol or terramycin may suppress both gram-positive cocci and gram-negative bacilli to such a degree that the fungi of the yeast and mold types from the normal ecologic flora multiply and produce disease in the mouth, vagina, bronchi, lungs, and intestinal tract.

4. Vitamin deficiencies of the B complex type including the syndrome of pellagra, may follow the prolonged administration of the newer broad coverage antibiotics.

5. Antibiotics should not be used in mild and ill-defined infections because a drug sensitivity may develop which will prevent the subsequent use of the antibiotic in a major illness. The dangers of inducing sensitivity seem to be greatest when the antibiotics is applied locally.

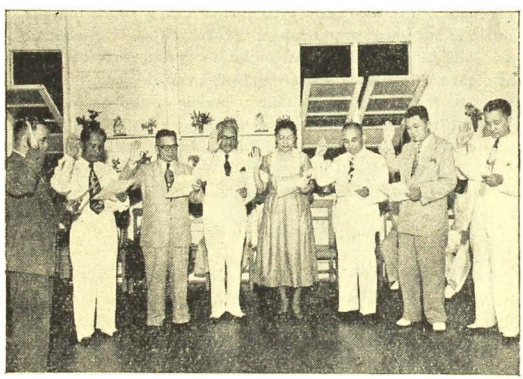
6. The newer antibiotics should not be administered for more than one week at a time unless the etiologic agent causing the infection has been identified and the indications for prolonged therapy are obvious.

7. A complete vitamin supplement, with special emphasis on the B complex group, should be given to all patients receiving prolonged therapy with the newer antibiotics.

COMMENT: The use of antibiotics for any illness seems to be the fashion today. The above article is a warning that the so-called wonder drugs may do harm when given improperly causing sensitivity or when given for a long period.—H.A.S.

SOCIETY ACTIVITIES

HEART ASSOCIATION HOLDS SEVENTH SCIENTIFIC MEET.—The Philippine Heart Association held on Aug. 6, 1953, its seventh scientific meeting at the Conference Room of the U.S.T. Hospital. The program included five scientific papers presented and discussed before the Association's interested members and medical students. They were as follows: (1) A Technic on Coronary Perfusion to Differentiate Coronary Sinus and Extra-Coronary Sinus Flow in the Isolated Dog's Heart—by Dr. Agustin P. Sevalla; (2) Premature Endothelial Hyperplasia of the Aorta and the Large Vessels. Report of a Case — by Drs. Emmanuel T. Gatchalian, Manuel D. Peñas, Albino Ocampo, and Felix Rodriguez; (3) Electrocardiographic Patterns Simulating Myocardial Infarction—by Drs. Salvador Busuego and Raymundo Katigbak; (4) Apical Diastolic Murmurs in Children Simulating That of Mitral Stenosis—by Dr. Mariano M. Alimurung; (5) Cardiac Effects of Indenbergia Filipensis. Preliminary Report—by Drs. Hermogenes A. Santos, Antonio M. Samia, Andres Cruz, Demetrio Nalagan, and Rene Arcilla.



Shown above are new officers of the Cagayan Medical Society taking their oath before Judge Virgilio Y. Pobre. From left to right: Judge Virgilio Y. Pobre, Dr. Gregorio M. Reyes, Councilor; Dr. Pio Lauengco, 1st Vice Pres.; Dr. Iderlina F. Manuel, President; Dr. Eligio Acebedo, Assistant Sec.-Treas.; Dr. Emiliano Perez, Councilor; and Dr. Oscar Romero. Not in the picture: Dr. Esteban Alameda, 2nd Vice President and Dr. Tomas Nolasco, Councilor.

The 7TH ANNUAL MEETING OF THE CAGAYAN MEDICAL SOCIETY was held in Tuguegarao, Cagayan, last August 14, 1953. The meeting was presided over by Dr. Gregorio M. Reyes. The program follows: (1) Brief remarks on "Do We Get Anything From Our Medical Society" by Dr. Gregorio M. Reyes; (2) Blood Transfusion In Emergency Cases For Small Town Hospital And Rural Areas by Dr. Francisco C. Cepeda; (3) Transverse Lie With Avulsion Of The Upper Extremities by Dr. Iderlina F. Manuel. At noon a Luncheon was given jointly by Zuellig, Inc., Doctors, Pharmaceuticals,

Pascual Laboratory, Inhelder Inc., E. R. Squibb and Sons, Inc., at the Patria. After the luncheon business meeting was held. The following officers for 1954-55 were elected: President, Dr. Iderlina F. Manuel; 1st Vice Pres., Dr. Pio Lauengco; 2nd Vice Pres., Dr. Esteban Alámeda; Sec.-Treas., Dr. Oscar Romero; Assistant Sec.-Treas., Dr. Eligio Acebedo; Councilors, Dr. Gregorio M. Reyes, Dr. Emilio Alvarado, Dr. Emiliano Perez and Dr. Tomas Nolasco. After the meeting scientific films were shown at the U.S.I.S. thru the courtesy of F. E. Zuellig, Inc. and E. R. Squibb and Sons, Inc. Ice cream was served through the courtesy of Manuel Zamora, United Drug, Inc. and Chemidrug Company after the showing.

