cine as to make an ordinarily active preparation practically inert, if not actually harmful.

Federal and state pure drug laws and the many laws designed to restrict and to regulate the practice of pharmacy are logically interpreted to mean that the licensed pharmacist is in a position to protect the purchaser by exercising a constant supervision over articles kept in stock and by selling only such drugs and preparations as will comply fully with the standards established for them.

The difficulties that are involved in this assumption become evident when we realize that the several books that have been recognized as standards for drugs and preparations include descriptions for more than five thousand articles and that, in addition, there are probably fifty thousand articles of a proprietary or semi-proprietary nature that are not described in any of the recognized books of standards, but are on sale, and frequently in a poorly preserved condition, in the drug-stores of this country.

The immense number of articles of a medicinal character carried in stock by the retail druggist, even if all of his time and the time of his employees were devoted to the study and care of these articles, would make it practically impossible to exercise the degree of supervision and care in testing that is theoretically required by the Pharmacopeia of the United States. Under present-day conditions practically no check is exercised in the pharmacy over drugs, chemicals or galenical preparations, and despite any care that may be exercised at the time of making, to adjust preparations to established standards considerable change may have taken place in the composition of these preparations before they finally reach the consumer.

The existing conditions and the possibilities may be summed up somewhat as follows:

The present-day drug-store with its numerous accommodations for the public has developed into a neighborhood necessity that can be continued with or without the strictly drug feature of the establishment.

In connection with a general collection of "side lines" it is impracticable for even the most careful and expert pharmacist to exercise any degree of supervision over the many drugs and preparations that must now be carried in stock.

In a shop devoid of "side lines" that is equipped with the necessary analytical apparatus it would be possible to exercise efficient control over a reasonable number of well-defined medicaments, and the physicians of the country, if they will but take an active interest in evolving a restricted or preferred materia medica list, can contribute much toward developing the sciences relating to pharmacy to such an extent that it may be a potent factor in the progress of the healing art and thus in turn a factor in promoting the welfare of the public at large.

Twenty-Fifth and E Streets N.W.

ABSTRACT OF DISCUSSION

DR. TORALD SOLLMANN, Cleveland: I imagine that the 50 per cent. of deficiencies perhaps does not reflect the actual condition of affairs. One must know how serious these differences were; then, again, where samples were taken. It is easy to standardize. It is simply a matter of enforcing the standardization. The faults are not due to dishonesty, but are due to carelessness. Why should not carefulness be enforced? We have state and federal laws for that purpose. The officials have mainly confined themselves to foods and patent medicines and have done fine work, and it should not

be lessened one bit, but I think it is very much to the point to request them to add to their activities and interest the public in the official medicines as well as in the patent medicines and proprietary specialties. I very strongly support that idea.

DR. ALEXANDER S. VON MANSFELDE, Ashland, Neb.: We have a law that is very strong in intention in my state of Nebraska. We have a drug expert and food inspector, but out of the means at his command it is impossible to give sufficient money for such service. I want Mr. Wilbert to go on another tangent next year and describe some sort of a method by which we can have the examination of the drugs on the shelves of druggists done in a rather quick way, even if it is a little bit superficial, so that we can go to an average pharmacist and quickly examine the things in the drug store and throw out those that are abominable. Then we shall have made a good beginning for carrying out the law.

A CASE OF COCCIDIOIDAL GRANULOMA (CALIFORNIA DISEASE)

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AND

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SAN FRANCISCO

History.—H. D. V., aged 24, American, clerk, Coalinga, San Joaquin Valley, California, was admitted to Southern Pacific Hospital Feb. 17, 1913. Family history was negative. Patient had had measles and typhoid (?) when a child. Denied venereal infection. He was in hospital from Aug. 16 to 20, 1912, for laryngitis, which was suspected of being tuberculous. The present illness apparently began two months before admission with "a cold," the laryngeal condition having subsided shortly after the previous discharge. Four days before readmission trifacial neuralgia together with severe frontal and occipital headache developed. Patient lost 20 pounds in weight in two weeks. No cough; no thoracic pains.

