ever, that if the jaundice had been more seriously considered, the process would have been recognized.

RECAPITULATION.

The rule to be observed in the surgery of the appendix is, to make the incision correspond to the position of this organ. It can frequently be localized if the situation of the exudate and the rigidity are kept in mind.

When the exudate is situated in the loin, a diagnosis of a retrocecal appendix should be made, excluding, as far as possible, perinephritic abscess and gall-bladder disease. If low down, the differentiation from pelvic disease should be made. Naturally the classic form must first be thought of.

On looking over the literature, I find that this subject, strange to say, has been almost entirely overlooked.

About thirteen years ago, at a time when it was considered good surgery to hunt for the appendix, despite the condition of the patient, my practice was to discontinue the search as soon as I realized that this could not be properly and successfully accomplished. Largely through the influence of J. B. Murphy, this practice has now been adopted, so that to-day it is an accepted principle that this search should be discontinued under the conditions indicated. It is my conviction that, in those cases in which the appendix is not discovered, the offending organ is situated in the retrocecal space. With the appendix in this position and the abscess incised in the usual manner, either through the Lennander or McBurney incision, the pus is evacuated, but the appendix is not discovered because it is practically extra-peritoneal. On several occasions in my experience, when the appendix has not been found at the operation and when a recurrence has taken place, the diseased appendix at operation, in each instance, has been found in the retrocecal position and then only after a long and tedious search. I fancy similar experiences have occurred to many surgeons.

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CASES PROBABLY MYCOTIC, BUT NOT EVIDENTLY DUE TO BLASTOMYCES.

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CASE 1.—Patient.—Male, aged 51. He had a rounded nodule in the middle of his right cheek three or four years before the date of the examination referred to below. I saw him once at this time. Later he was subjected to various escharotic treatments. When he returned to me he brought from a competent pathologist the simple diagnosis of "cancer." Within a short time I requested that he get the pathologist to make another examination microscopically. This was refused because the latter believed his original diagnosis correct.

Examination.—January, 1902. The disease occupied an area from the right zygoma over the lower one-third of right cheek and chin, as well as slightly below inferior maxillary border and a little under the ear. The unbroken parts were livid, swollen, the surface partially cicatricial, partially open and irregular. In the raw surface and in the borders were pits from the size of the finger-tip to real subcutaneous cavities from which could be removed a most offensive white granular substance, like fresh butter grains, and pus. The odor was that of intensely sour buttermilk, which permeated the office for an hour after the removal of the dressings. There were no fine verrucous growths but some fleshy papillomata. The pus and white substance eventually burrowed in the subcutaneous tissues of the right temporal region over an inch. There was no carcinomatous hardness and no metastasis to glands. The striking features of this case were the white granules in the pits and cavities, the intense secondary pus

infection, and the offensive sour buttermilk odor. Microscopic examination of granules and pus in caustic potash solution showed structures resembling fat cells from which the oil had been dissolved.

Treatment.—X-rays were employed for the greater part of a year, with some benefit, but there was final extension of the trouble. Iodid of potassium, even in large doses, had little, if any, favorable effect.

Clinical Course.—The patient was finally reported ill of pneumonia. I did not see him. He possibly died of extension of the disease to the right lung. Cultures could not be made and further microscopic examination was not to be had. There was no actinomycosis.

Summary.—The clinical course of this case was not that of blastomycosis or of any form of cancer. The large pits and cavities containing and forming white granules and abundant pus were unique. The edges were swollen, hyperplastic, livid—often showing soft-topped abscesses. (Compare with Case 2.). At times healing would occur in parts, with scars resembling those from an escharotic, or fire, but the scar tissue had no permanence, new abscesses occurring.

CASE 2.—Patient.—Male, farmer, aged 36. About a year before the date of the examination mentioned below, he had picked a scaly papular lesion on the carmine border of the lower lip. He soon developed symptoms as at present. He then used a concentrated infusion of the leaves of the oxalis (sheep sorrel) and other caustics, destroying all but those rounded, retracted "hillocks" of the lower lip. The disease occurred below, with redness and swelling involving the whole chin and causing some enlargement of the submental glands. Each half of the chin had previously shown more marked involvement and later the lesion to the left of the left oral angle developed.

