TABLE 7.

Showing presence at confinement of doctors who signed Birth Certificates in 1910, in Wards A, AA and AAA.

Birth Certificate Signed by	Total for which information about presence of doctor was obtained	Doctor alone present at confinement	Doctor and midwife present at confinement	Midwife present at confinement; doctor came afterward	Midwife present at confinement; doctor did not come at all
WARD A					
Attendance from Institution Y	99	99	0	0	0
Attendance from Institution Z	64	63	1	0	0
Dr. 1	94	10	14	17	53
Dr. 2	78	3	20	39	16
Dr. 3	56	3	15	26	12
Dr. 4	13	1	0	7	5
Dr. 5	13	0	1	2	10
Dr. 6	11	1	2	4	4
Dr. 7	16	1	3	6	6
Dr. 8	18	8	3	3	4
Dr. 9	18	1	3	8	6
Miscellaneous Physicians Resident in Ward A.....	55	17	12	17	9
Miscellaneous Non-resident Physicians	48	41	3	2	2
Collected by canvassers and signed xxx, or signed by midwives	47	0	0	0	47
WARD AA	630	248	77	131	174
Miscellaneous Physicians	570	566	1	0	3
Collected by canvassers and signed xxx, or signed by midwives	13				13
WARD AAA	583	566	1	0	16
Miscellaneous Physicians.....	477	472	4		1
Collected by canvassers and signed xxx, or signed by midwife	1				1
	478	472	4		2

Clinical Department.

CHRONIC INVAGINATION OF THE ILEUM, SECONDARY TO A LIPOMA OF THE INTESTINAL WALL.*

BY HARRY W. GOODALL, M.D., BOSTON.

THERE are two reasons for reporting the following case:—

- 1. Lipomata of the intestinal wall are rare.
- 2. The clinical signs and symptoms arising therefrom are those of chronic invagination of the intestine.

Dewis in 1906 (BOSTON MEDICAL AND SURGICAL JOURNAL, Vol. clv, No. 16, pp. 427-433) reviewed the literature of intestinal lipomata and found but 44 cases reported. The situation of the tumors in these cases was as follows: duodenum 6, jejunum 4, ileum 7, cecum and colon 5, sigmoid 5, rectum 6, small intestine 2, intestines 1, unknown 6.

The rarity of intestinal lipomata is, however, of secondary importance in this case as the symptoms were those of chronic invagination, the recognition of which lead to the proper treatment and the final cure. It is of interest to

* I am indebted to Dr. Thomas Orday of the Huntington Hospital for the photographs.

note that 16 of these reported cases of lipomata caused an invagination of the intestine; whether or not the remaining cases presented symptoms of invagination I am unable to say.

In 1910 (BOSTON MEDICAL AND SURGICAL JOURNAL, Vol. clxii, pp. 445-452, 491-499) the writer reported a case of Chronic Primary Intussusception in an adult and reviewed the literature up to that time. In that paper the following points were emphasized:

- 1. That a chronic intussusception may be
 - a. Primary.
 - b. Secondary, to malignant or non-malignant disease.
- 2. That the clinical course regardless of the cause is often suggestive of malignant disease.
- 3. That the diagnosis is rarely made before operation or death, owing to the unfamiliarity with the clinical history and findings.
- 4. That the clinical history in the majority of cases is alone sufficient evidence for making a diagnosis.
- 5. The history combined with typical tumor findings allow a positive diagnosis to be made.
- 6. That resection of the bowel offers a cure and should be attended with a low mortality.

This case is reported in detail as it presents many of the clinical signs and symptoms which are fully described in the previous paper.

Clergyman, 49 years of age. First seen at hospital Feb. 14, 1911.

Family History.—Father died at 61 years of age of some intestinal trouble which was considered tubercular. Otherwise unimportant.

Past History.—Always well and robust. Phlegmatic disposition. No previous digestive trouble and bowels always regular.

Present Illness.—About the middle of August, 1910, had a violent attack of diarrhea, without known cause, which lasted two or three days; then the bowels became normal again but he complained of constant soreness about the umbilicus, of lack of energy and general weakness up to the middle of September, 1910, when he had a second violent attack of diarrhea during the night. The next morning he took castor oil and in twelve hours the diarrhea had ceased. Following this he went three days without any movement. From this time on he had *marked constipation and frequent attacks of abdominal pain*. These attacks he describes as follows: At first there is a sensation of uneasiness across the upper half of the abdomen, and in about thirty minutes cramps begin, usually in the right hypogastrium radiating to the left hypogastrium. These last from 15 to 30 seconds, then there is a *gurgling, rumbling sound "as though something was being pressed through the bowel."* Then he would be free from pain for a few seconds and the cramps would recur, gradually increasing in severity; the entire attack lasting from 4 to 6 hours, then disappearing suddenly, usually when the bowels moved. Pressure on the abdomen relieved slightly but there was considerable soreness in the epigastrium. *Mental depression* was pronounced in all attacks. Attacks were always associated with *constipation*, and relieved when the bowels moved. Cathartics and ingestion of food or water did not aggravate the pains. After the attack passed away he became cheerful. Soreness in abdomen passed away gradually, and he did his work in the usual manner.