Examination.—Poorly nourished young man. Pulse rapid and weak; respirations normal; temperature 97.6 F. (a. m.). Pupils react well to light but poorly to accommodation. Tongue coated. Lungs and heart negative. Very slight abdominal tenderness. Spleen negative. No rose-spots. No tremors. Urinalysis: clear, amber, specific gravity 1.020; acid, no sugar nor albumin; no casts (on admission). Widal positive 1:40 and blood-culture negative.

Temperature and pulse were of typhoid character. Chief symptoms were severe, general headache and diarrhea. During the last week there developed an unproductive cough, mild nocturnal delirium and sweats.

Clinical diagnosis of typhoid was made. Death occurred March 2, 1913.

Post-Mortem Record.—Moderately emaciated body. No eruption, scars, bruises or bed-sores. Peritoneum smooth, glistening, pale and rather dry. Position of abdominal organs normal. Spleen moderately enlarged, but of normal shape; color slaty gray; consistency firm. Cut surface showed dark-brown pulp and many yellowish-white, firm and somewhat cheese-like areas from 3 to 5 mm. in diameter. Trabeculae indistinct. Liver of normal size and shape. Color of capsular and cut surfaces brownish-red. Consistency flabby. Numerous very small (1 mm.), yellowish-white, firm areas noted on capsular and cut surfaces. Gall-bladder apparently normal. Numerous petechial hemorrhages in gastric mucosa. Moderate congestion of ileum. No apparent involvement of Peyer's patches or solitary follicles. Appendix and pancreas apparently normal. Left kidney of normal size and shape; brownish-red and flabby. Moderate increase in cortical thickness. Yellowish-white, firm area of 1 mm. in medulla. Ureter apparently normal. Adrenal not examined. Right kidney identical with left. Adrenal showed yellowish-white, firm area of 1 mm. Bladder, prostate, testicles and epididymides not examined.

Left pleural sac apparently normal. Lung, 1,255 gm. Moderate congestion, especially at base. Both lobes closely

infiltrated with small, grayish-white, firm areas from 1 to 3 mm. in diameter. No evidence of pneumonia, or cavities. Right pleural sac showed old adhesions throughout. Right lung, 1,250 gm.; identical with left. Pericardial sac contained some excess of clear, yellow fluid. Serous surfaces apparently normal. Heart and aorta not opened. Mesenteric group apparently normal, except for one lymph-node, which was moderately enlarged, caseous and calcified. Brain and spinal cord not examined. (Permission for partial necropsy only was obtained.)

Histologic Examination.—Spleen: Except in a few places the follicular arrangement of the tissues was lost. General lymphoid hyperplasia present. There were many large, fairly well-circumscribed areas of lymphoid and polynuclear cells together with round, yeast-like bodies, many of which were endospore-forming. In places marked congestion. There were a few necrotic areas. Trabeculae were indistinct.

Liver: Moderate, cloudy swelling present. Numerous small lymphocytic and polynuclear cell-collections noted, chiefly in the lobular tissues. Some of these contained the above-mentioned bodies. There was an area with a giant-cell which closely resembled a miliary tubercle.

Pancreas: Moderate congestion and a few areas of necrosis. There were a few small cellular masses similar to liver.

Kidneys: Cortical epithelium showed degeneration and desquamative changes—some cloudy swelling but chiefly fatty degeneration. There were several large and small cellular collections with and without yeast-like bodies similar to spleen and liver. There was an area with a giant-cell which closely resembled a miliary tubercle.

Adrenal: A few of the larger medullary arteries contained thrombi. A few small, cortical, cellular collections with bodies.

Mesenteric Lymph-Node: Capsule fibrotic and hyalinized. Lymphoid tissues almost completely necrotic and in places calcified. There were no giant-cells or other cellular evidences of tuberculosis.

Lungs: Moderate fibrosis of pleura. Moderate emphysema. Many large areas contained cells and bodies similar to spleen.

Pathologic Diagnosis.—Coccidioidal granuloma with lesions in the spleen, liver, pancreas, kidneys, adrenal and lungs; congestion of the spleen; cloudy swelling of the liver; congestion and post-mortem necrosis of pancreas; chronic parenchymatous nephritis; chronic pleuritis and pulmonary emphysema; tuberculosis (?) of mesenteric lymph-node.

