ovaries were bound down in massive exudates from which the Doctor literally dug them out. Every element in the tube and ovary was diseased; perisalpinx, musculature and endosalpinx all had widespread pathologic conditions. Considerable pus was found in the pelvis. The abdominal cavity was thoroughly irrigated and the wound closed with silk-worm-gut. Drainage was used. Recovery was good. Eight months after the operation she is nursing and is practically well. The reasons which justified and demanded laparotomy in this case were exactly what Dr. Waite and myself had repeatedly observed during our four months' treatment of the patient viz: periodic exacerbations of pelvic peritonitis, pain, gonorrhea, pelvic exudates, rise of temperature, constant suffering and incapacity for labor and the downward course of the patient.

Case 27.—Removal of the tubes and ovaries for a general myoma of the uterus. The patient had had a tumor the size of a cocoanut for three years with severe hemorrhage for one year. She had three children. She recovered from the operation and has had one hemorrhage since, so far as reported, in six months.

Ten months after the operation I saw her. She appears perfectly well, and says she is now healthy and hemorrhage has almost entirely stopped. Dr. Waite ligated the upper end of the uterine artery, which accounts for the almost complete arrest of bleeding.

Case 28.—Laparotomy for chronic salpingitis and ovaritis. Age 36. She was ill seven years and a neurotic wreck. The operation proved difficult, as the old organized exudates were very dense. She made a good recovery and is now very well seven months after the operation. She has improved in all nervous symptoms.

Case 29.—Removal of the appendages in a girl of 20 for hystero-epileptic convulsions of six years duration. She recovered without an untoward event. Six months after the operation the guardian of the girl writes to Dr. Waite the following: "Your patient is doing nicely and we believe she will come out all right." It seems to me that the word, epilepsy, should be excluded from this disease, as it is a reflex menstrual disturbance and is not true epilepsy. True epilepsy does not recover from removing ovaries or testicles. It is true that this girl was a total wreck, that she could not even care for herself and that an extra attendant was required for at least a week every month to supervise her during dozens of convulsions at each period. She is recovering from a *neurosis* but not epilepsy.

Case 30.—Removal of the appendages for double pyosalpinx and abscess of uterine wall, following five weeks after delivery.

The pelvic organs were imbedded in a mass of exudates and the abscess contained about a tablespoonful of yellow pus. The peritoneum was well irrigated; the mouth of the abscess was clamped to the abdominal wound for thirty-six hours. Drainage was employed and the patient made a good recovery. Five months after the operation she is well.

Case 31.—Age 52; one child 10 years old. Ill since last child was born. Laparotomy showed the uterus and appendages consolidated into a mass. Dr. Waite separated these old dense adhesions with much difficulty. The proof of the age of the adhesions was profuse hemorrhage from newly formed blood vessels. She recovered well, and left the Hospital improved in every respect. A significant fact is that her extreme neurosis almost magically disappeared.

Case 32.—Age 22. Ill two years with pelvic trouble. She was a miserable neurotic, incapacitated for labor. She had severe attacks of pelvic peritonitis. The menstruation was becoming more and more severe with increasing pain. She reports a sudden flow of pus through the vagina besides leucorrhea. The diagnosis was gonorrheal salpingitis with pyosalpinx. Dr. Waite enucleated and tied off both the appendages which were in severe pathologic conditions. Abdomen irrigated, drained and closed with silk-worm gut sutures. The patient recovered well, and left the Hospital a different looking woman.

The foregoing thirty-two cases of laparotomy were performed just as they came in order. No selection was made, no picking of cases was done. The one case of death was from acute sepsis (due to what cause I know not) in a woman with a sixty pound ovarian tumor. At present (ten months after the

above operations), I know of two abdominal fistulae existing. So far as I know all other fistulae have closed. One patient died six months after the operation from acute rheumatism; one died a year after the operation from pulmonary tuberculosis.

COCILLANA—THE BARK OF AN UNDETERMINED SPECIES OF GUAREA.

NATURAL ORDER—MELIACEÆ; HABITAT, BOLIVIA.

Read in the Section on Materia Medica and Pharmacy, at the Forty-fourth Annual Meeting of the American Medical Association.

BY F. G. RYAN, M.D.

PROFESSOR OF THE PHILADELPHIA COLLEGE OF PHARMACY.

This remedy, which was first brought to the attention of the medical profession by Dr. H. H. Rusby of the New York College of Pharmacy, seems to be gaining much favor. The results of many clinical investigations indicate that this drug is destined to become one of great usefulness in the treatment of diseases of the respiratory organs.