December 22, 1910. A few hours after a hearty meal he had a very severe attack of "stoppage of the bowels." Pains of the same general character, but very intense, seized him suddenly. With this attack he noticed for the first time a distinct *bulging of the abdomen* on the left, just above the umbilicus, and could feel *"a lump as hard as a rock which felt as if the intestines were knotted up."* After two or three hours of intense suffering he vomited and the pain became much less severe. Took cathartics and enemas without result. The cramps and constipation continued until the night of the 24th, when as a last resort he began to knead the mass with his hands, using very firm pressure. While he was doing this he noticed the mass *change in size and consistency, getting larger and smaller, harder and softer.* His opinion was that the bowel was twisted. *Suddenly, during this manipulation, the "lump gave away" with a gurgling and rumbling of gas and liquid in the bowels, and there was immediate relief of pain, the bowels moving shortly after.* The soreness in the abdomen persisted for a few hours. During this attack his face looked greyish green, and there was extreme mental depression.

Following this attack he found if he took two A.S. and B. pills every night (a dose large enough to get loose bowel movements) he was free from these attacks. This he persisted in until the spring of 1911, then thinking he was getting to depend

upon pills he took salines, and the attacks returned at frequent intervals. These later attacks were of the same general character, and it is only important to state that he vomited constantly and that at times he thought the *vomit contained intestinal contents*. Furthermore, the *"lump" did not always appear at the same place*; sometimes it was in the right hypogastrium, sometimes in the left, and again near the navel, and at all times was freely movable as he felt of it. His weight at the beginning of his illness was 192 pounds, present weight 182 pounds. At no time was the temperature found above normal.

Physical Examination.—Well developed and nourished. Color good. Tongue clean. No glandular enlargement. Pupils and reflexes normal. Heart and lungs normal. Abdomen soft, tympanitic, slightly sensitive to pressure in region of umbilicus, especially on the left. Percussion outline of stomach normal. Liver dullness from 5th rib to costal margin, edge not palpable.

Rectum negative.

Blood, Hgb. 95 per cent. Reds 4,200,000; whites 6000. Stained specimen negative.

Urine negative.

Feces showed nothing abnormal. Guaiac test for blood, negative.

A chronic invagination of the intestine was suspected and an exploratory laparotomy advised. The patient did not care to consider operation and returned home.

July 19, 1911. Returned to hospital because attacks of pain persist, but much less severe as he pays more attention to bowels. Gets along best with a coarse diet: graham bread, prunes, etc., together with olive oil. Mental depression still marked and interferes with his work.

At this time an Ewald test breakfast was given; 80 cc. contents were removed at the end of an hour. Free HCl 0.02 per cent. Total acidity 0.12 per cent. Sediment negative. No evidence of stasis. Guaiac test for blood, negative. Stomach held 800 cc. of water. After washing the stomach it was inflated with air, lower border of tympany $1\frac{1}{2}$ inches above umbilicus.

While inflating stomach patient suddenly complained of abdominal cramps, "the knotting sensation" and felt the lump, all of which was similar to the condition he had experienced in some of his previous attacks.

Examination of the abdomen at this time revealed a sausage shaped mass 4 inches long, extending from the region of the spleen towards the umbilicus. With palpation it was firm, with well defined margins, movable and with manipulation showed variation in shape and size, and consistency. There were no visible peristaltic waves. After about 20 minutes it suddenly disappeared with a gurgling sound.

At this time the weight was 153 pounds (a loss of 39 pounds in 11 months).

At this time the diagnosis of chronic invagination was made, and again operation advised but refused.

February 2, 1912. Returned. Condition much the same. Thoroughly discouraged and ready to have an exploratory operation if it seemed advisable. At this time he was referred to Dr. Percy Brown for Roentgen examinations. After a bismuth meal eight exposures were made during the following 32 hours. The result of these plates is summarized as follows:—

Stomach normal, completely evacuated, and the bulk of the meal contained within the ileum in four hours. Seven hours after ingestion the cecum and colon is filled well up towards the splenic flexure, a certain small portion of the bolus still in the ileum. Twenty-four hours after ingestion the bolus head had reached the splenic flexure but no passage of any bulk of the meal had passed beyond the beginning of the descending colon. From this time on the plates showed an area not far from the region of the spleen and possibly a little below it where the passage was delayed; this is still evident at the end of thirty-two hours, when only a small portion of the bolus has passed into the descending colon. This suggested an intrinsic or extrinsic obstruction.