Examination.—May, 1905. There were four distinct areas, one in the sublabial fossa, one each side of the chin, one in the left oral angle. When the patient was examined first, the lower lip, down to the roots of the teeth, was destroyed save rounded remnants. On the base of the lip and on the upper chin were three semi-solid lesions; the cavities large and papillomatous, with small holes in the skin over them; the lesions full of pus and grayish-yellow granules. Just to the left of, almost in the left oral angle, lying between skin and mucous membrane was an unbroken lesion the size of a finger-tip. Incision exposed pus mixed with a quantity of granules somewhat like those from a sebaceous cyst, but firmer, slightly resembling small fish-roe. All the diseased parts were very sensitive. There was no impairment of general health.

Treatment and Clinical Course.—The lesion was cleansed with hydrogen peroxid and dressed with 1/1000 mercuric chlorid gauze, b. i. d. Granules and pus rapidly reappeared. A saturated solution of potassium iodid was given up to 47 drops t. i. d., and some iodism. No effect was produced on the disease. A sour odor was constantly present in this case, but not so intense as in Case 1. After a few days, the chin lesions having been well incised, the cleansing was followed, once a day, with application of 95 per cent. carbolic acid, not controlled by alcohol. This had only a little effect on the formation of granules and pus or the subcutaneous burrowing. The soft papillomata in the lesions were exceedingly vascular, bleeding freely on injury. They resembled somewhat the columnæ carneæ of the heart. A few seemed to have been blanched, forming at times whitish, coral-like clumps, but very vascular at attachment. It is possible that these were infiltrated with the disease bodies. There was a marked tendency of the chin infection to burrow, forming sinuses under the skin. In these, concealed, the white granules multiplied and pus formation continued in spite of cleansing and dressing twice a day. Nearly a month after the beginning of the treatment a new point appeared in the mucous membrane of the right lip remnant, as a small, discrete, whitish erosion from which a quantity of the seedlike grains were pressed, not mixed with pus. This formed a sinus a third of an inch deep. When the patient reached 66 m. saturated solution of potassium iodid t. i. d. with no benefit, the drug was stopped. He had fourteen x-ray treatments, getting primary reaction; a few

beard hairs loosened. Dr. Hynds reported that he was unable to find or cultivate any growth, and saw nothing resembling blastomycetes or actinomycetes. When the patient was last seen after eight days' absence the verdict was reached that no treatment had been of any avail. The patient was reported to have died after rapidly increasing emaciation and gradual extension of the infection of the chin downward to the muscles of the throat and integument at the front, which left the bones bare. Death occurred about ten months after the date of first examination. Neither in this case nor in Case 1 was there any involvement of bone or periosteum.

This paper was begun nearly two years ago. The untimely death of Dr. R. W. Hynds, who did the microscopic work, together with my inability to obtain any notes of his observations, has embarrassed me in attempting a proper report. I delayed finishing the paper in the hope, thus far futile, of getting another of those anomalous cases characterized by "granules and sour buttermilk odor." Clinically these cases bore not the slightest resemblance to the blastomycotic cases or to any of the published records of systemic, deep tissue and diffuse blastomycosis. I regret the absence of opportunity to have full histology and cultural work done on these cases, and my failure, at the time, sufficiently to appreciate them.

Characteristics were white granules, often the only contents of the cysts, deep subcutaneous abscesses, with inflammatory swelling around, hard and red, becoming darker and softer; and the strikingly peculiar odor. Should another case be found it would be of interest to investigate as to the probable presence and effect of the *Bacillus acidi lactici*.

Epithelioma, carcinoma, actinomycosis, tuberculosis, syphilis and typical blastomycosis were not suggested by any of the symptoms. If the cases were blastomycotic they were essentially as different from typical blastomycosis as granular, plus cutaneous, tuberculosis is from tuberculosis cutis verrucosa. This comparison offers the only basis for an effort to harmonize the cases I have reported with the descriptions of typical blastomycosis.