The following botanical description is taken from the "Pharmacology of Newer Materia Medica:"

"This species was first described by Dr. N. L. Britton of Columbia College, under the name of *Sycocarpus Rusbyi*, on the supposition that it was a new genus belonging to the natural order *Anacardiaceæ*. On the subsequent acquisition of complete specimens, Dr. Britton at once recognized the true affinities of the plant as being with the genus *Guarea*, natural order *Meliaceæ*, and referred it with some doubt to the species *Guarea trichlioides*. (Linn.) While it is certainly a *Guarea*, there is much difference of opinion as to the species. Dr. Rusby is quite positive that its characters render it distinct from all known species of that genus, in which, I may remark, nearly all the species are separated by very minute differences of structure. The tree is described as reaching an extreme height of some thirty or forty feet, and a trunk diameter of nearly three feet. It is low, and broadly spreading in habit, reminding one considerably of a large apple tree. The bark is thick and ash-colored, becoming rough only with considerable age. The larger branches are horizontal, the ultimate ones somewhat erect and bearing the leaves erect, clustered at their ends. The leaves are pinnate, bearing some resemblance to those of the common sumach, but much larger, being a foot and a half or more in length by two-thirds of a foot broad, and bearing from five to ten pairs of oblong obtuse leaflets, the larger of which are six or eight inches in length. In the axils of these leaves appear the loose racemes of flowers, some eight or ten inches in length. The flowers are small, scarcely larger than the head of a small carpet tack, with the parts in fours, of a dull greenish color, very inconspicuous, and are succeeded by a somewhat woody fig-shaped fruit, as large as a walnut. It contains four cells, one or more of which are commonly obliterated as it matures, and one or two erect seeds."

Joseph Schrenk in the *Druggists' Bulletin*, August, 1888, gave the following description of the appearance and structure of the bark:

"The samples of this bark which I had occasion to examine, were evidently taken from an old tree. They were curved pieces, about fifteen mm. thick; large white patches, caused by the growth of a fungus, are seen on the tawny-yellow outer surface, which is very rough and uneven, with deep longitudinal furrows and crevices, and occasional horizontal fissures. The inner surface is grayish yellow, coarsely striate, and often roughly fibrous, with numerous detached broad bands of bast-bundles.

"The fracture, which is coarsely granular in the outer and splintered in the inner bark, shows that the 'cork' is very strongly developed, for in many places the periderm occupies about two-thirds of the entire thickness of the bark; it is of a light reddish-brown color, with numerous yellowish-white, scattered dots plainly visible to the naked eye. The inner portion of the bark is of a firmer texture and tangentially finely striate. The odor is slight, but peculiar, and the taste unpleasant (not bitter); slightly nauseous.

"On cross and longitudinal sections the periderm is found to consist of one or several layers of primary, and frequently even of secondary bark separated from the deeper living tissues by broad bands of cork. Large groups of sclerenchyma cells with very much thickened porous walls are seen in the periderm and the other parts; their number diminishes toward the interior, and in the inner half of the bast portion they are met with only very sparingly.

"The bast cells are arranged in strictly tangentially elongated groups (as seen on the cross section), but there are no radial rows, therefore the medullary rays are not so readily distinguished with the unaided eye as in some other barks. They invariably make considerable curves where they enter the zones of cribrose and parenchyma tissue, which alternate with those of the bast-fibers; and as they contain a red colored substance they can easily be traced under a low power as undulating red lines. On tangential sections they appear very distinctly as narrow eclipses made up from one to three horizontal, and up to twenty vertical rows of cells. Where these rays pass through parenchyma tissue they are frequently bounded by vertically elongated, rather wide cells, distinguished by the fibrous thickening of their cellulose walls. They form a prosenchyma-like tissue, or in each vertical row of (from five to ten) cells the two terminal ones are pointed.

"The bast-cells are slender and straight, at an average of seventy-five hundredths mm. in length. Each fiber bundle is accompanied by rows of cells with very much thickened lignified walls, each containing a large calcium oxalate crystal (of the monoclinic system) entirely filling the interior of the cell, so that when the crystal is removed by the application of hydrochloric acid, an exact mold of it is left. So closely are these rows of 'crystal sacs' applied to the bast-fibers, that the latter can be brought to view on longitudinal sections only with difficulty. Calcium oxalate crystals of the same form are also seen in other cells, especially in the proximity of the stone cells. Small, rounded, simple starch grains are rather abundant in the parenchyma, and in the cells of the medullary rays can be noticed the red colored masses mentioned above, which are insoluble in alcohol."