In the evening Reception and Dance was given by Dr. and Mrs. Gregorio M. Reyes in honor of the members of the Cagayan Medical Society at the Reyes Clinic. During the dance the newly elected officers were inducted by Judge Virgilio Y. Pobre, Justice of the Peace of Tuguegarao, Cagayan.

BULACAN MEDICAL SOCIETY HOLDS SECOND MEET. — Meeting at the New Selecta on Dewey Boulevard under the sponsorship of F. E. Zuellig, Inc., the Bulacan Medical Society held its second scientific meeting August 22, 1953, at 10:00 in the morning. The program commenced with an opening remarks by Dr. Jose L. Santos, V.P. of the Society, followed by a welcome address by Dr. Emilio Venturina, a member of the B.M.S. and medical representative of F. E. Zuellig, Inc. Miss Sylvia La Torre, a popular radio singer, accompanied by Mrs. Nilda M. Redoblado of the U.S.T. Conservatory of Music, gave a musical rendition. After this Dr. A. S. Fernando, P.M.A. president, gave a short remark on the progress of the projected P.M.A. House and other activities of the Association. Guest speaker of the occasion was Dr. Gonzalo F. Austria of the U.P. College of Medicine who spoke on Medical tid-bits. He was introduced by Dr. Salvador C. Santiago, B.M.S. President. Films on Varidase and Aureomycin by F. E. Zuellig, Inc., was shown. Medical Samples were distributed. At 12:00 noon luncheon was offered by the sponsor.

HEART ASSOCIATION HOLDS MEET AT P.G.H.—The eight regular scientific meeting of the Philippine Heart Association was held at the Philippine General Hospital on the evening of September 3. The complete program follows: (1) Correlation Between Pathologic and Electrocardiographic Findings in Myocardial Infarction—by Drs. A. Florentin, A. Baltazar and A. Buenaventura; (2) Thyroid Extract in the Management of Hypertension—by Dr. Edward Z. Fang; (3) The "Wolff-Parkinson-White Syndrome". Report of Two Cases—by Drs. Jose M. Barcelona and S. Ador Dionisio; (4) Cardiovascular Actions of Phaeantharine HCl, a New Quarternary Ammonium Compound from Phaeanthus ebracteolatus (Kalimatas). Preliminary Report—by Drs. Conrado Dayrit, Gerardo V. De Leon, Horacio R. Estrada, Ernesto Valdez, Natividad Diaz and Romulo Guevara, and Gertrudes Aguilar-Santos and Alfredo C. Santos; (5) Electrocardiographic Exercises—by Dr. S. Ador Dionisio.

V. LUNA GENERAL HOSPITAL HOLDS SEVENTH ANNIVERSARY. — A program celebrating the 7th anniversary of the V. Luna General Hospital, AFP, was held Sept. 3. The program started with an open house and a band concert held at 10:00 in the morning. At 12:00 noon a luncheon was offered by the V.L.G.H. Officer's Club. Other part of the program were athletics, a musical program offered by the Philippine Women's University students, distribution of prizes, and Officer's Club party.

JOINT MEET AT N.G.H. — The Manila Medical Society and the Director and staff of the North General Hospital held a joint scientific meeting at the Conference Room of the N.G.H. in the evening of Sept. 8, 1953. In this meeting Dr. Wenceslao Vitug and Dr. Hipolito Tanjuakio presented "Tuberculosis: A Diagnostic Problem (Report of a Case). A panel discussion on cough was also held with Dr. Miguel Cañizares as moderator. The panel of discussors were Drs. J. R. Cruz, F. A. Estrada, G. Macatangay, F. Nepomuceno and A. B. Rotor. After the panel discussion the usual business meeting followed.