February 7, 1912. Operation by Dr. D. F. Jones. Left rectus incision about opposite the umbilicus. Large intestine normal. A mass 5 cm. in length was felt to the right and just below the umbilicus. This was brought out on the abdominal wall and appeared to be an invagination of the ileum about 15 cm. in length, the intestine being constricted at the proximal point and so firmly adherent that it could not be reduced. (Fig. I.) The mesentery for 5 or 6 inches along the intestine was thickened and board like, covered with cicatrices, mostly old, a few comparatively recent. The peritoneum was much thickened over this whole portion of the bowel. The walls of the intestines above the mass were hypertrophied and the bowel dilated to about 8 cm. in diameter. Below the mass there was hypertrophy but not as marked. With manipulation the mass could be readily invaginated in either direction. Twenty-five cm. of bowel together with the thickened mesentery was resected and the ends brought together with a line of Cornell sutures and a few intestinal Lembert sutures. Recovery was uneventful.

Pathological Report.—Department of Pathology, Harvard Medical School, No. H12-148. Examination of the excised bowel before section was made confirmed the findings at operation, suggesting an invagination of the bowel and its mesentery. A sagittal section was made (Fig. II.) and disclosed in the lumen of the bowel within the tumor mass, a pedunculated lipoma nearly filling the lumen. Opposite this the wall of the bowel and the mesentery had become invaginated and firmly adherent, leaving a tortuous lumen about 5 cm. in length, which would only admit a small sized lead pencil.

The condition was due to a lipoma of the intestinal wall producing constriction and invagination at the point of attachment with hypertrophy of the mucosa and dilatation of the bowel above and below.

The patient was last seen July 10, 1912. Aside from the fact that there was a little more gas than normal in the bowels (which caused no pain) and pruritus ani which he has had for some years, he was perfectly well, the bowels regular, working with his usual vigor and enthusiasm. Weight in light clothing, 182 pounds.

The pathological findings suggest the following sequence of events. As soon as the lipoma was of sufficient size to interfere with the passage of the intestinal contents a small portion of the intestine and its mesentery became invaginated and firmly adherent, leaving such a very small lumen that only liquid contents could pass through. The moment there was any in-

terference with this passage the entire mass became invaginated into the bowel below or above, according to the direction of the peristaltic waves. The reduction of this secondary invagination was accompanied with sudden relief of symptoms.

Differential Diagnosis. During the twenty months of his illness he consulted several physicians and according to the patient's story the following diagnoses were made—constipation, intestinal indigestion, nervous indigestion, gastroptosis with gastrectasis, and malignant disease of the intestine.

In the first three instances the diagnosis of a functional disturbance was undoubtedly made because he was a robust man with an entirely negative physical examination, the mental depression suggesting a nervous origin. The fourth opinion was given presumably because at the time the examination was made there was considerable splashing in the epigastrium with palpation and he gave a history of vomiting large amounts of stomach contents. The last diagnosis because of the age, the persistence of the symptoms and the loss of weight.

The evidence upon which a diagnosis is to be made is fully described in the previous communication and it is only necessary here to call attention to the fact that the particular features which make the diagnosis certain are emphasized in the history.

If the patient's own observations of the tumor mass during the attack in December, 1910, and in subsequent attacks could have been confirmed, as they were in July, 1911, the diagnosis would have been made much sooner.

There is no way in which one can determine whether an invagination of the ileum is primary or secondary unless pieces of tumors are passed by the bowel. When the large bowel is involved the tumor can sometimes be felt or seen in the rectum.

Location of the Invagination. At first the invagination was located in the small intestine because of the fact that the mass appeared in different parts of the abdomen, frequently near the umbilicus; whereas in invagination of the large intestine the mass is usually felt somewhere along the course of the colon and is less movable than is the case of the enteric variety.

Constipation is the rule with involvement of the ileum and diarrhea in the case of the ileocecal invagination (the most frequent variety).

The Roentgen examination, however, was so suggestive of obstruction at the splenic flexure of the colon, and the fact that the bolus passed through the ileum normally, made the conclusion of a colic involvement more probable.

There seems to be no satisfactory explanation of the x-ray findings at the splenic flexure. The question of the mass pressing on the colon at this point seems improbable as there was no pain suggesting obstruction at the time and there was no unusual peristalsis of the transverse colon.

One is therefore forced to consider the x-ray

FIG. 1.

FIG. 2.

as one of the aids in diagnosis of invagination which does not permit of too definite conclusions.

In conclusion two points are to be emphasized.

1. It is necessary that one be entirely familiar with the clinical story as often the important features are only brought out by direct questions.

2. That in all chronic abdominal diseases this condition should be excluded before a hopeless prognosis is given, and the disease allowed to run its natural course.

