cover well powdered continue pushing the catheter through it until the cover takes the position D-E in Fig. 3. It is then ready to be sterilized and used.

The advantages of this form of catheter are,

(a) It has a definite caliber which will not change.

(b) It has a larger caliber than other forms.

(c) Drainage through an opening on the end and on the concave surface of the catheter may be perfect during its time of application.

(d) A small drainage opening on the side insures against any fluid collecting in this lower space.

(e) It can be inserted very easily.

(f) Its time of removal is governed absolutely by the desire of the surgeon and not from force of adverse circumstances, such as blistering, kinking, etc.

(g) Its flexibility allows it to conform freely to any desired position.

(h) It can be perfectly sterilized and repeatedly used.

Clinical Department.

CONGENITAL STENOSIS OF THE PYLORUS, POSTERIOR GASTROJEJUNOSTOMY. THE REPORT OF A FIFTH SUCCESSFUL CASE. REMARKS ON DIAGNOSIS AND TREATMENT.

BY CHARLES L. SCUDDER, M.D.,

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THE patient was a boy baby seven weeks and five days old, under the care of Dr. M. Cook, of Fitchburg, Mass. The child was born Aug. 24, 1908, after a normal confinement. The baby nursed and gained in weight during the first month of its life.

On the 29th of September, 1908, when four weeks and five days old, after considerable hiccoughing he vomited two or three times. The weight of the baby at this time was eight and a half pounds. The dejections up to this date had been normal in color, amount and consistency. The vomiting was explosive in character, projectile,—as the mother expressed it, the vomiting was as if a valve had been turned, letting escape something under pressure. The vomitus gushed out through the nose and mouth. The vomited material consisted of what the baby had taken into his stomach. At no time did the vomitus contain bile. The baby vomited each day from the beginning of the vomiting until Oct. 17, 1908, the time of the operation.

Examination found a moderately thin baby who had lost considerable weight during the preceding ten days. Very marked gastric peristalsis was visible through the abdominal wall, the peristalsis passing from left to right across the abdomen. A pyloric tumor was indistinctly felt in the region of the pylorus. The weight of the baby at this time was 6 lb. 4 oz. The tongue was clean. The baby was hungry, eager for food. From the time that the vomiting began the baby was constipated, the dejections being meconium-like.

From the symptoms there was no doubt of the diagnosis, for in a breast-fed baby, the sudden onset of vomiting of this characteristic type, constipation, the presence of gastric peristalsis and the palpation of a pyloric tumor were conclusive proof of the existence of a pyloric obstruction.

For some three weeks following the diagnosis an attempt had been made by careful and skilled feeding to treat the baby without an operation. In view of the fact that the baby did not gain in weight, but lost, and because the positive symptoms persisted, it was thought wise to relieve the obstruction by operation. A posterior gastrojejunostomy was done and thus the obstruction was short-circuited.

The baby has recovered well from the operation and is to-day, March 4, 1909, about five months since the operation gaining one-half pound each week. The baby looks well, sleeps well and is contented, seeming to be in perfect health. Immediately following the operation for several days there was occasional vomiting. The first movement of the bowels was fifty-two hours after operation. The character of the movement was dark-green, with curds. Subsequently to this the bowels moved each day and gradually became normal in appearance. The baby was fed by breast milk through the medium of a wet nurse. Subsequently, because of the inability to obtain a wet nurse, the baby was fed on a home modification of cow's milk.

REMARKS.

This is the fifth case, in a series of my own cases of gastrojejunostomy for pyloric stenosis in infancy, which has recovered. There are one or two things which seem to me of great importance in connection with these cases of stenosis of the pylorus in little babies.

First, the diagnosis may be difficult.

There can be no doubt from the reported cases of Wernstedt, Rotch, Heubner, Ibrahim, Morse, Marx, Cautley, Hutchinson, Reinach and other equally keen observers that there are cases with many of the signs of hypertrophic stenosis in which no pyloric tumor is found. The only explanation of these cases is by the assumption that for some reason a spasm of the pylorus exists, preventing more or less completely the regular periodical opening and closing of the pyloric sphincter. The chief symptom in these pyloric spasm cases is the repeated vomiting. In this group, too, will be included many cases of difficult feeding.

These cases of pyloric spasm differ from those with true hypertrophic stenosis in that all the symptoms are apt to be less severe. The vomiting is less persistent. The loss of weight is less rapid and less progressive. Gastric peristalsis is slight or not present at all. The stomach is rarely dilated. Very marked constipation is absent. There may be diarrhea present instead of constipation. There is no pyloric tumor. There are very marked intervals of improvement in the baby's condition under treatment.