JOINT SYMPOSIUM ON MENTAL HEALTH. — The national medical and allied organizations and the Department of Health held a joint meeting on Mental Health at the Science Hall of the New Library Building of the Philippine General Hospital September 16, 1953. The organizations that participated in this meeting were the following: Phil. Med. Assn., Phil. Fed. of Priv. Med. Pract., Phil. Med. Women's Assn., Phil. Pub. Health Assn., Phil. Mental Health Assn., Phil. Dental Assn., Fed. of Dental Pract. of the Phil., Fil. Nurses Assn., Visiting Nurses Assn., Phil. Pharm. Assn., and Col.-Med. Far. de Filipinas. The symposium was on "Teamwork for Mental Health" with the discussions being led by Dr. Marciano Limson, Dr. Manuel V. Arguelles, Dr. Leopoldo G. Pardo, Dr. Fe del Mundo, Dr. Alfonso Salcedo, Dean Julita Sotejo, Mr. Iluminado Cada, Dr. Mariano Icasiano, and Dr. Victorino G. Villa. Dr. Jose Fernandez acted as moderator. Guest of Honor of the occasion was the Hon. Juan Salcedo, Jr., Secretary of Health. The complete program follows: (1) Call to order and opening remarks — Dr. Ramon R. Angeles; (2) Welcome address — Dr. Arturo B. Rotor; (3) Introduction of the Guest Speaker — Dr. Toribio Joson; (4) Address by the Guest Speaker — Dr. Estefania Aldaba-Lim, Ph. D.; (5) Introduction of the Guest of Honor — Dr. Arsenio Regala; (6) Closing Remarks by the Guest of Honor — Hon. Juan Salcedo, Jr. Refreshments were served through the courtesy of Metro Drug Corp.

NEWS ITEM

P.I. IN INTERNATIONAL CONGRESSES IN EUROPE

At the invitation of the Turkish and Italian Governments, the Philippines will be represented by Drs. Antonio Ejercito and T. P. Pesigan, both of the Department of Health, at the 5th International Congress of Tropical Medicine and Malaria which will be held in Istanbul from August 28-September 4 and at the 6th International Congress for Microbiology which will be held in Rome from September 6-12. These two delegates, who left by PAL plane on August 22, 1953, are project directors in charge of the control of malaria and schistosomiasis in the Philippines. These two diseases which are two very important public health problems in the Philippines will be dealt with intensively in the agenda of these congresses and it is believed that with their participation and their contact with renowned workers, the successful prosecution of their respective projects will be assured.

After these congresses, Dr. Ejercito will go back to the Philippines and then leave for the United States on a FOA (MSA) fellowship, while Dr. Pesigan will visit different health institutions and agencies in the capital cities of Europe such as Geneva, Stockholm, London, Paris, and Madrid where he will observe the researches being done in the various institutions in charge of communicable diseases control.

BOOK REVIEWS

GIFFORD'S TEXTBOOK OF OPHTHALMOLOGY by Francis Heed Adler, 5th Edition, W B. Saunders Co., Philadelphia, 1953, cloth 488 p., 281 figures and 26 color plates.

This book is quite different from the 4th edition published 6 years ago. There is much revision aimed at including and presenting materials for the undergraduate and the general practitioner of medicine. Many diagrams and photographs of the previous edition have been removed. Some of these are replaced by new ones. Some chapters, like the section on hypertensive diseases and diabetes, have been entirely rewritten in a very illuminating way and attempts are made to include new thoughts, classification and drugs to make it up-to-date. There is a confusing arrangement, however, in the inclusion of epidemic kerato-conjunctivitis under allergic conjunctivitis, on p. 207, and the omission of cortone in the section on therapeutic agents. In the chapter on Orientation on Surgical Operations, the techniques have been omitted and the emphasis is on the indications of the common operations, and what they may accomplish from the point of view of the general physician. What should be referred to the ophthalmologist is clearly pointed out throughout the next. This presupposes the availability of ophthalmologists in the different parts of the United States, which may not be so in such countries like the Philippines.

This textbook of ophthalmology is to be recommended for undergraduates and general practitioners of medicine.

GEMINIANO DE OCAMPO, M.D.
Assoc. Prof. of Ophthalmology
University of the Philippines

"PRACTICAL DERMATOLOGY" by George M. Lewis, M.D., FACP, Professor of Clinical Medicine (Dermatology) Cornell University Medical College; Attending Dermatologist, The New York Hospital Secretary, The American Board of Dermatology and Syphilology, W. B. Saunders & Company, Philadelphia and London, 1952, 328 pp.

The full title of this Book is "Practical Dermatology for Medical Students and General Practitioners," and it proves to be exactly that. It compresses in a little over 300 pages the information and advise, both diagnostic and therapeutic, that one associates with 1000-page textbooks on dermatology. In an unbelievably brief presentation of the subject, the author has given the general practitioner everything that he needs to know and can use.