REMARKS

The patient had lived in the San Joaquin Valley and had presented no skin-lesions to account for his infection. Although tuberculin reactions were negative, he was strongly suspected of being tuberculous when he was first admitted to the hospital in August, 1912. Marked hoarseness was present. Wassermann reaction was negative. On readmission in February he was apparently suffering with typhoid. In the light of the pathologic findings it seems not improbable that the positive Widal reaction was the consequence of a typhoid infection in early life. Although there was no splenic enlargement and blood-cultures were negative, the clinical picture was one of typhoid. At necropsy the lesions appeared to be those of miliary tuberculosis, the largest lesions being present in the spleen, if we accept the tuberculous character of the mesenteric node. For their size, however, the splenic lesions appeared rather firm for tuberculosis. Microscopically, there was no difficulty in demonstrating the *Oidium coccidioides* (Ophiids) in the various organs. These were most numerous in the spleen. It was unfortunate that a complete necropsy was not performed, especially to determine, if possible, the character of the early laryngeal lesion.

Southern Pacific Hospital.

LUMINAL, ITS TOXIC EFFECTS

WITH THE REPORT OF TWO CASES

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There has recently been introduced into this country a new sedative and hypnotic called "Luminal," which is chemically phenyl-ethyl-barbutyric acid. The need for new hypnotics is readily recognized, and the eagerness with which they are taken up in practice needs no comment especially to the neurologist and the psychiatrist. The features about this new hypnotic are that the sodium salt is readily soluble in cold water and that 0.3 gm. has approximately the same action as 0.5 gm. of veronal.

This brief communication is for the report of two cases in which Luminal was given as a sedative to produce sleep, and which produced in both, distinct toxic and untoward symptoms, lasting from twelve to thirty-six hours.

CASE 1.—A young woman, aged 24 years, single, has suffered from hysteria for at least five years, at times suggesting a psychosis. She is always wide awake; never retires until 2 or 3 a. m.; she will lie awake for an hour or more and finally fall asleep for several hours. This has occurred over and over again for several years. On April 1, the patient was given 0.3 gm. of Luminal, not to be repeated for forty-eight hours. The dose was taken at 9:30 p. m.; sleep was not produced and the usual run of events followed that evening. The next night, not having slept sufficiently the night before, she again took 0.3 gm. Within an hour she was asleep and slept very soundly until awakened by a member of the household at 10 a. m. At this time she presented evidences of drug toxemia. She was dreamy and sleepy; head felt very "light." Her speech was slurring and scanning; her words were mispronounced and there was paraphasia. On attempting to walk she swayed; there was considerable ataxia and inability to stand without support. She continued in this condition for twelve hours, when the symptoms subsided and left her in her normal state. During the active stage, her pupils were dilated and her knee-jerks very much diminished. There was no disturbance in sensation.

CASE 2.—Man, aged 35, single, has been suffering from insomnia, a symptom of a pronounced psychasthenic reaction. Manifestations of his condition have been present for about fifteen years, but within the last year his insomnia has grown more troublesome and he rarely obtains any more than three hours sleep a night. Various hypnotics, sedatives, placebos, hypnotic suggestion and psychotherapy have been employed without material result.

Having had several "bad nights" following a period of strain and stress in business, he pleaded for sleep. He was given 0.6 gm. of Luminal at 10 p. m. and told to repeat in one hour with 0.3 gm. At 2 a. m. he was still wide awake. At that time he asked if he could take more, but in its stead, 0.2 gm. of veronal was given him. He went to sleep about 4 a. m. but had to be awakened at 10 o'clock. At that time he was very sleepy; his speech was unrecognizable, he mispronounced words, stumbled in his speech and evinced paraphasia. On walking, there was marked ataxia, with a tendency to drop-foot; he was unsteady in his gait; had a tendency to fall; there were accompanying gastro-intestinal symptoms. His knee-jerks were absent. His pupils were dilated. There were no sensory disturbances.

This condition continued with very long periods of sleep for forty-eight hours, when he gradually returned to normal.

It would seem that the use of this new drug as a hypnotic, even in pronounced cases of insomnia, is going to lead to some difficulty, if repeated doses of the drug are given. In both cases it is seen that the action of the drug did not make itself manifest until an accumulative