I am indebted to Dr. Oliver H. Ormsby, of Chicago, for references and suggestions.

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BIRTH OF QUADRUPLTS.

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Mother's History.—Mrs. L. C. T., aged 35, American, weight 112 pounds, height 4 ft. 6 in., married twelve years, had seven children, of whom four are still living; two were born prematurely at six and seven months respectively, and one died at the age of three months, cause of death unknown.

Present Labor.—I was called to attend the patient July 19, at 1:30 a. m. The os and cervix were well dilated and the amniotic sac was protruding. Within ten minutes the first child, a boy, was born; it seemed small, and on tying the cord I was surprised to find four umbilical cords braided together. Within fifteen minutes another boy was born, thirty minutes later a girl, half hour later another boy.

Description of Placentas.—There were two placentas, one with three cords and the other with one. They were delivered in a macerated condition.

The Children.—The length and weight of the children were as follows: First child, length 9 inches, weight about $4\frac{1}{2}$ lbs.; second, length $8\frac{3}{4}$ inches, weight about $3\frac{1}{2}$ lbs.; third, length $8\frac{1}{2}$ inches, weight about $2\frac{1}{2}$ lbs.; fourth, length 8 inches, weight about 2 lbs. In the case of the child delivered last it was necessary to resort to artificial respiration for a few minutes. The others breathed naturally. The children

seemed normally developed, though small. The second child began to nurse on the second day and was apparently the only one able to swallow. The first-born child lived 24 hours; the second, 4 days; the third, 8 hours, and the fourth, 18 hours.

The mother's convalescence was uneventful except for a slight rise in temperature for a few days immediately succeeding delivery.

Therapeutics

METRIC SYSTEM VS. APOTHECARIES SYSTEM.

To the Editor.—In looking over the pages of THE JOURNAL devoted to therapeutics, I have frequently been surprised at the disparity existing between the apothecaries and the metric system when both were given.

In many cases the equivalents are not even approximately correct and are extremely annoying to those who employ the metric system exclusively as well as puzzling to those who occasionally use both.

In the issue of Oct. 14, 1908, pages 1336-37, twelve formulas are given in which eleven are not even approximately correct and are so strikingly contradictory in the equivalent values given that a plea for a closer approximation of values seems justified.

Despite its many so-called objectionable features, there are many physicians who employ the metric system exclusively in prescribing; therefore, this loose and careless manner of giving approximate values is pernicious in its effect by encouraging slovenly methods in prescribing, and not only tends to confuse the physician but subjects the patient to extra hazard from errors in prescribing.

If we are to have equivalents given, let us have them at least approximately correct. F. A. CARMICHAEL.

The editor of the Department of Therapeutics is glad that Dr. Carmichael has brought up this subject for discussion. In the first place, the doctor does not quite understand the method with which the prescriptions which he criticises are written. If there were a stone wall between the prescriptions written in the metric system and the prescriptions written in the old system they could not be farther dissociated than they are intended now to be by the word "or." If the amounts were intended to be equivalent the sign of equality would be used. The hypothetical stone wall is represented by the word "or." This saves writing the ingredients of the prescriptions twice. It would, of course, be difficult for a devotee of the old system to attempt to convert his thoughts and doses from that system, in any given prescription, into the metric system directly opposite.

The prescriptions in both systems are written, i. e., the liquid ones, with the idea that the dose should be represented by a teaspoonful. It is foolish to consider that a fluidram is a teaspoonful, or that the metric system equivalent to a fluidram, 4 c.c., is a teaspoonful, because they are not. It should be recognized that a teaspoonful represents 5 c.c., considerably more than a fluidram, and that by the use of the teaspoon as a measure of dosage no three fluid-ounce mixture will ever represent twenty-four doses (as it does twenty-four fluidrams), but approximately eighteen doses, of 5 c.c. each, viz.: the three ounces would represent about 90 c.c. of fluid.

The criticism is naturally then made that we should insist on the use of medicine glasses graduated to fluid-