Reports of Societies.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

THIRTY-SIXTH ANNUAL MEETING, HELD AT THE BARNARD FREE SKIN AND CANCER HOSPITAL, ST. LOUIS, MO., MAY 23, 24, AND 25, 1912.

The President, DR. GROVER W. WENDE, of Buffalo in the Chair.

(Concluded from No. 15, page 516.)

AN INQUIRY INTO THE EFFICIENCY OF SULPHUR LOTIONS.

DR. O. H. FOERSTER, of Milwaukee, said that in sulphur we empirically recognized one of our most valuable dermatologic remedies for local use, but concerning its mode of action on the skin opinions today were still divided. It was certain that sulphur, as such, in contact with the skin remained practically inert, there being no interchange between sulphur and the keratin of the corneous layer, for both were insoluble. The action of the sulphur must consequently depend upon its conversion into a soluble form or gaseous product. Unna was the first to investigate this question and he concluded that sulphur acted by virtue of the hydrogen sulphide formed. His observations remained current and undisputed until Brisson, in 1909, asserted that the action of sulphur on the skin was due entirely to sulphuric acid formed by oxidation of sulphur. The efficiency of a sulphur preparation, according to Brisson, was therefore directly proportional to the amount of sulphuric acid formed from it by oxidation, while Unna and Golodetz considered its efficiency proportional to the formation of hydrogen sulphide. Further research was required for a definite decision of this question, though it appeared at present that Unna's conclusions were more securely founded. The watery suspensions of sulphur, as ordinarily prescribed and prepared, must be regarded as of little value, for sulphur was insoluble in water, and sulphur, as such, was practically inert. Measured by our theoretical standard, liquor calcis sulphurata was to be regarded as the most efficient sulphur lotion.

A CASE OF SO-CALLED PRURIGO NODULARIS.

DR. JOSEPH ZEISLER, of Chicago, reported this case and showed the patient. He said the term prurigo nodularis had been selected by Hyde in the last edition of his treatise on skin diseases for a rather unique dermatosis which he described on the basis of but four observations, one of them his own. Of

the others, one was published in 1880 by Hardaway in the *Archives of Dermatology* under the title "A Case of Multiple Tumors of the Skin Accompanied by Intense Pruritus." The other two cases formed the subject of a communication by Schamberg and Hirschler in the *Journal of Cutaneous Diseases*, April, 1906, under the heading, "Two Cases of Multiple Tumors of the Skin in Negroes, Associated with Itching." There was a striking similarity in these four cases. All of them concerned women in middle life; in all the lesions varied in size from a small pea to a hazel nut; they were located chiefly on the extremities and gave rise to intense itching. Having once become established, they showed little tendency to either further development or involution, and remained thus unchanged for years, uninfluenced by treatment.

CONCERNING EPITHELIOMA OF THE LIP.

DR. WILLIAM ALLEN PUSEY, of Chicago, in this paper, limited himself to his own experience, giving the records of 44 cases of epithelioma of the lip seen in private practice and treated with the x-rays more than three years previous to January, 1912. In 40 of these cases, all men, the lesion was on the lower lip; four were of the upper lip; of these, three were women and one a man. The youngest patient was 28; the oldest 90. The cases were for the most part selected cases, i.e. the lesions were as a rule superficial, not extending deep into the lip, but this statement by no means covered all of the cases, for some were not regarded as favorable and were treated only because an operation was not practicable. The list did not include many cases of extensive carcinoma of the neck following cancer of the lip. In only two cases were glands palpable at the time of beginning treatment, and of course, operation was urged in these cases. One of these was not helped, and presumably died of carcinoma, but the other had been well six years. In another case a gland developed beneath the angle of the jaw after the lesion on the lip had healed; the gland gradually subsided, and the patient, a physician, had been well seven and a half years. The lesions in these cases varied from small, finger-nail size nodular masses, or ulcers with nodular borders and indurated bases, up to ulcers covering nearly the entire lip or tumors the size of an olive. Of these 44 cases, Dr. Pusey said he knew the subsequent history to January, 1912, of all but five, which he would be compelled to deduct from his list, together with one additional case, that patient having died from intestinal obstruction five months after an apparent cure of the lesion on the lip. Of the 38 cases whose subsequent histories were complete, 35 had an epithelioma of the lower lip; three of the upper. Twenty-eight of these patients were living and free from epithelioma of the lip or metastases arising therefrom in January, 1912. Four were well when last heard from, from three to seven years after their treatment. Four had died from other causes. Two were failures: the disease spread to the glands beneath the jaw and caused death. Two of the patients had lived nine years without a recurrence; seven had lived eight years or more; seven had lived seven years or more; five had lived six years or more; two had lived five years or more; five had lived four years or more and eight had lived three years or more. The mean average interval which had elapsed since treatment in the 36 cases was six years. Dr. Pusey said he was willing to treat any epithelioma of the skin with the x-rays,