There is no proof that a spasm exists in such cases. It is the most reasonable etiological assumption possible. However, a muscle tonus of this sort is not ordinarily recognized in other parts. Its explanation by physiologists is attended by very great difficulty. *Only the most severe cases of pyloric spasm will be confused with the true hypertrophic stenosis.*

Cases of pyloric spasm are much more likely to be mistaken for cases of true hypertrophic stenosis than are cases of true stenosis to be confused with those of pyloric spasm,

A suspicion of hypertrophic stenosis should be aroused by the association in a breast fed baby of constipation and persistently recurring vomiting. The presence of visible peristalsis and the palpation of a pyloric tumor will serve to confirm the suspicion. The character of the stools may be helpful in determining the degree of the obstruction at the pylorus. If there is any fecal residue the obstruction is partial; on the other hand, if the dejections are meconium-like, then the obstruction is more nearly complete.

In long-standing cases of hypertrophic stenosis, some gastritis may result. To distinguish those cases of indigestion from the ordinary indigestions of infancy may be at times very difficult. *It is the mistaking of these cases of pyloric spasm and indigestion in infancy for true cases of hypertrophic stenosis which has led to much confusion as to the efficiency of medical treatment in true hypertrophic cases.*

That is, cases of pyloric spasm have been mis-called pyloric tumor cases, have been treated medically and have recovered. The physician or pediatricist, like Heubner of Berlin, and others, therefore, state that pyloric tumor cases may be successfully treated by medical methods. As a matter of fact, the diagnosis of any case not operated upon or not coming to autopsy is at present open to question. There are no cases on record which have recovered after medical treatment in which it has been proved beyond a doubt that the true pyloric tumor existed. The single cases of Batten, Ibrahim, Wernstedt and de Mondy are cited as evidence in favor of the contention that medicine will cure true pyloric tumor obstruction. The symptoms in these cases were suggestive of pyloric tumor. The autopsy findings are not conclusive.

Many cases have been thought to have been cured by medical means and subsequently have required surgical treatment. Medical treatment will undoubtedly relieve some of the symptoms of true tumor stenosis, but that it cannot remove the pyloric obstruction completely is evident from the facts at present available.

The simple and satisfactory explanation of the supposed success of medical treatment is that the cases are not those of true hypertrophic stenosis. In such contentions *the surgeon and internist are dealing with different groups of cases, incomparable cases.*

Second, with regard to treatment.

The cases of pyloric spasm and the cases of difficult feeding will undoubtedly continue to improve and recover under medical treatment. Cases of true pyloric tumor, I believe, require and demand surgical treatment. If the clinical picture is suggestive of tumor stenosis and the baby is losing ground under skilled feeding, as was happening in the case here reported, operation should be done.

It is the aim of the surgeon to avoid operating for a diagnosis. I believe, however, that in certain of the very doubtful cases of pyloric stenosis it may be wise to do an exploratory operation when the delay in operating would

sacrifice the child. *It is better to occasionally do a comparatively safe exploratory operation when the child is in excellent condition and find no lesion at the pylorus requiring surgical treatment than to postpone the operation and allow the child to die from unrelieved obstruction because of delay.* For there comes a time in the life of these little babies when operative interference, even under the best conditions, is not borne well, and if the child is allowed to go along upon medical treatment and is continually losing ground, even though the diagnosis is not certain, there will come a time when even the surgeon can do nothing to save the child. Operation, I believe, should be done when the diagnosis of pyloric stenosis is made, and in doubtful cases when skilled medical treatment of perhaps two weeks' time has been tried and found unavailing.

It must be borne in mind that two objects are sought by operation, (1) the overcoming of obstruction to meet the emergency of starvation and (2) the restoration by operation of the gastrointestinal canal so that it will serve the individual during the remainder of his life.

The medical practitioner who ordinarily comes into contact with these cases at the very beginning of the symptoms must, I believe most emphatically, recognize the fact that delay in operating upon these little babies with true tumor stenosis is largely the reason for the present surgical mortality. The operative treatment when the baby is first taken ill is attended by comparatively slight risk. *The risk in operating is less than is the risk of unskilled medical experimenting with foods and useless drugs.* Skilled feeding is wise in doubtful cases for two weeks, but for no longer.

Early operation upon little babies who have a stenosis at the pylorus is the best and safest treatment.

Medical Progress.

REPORT ON GYNECOLOGY.

BY W. L. BURRAGE, M.D.

THROMBOSIS AND EARLY GETTING-UP AFTER CELIOTOMY AND LABOR.

THIS is the subject of two papers in a recent number of the *Zentralblatt für Gynäkologie*,¹ one by Fromme, of J. Veit's clinic in Halle, and the other by Hofmeier, of Würzburg. The papers were called forth by the comments of Krönig, in a discussion of the topic before the assembly of German naturalists and physicians at Cologne in September, 1908, on the statistics of Burkhardt published in the *Zeitschrift für Geburtshilfe und Gynäkologie*.² Burkhardt presented a series of 236 operations for the removal of fibroids, followed by 12 cases of thrombosis with 6 deaths. Krönig, arguing for an early getting-up after operations, interprets these statistics as going to prove the great frequency of thromboses (5%)

¹ No. 1, Jan. 2, 1909.

² Bd. xliiv.