Clinical examination of the therapeutic properties of cocillana has engaged the attention of a number of prominent physicians, complete reports of which will be found in various journals.¹ The latest of these by Dr. John V. Shoemaker,² speaks of his results as follows:

"In small doses, it has a good influence upon the appetite and digestion. In larger quantities, it produces an emetic and cathartic effect. The alvine discharges, under its use contain mucus and bile. It stimulates the sudoriparous glands and, when given in considerable quantities, causes copious perspiration, accompanied by prostration of muscular strength. Excessive amounts also give rise to giddiness. It is eliminated principally by the broncho-pulmonary mucous membrane, upon which it exerts a stimulant and alterative effect.

"Cocillana may be administered in the form of a tincture or fluid extract. The dose of the tincture is from 30 minims to 2 fluidrachms; that of the fluid extract from 10 to 20 minims. In my clinical experiments I have made use of the fluid extract, which resembles sherry wine in color, has an aromatic odor, and a bitter taste. It is, however, not unpalatable when mixed with syrup.

"The chief therapeutic value of cocillana is in the treatment of the diseases of the respiratory tract. In epitomizing my experience with this drug, I deem that I can not do better than to relate briefly the histories of a few cases in which it was employed with notable advantage. Bronchitis is the malady to which it is the most applicable, and it is particularly beneficial in the subacute or chronic stage. Cocillana stimulates the capillary circulation of the bronchial mucous membrane, and thus relieves inflammatory congestion. The secretions of the respiratory tract become more notable in character; thick and tenacious sputum is liquefied, excessive expectoration is restrained, and cough is allayed.

"The amelioration of the cough allows the sufferer to obtain more sleep. The stomach likewise gains in tone under the use of medicinal doses of this drug. I have employed

it in the bronchitis of children as well as of adults. I have, in some cases of chronic bronchitis, found it fully as efficacious as iodid of potassium, and it is usually better borne, and can be used for a longer period continuously than the iodid. Cocillana should, therefore, be esteemed a very welcome addition to our therapeutic resources. In the doses which I have named, it is totally free from nauseating or depressing effect. In beginning my clinical experiments, I gave the drug alone. When I became acquainted with its properties, I combined it with some syrup for the purpose of increasing its palatability, assisting its action, or fulfilling other indications of the case."

THE SINGLE HYPOPHOSPHITES IN DEFECTIVE NUTRITION OF BONE AND NERVE TISSUES.

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Of all the varied uses of the hypophosphites, none are more interesting to me than their employment to meet certain faults of nutrition in the osseous and nervous systems. I group these two departments of the human organism roughly together here, because my attention was directed to them in this connection, by certain rational considerations. In the chemic constitution, the growth and the maintenance of both, phosphorus plays a very important part. So it was inferred, that in certain pathologic conditions of either, especially when characterized by defective nutrition, the use of phosphorus in some convenient and easily assimilable form, is the primary and essential indication of treatment. The various clinical trials of this opinion in practice for several years, have amply justified and sustained the inference. My readers are probably familiar with the use of these remedies in cases of delayed teething in children. Aside from this familiar use, my cases have embraced instances of defective bone development in children, and a certain low type of sub-acute and chronic inflammation, occurring in the bony and periosteal tissues of scrofulous or badly nourished patients, as the result of a blow or injury. It must be borne in mind, in these cases, that the predisposing cause is the state of defective or perverted nutrition. The same traumatism which in such a constitution would cause a troublesome, tedious and prolonged inflammation, would produce very slight local effect in a vigorous healthy subject. The course of such a case under the usual treatment is very unsatisfactory. The periostitis shows little tendency to recover, and the bony tissues, so dependent on the healthy action of the periosteum, manifest a tendency to disintegrate. As a result we have a case of hip-joint disease, or Pott's disease, or some other orthopedic affection, with the prospect of a *long special* treatment, and an endless array of plaster jackets, splints, etc. Recognizing and appreciating all the good to humanity and to science that has been accomplished by the modern orthopedic surgeon, (and it is much), it is plainly the duty and province of the general practitioner, to arrest the progress of these cases in the earlier stage if possible. In my own experience, the hypophosphites offer the best means of relief in this incipient period and, in some cases, almost the only hope of resolution of the inflammatory process. If I might be pardoned the presumption of making a suggestion to a specialist in his own field, I would say to the orthopedic surgeon, that he could not do a better thing, even after this ugly inflammation has reached that stage in which

¹ H. H. Rusby, M.D., in the *Therapeutic Gazette*, August, 1888. David D. Stewart M.D., in the *Medical News*, of August 24, 1889. Reynold W. Wilcox, M.A., M.D., in the *New York Medical Journal*, Dec. 28, 1889.

² John V. Shoemaker, A.M., M.D., in the *Medical Bulletin*, February, 1893.