How was this unusual conciseness achieved? Firstly, by making generous and judicious use of excellent pictures and illustrations. This 263 pages of description of diseases contain 99 plates, each plate often consisting of 4 or more separate pictures. It is amazing how quickly one understands the difference between psoriasis and tinea corporis, between tuberculids and acne, by studying these pictures. Secondly, by eliminating historical notes, definitions, theoretical considerations, pathology and limiting discussions of etiology and treatment to the most essential points. Presentation of a disease begins typically with a paragraph on symptoms, a sentence or two about etiology, a few sentences on differential diagnosis and paragraph on treatment.

Can dermatology be learned in this manner? Many professors will disagree, many general practitioners will agree.

A. B. ROTOR, M.D.
Dept. of Med., Coll. of Med. U.P.

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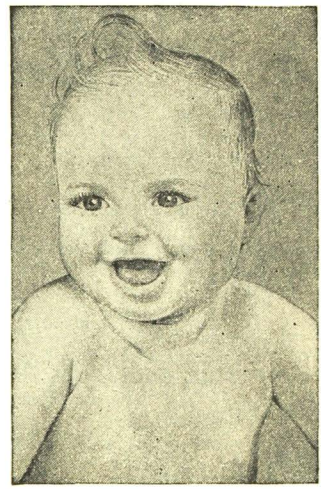

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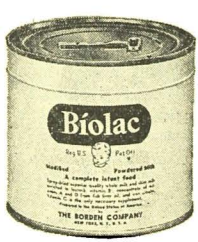

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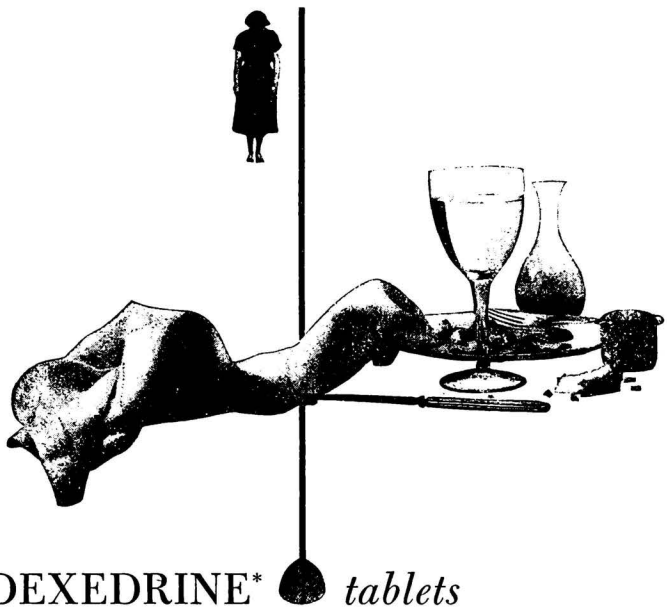

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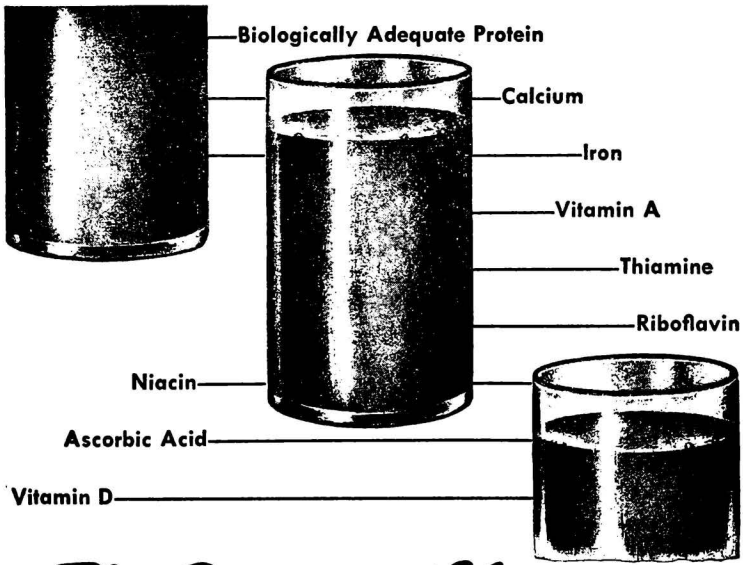

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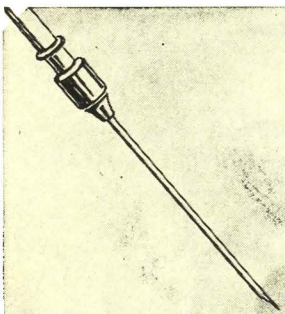

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