EXPERIMENTS WITH URIC ACID SOLUTION.

No.	Uric Acid Used.	Uric Acid Obtained.	Variation.
	Grammes.	Grammes.	Grammes.
1	.05	.05308	+.00308
2	.01	.01309	+.00309
3	.01	.01276	+.00276
4	.01	.01243	+.00243
5	.01	.01243	+.00243
6	.01	.01210	+.00210
7	.01	.01140	+.00140
8	.01	.01780	+.00780*
9	.01	.01276	+.00276
10	.01	.01294	+.00294
11	.01	.01376	+.00376
12	.01	.01243	+.00243
13	.01	.01209	+.00209
14	.01	.01209	+.00209
15	.01	.01276	+.00276
16	.01	.01316	+.00316
17	.01	.01293	+.00293
18	.01	.01293	+.00293
19	.01196	.01193	-.00003
20	.01196	.01108	-.00088
21	.01196	.01159	-.00037
22	.01196	.01226	+.00030
23	.01196	.01008	-.00188
24	.0166	.02587	+.00927
25	.0166	.01752	+.00086
26	.0166	.01967	+.00207
27	.01444	.01209	-.00235
28	.01444	.01309	-.00135
29	.01444	.01444	none.
30	.01444	.01735	+.00291
31	.01444	.01377	-.00067
32	.05	.05107	+.00107
33	.05	.04838	-.00162
34	.05	.04644	-.00356
35	.05	.04569	-.00431
36	.05	.03931	-.01069
37	.00833	.01208	+.00375
38	.00833	.01108	+.00275
39	.00833	.00907	+.00074
40	.00833	.01009	+.00176
41	.00833	.01747	+.00914 (1)
42	.00833	.00807	-.00026

* An excess of uric acid was not in solution.

NOTE. — Experiments 4-8, 9-13 and 14-18 were made by dissolving .05 grammes of uric acid and using one-fifth of the solution in each experiment. The weight was not quite accurate owing to a fault in the scales. The weights are perfectly accurate from No. 19 on. However, each portion of the series of five above mentioned contained equal amounts of uric acid.

EXPERIMENTS WITH URINE.

No.	Am't of Urine.	Uric Acid Obtained.	Variation.
	Cub. Centimetres.	Grammes.	Grammes.
1	a. 25	.02305	.00013
	b. 25	.02318	
	c. 25	.02326	
2	a. 25	.02117	.00294
	b. 25	.02116	
	c. 25	.02032	
3	a. 25	.00924	.00151
	b. 25	.00773	
	c. 25	.00722	
4	a. 1000	.7792	.000836*
	b. 1000	.7660	
	c. 1000	.7660	
5	a. 1150	.7115	.00106*
	b. 1150	.7287	
	c. 1150	.7596	
6	a. 1100	.6501	.00165*
	b. 1100	.6357	
	c. 1100	.6131	
7	a. 100	.5773	.00075
	b. 100	.10878	
	c. 100	.10953	
8	a. 1150	.7366	.0028*
	b. 1150	.8653	
	c. 1150	.7443	
9	a. 1000	.5642	.0084*
	b. 1000	.9004	
	c. 1000	.7690	
	d. 1000	.6821	

* For each 25 cubic centimetres of urine.

inconvenience by a physician and a knowledge sufficient for diagnosis obtained. For experimental work, a more accurate method is necessary and it is possible this may be obtained in the method of Hopkins, which depends upon the separation of ammonium urate and the uric acid estimation therefrom. I have not yet

had sufficient experience with this method to give any results, but according to report it gives very constant results, the chemical reaction upon which it depends not being variable as in the case of the silver methods.

SOME GENERAL OBSERVATIONS ON RECTAL DISEASES.¹

BY JOSEPH C. STEDMAN, M.D.

Assistant Surgeon to the Department for the Diseases of the Rectum, Boston Dispensary.

It is well for a general practitioner to have some line of special work in which he is particularly interested and one that he can, after patient study and observation, become experienced in and capable of giving expert advice.

While on the house staff of the New York Post-Graduate Hospital for two years, and in the service of Prof. Chas. B. Kelsey, I became much interested in rectal diseases, and since January 1, 1894, have assisted Dr. W. J. Otis at the Boston Dispensary in the department for the diseases of the rectum. With these few preliminary remarks I will endeavor briefly to give some general observations on the rectal disorders that a physician will meet most frequently in everyday practice, and indicate the line of treatment generally found to be the most successful.

It is not my intention on this occasion to give in detail each disease or to dwell on the anatomy or pathology of the parts except when it is necessary in order to explain and fully understand the treatment and reason for the same. There is no doubt that physicians in many cases do not recognize the true state of affairs in many diseases of the rectum, one principal reason being their failure to make a careful examination, either because of the modesty of the patient, or their reluctance to insist on a careful exploration, or not having paid sufficient attention to these disorders, or not caring to take the time and trouble necessary for treatment because of lack of interest in this branch of surgery, and lastly their inability to recognize what they do see from their unfamiliarity with such diseases. Allingham says "an accurate diagnosis in rectal diseases is all important and to prescribe for patients suffering from these maladies without examining them both ocularly and digitally, is not only false delicacy, but radically wrong and likely to bring the treatment of these diseases into contempt;" he also says that "rectal diseases are among the most common that affect civilized humanity but are of rare occurrence in barbarous countries." By far the most common forms of rectal diseases are hemorrhoids and fistula. Allingham claims that especially in hospital practice the most common rectal disease affecting the adult is fistula.

During my service with Dr. Kelsey, the most common condition we found was hemorrhoids, although some of those were complicated with fistula, bringing the number of cases of fistula nearly up to that of hemorrhoids. In the Boston Dispensary we find hemorrhoids are much more common and ulceration, particularly fissure ani, are next in frequency, fistula and abscess being third in frequency.

First, in regard to examination. The most favorable position to place the patient in is the right or left

¹ Read before the Norfolk District Medical Society, December 17, 1895.

Sims, preferably the right as it allows more freedom of the right arm and hand in treating and examining the patient and also more convenient for use of the speculum. The back is the best position for external inspection and eversion of the anal margin because the nates naturally spread more in this position and the pressure from the flexed thighs on the abdomen causes a certain amount of downward pressure upon the rectum. A female should almost invariably be placed in the Sims position for obvious reasons. The anus of the patient should be on a level with the eyes of the physician, and it will be found more advantageous in examining the cases to use reflected light from a head mirror, particularly when the speculum is used.

In making the examination the tissues surrounding the anus should first be carefully inspected, for in many cases the condition of the anal integument will give a clue to what one is to expect as to the condition internally, either present or past. After having inspected the anus carefully the next step is to make an internal examination. This can be done either with the finger or the speculum, or both. A digital examination will be much more agreeable to the patient if the finger is introduced slowly and gently, as any attempt to force the finger through will cause an involuntary resistance on the part of the patient, thus causing unnecessary discomfort. The anus and finger should be well lubricated, preferably with some preparation of vaseline, as eucalyptus. In introducing the finger into the anus the first thing to be noted is the amount of resistance offered by the anal sphincters, the external being a voluntary and the internal an involuntary muscle, and it is possible to distinguish between these two muscles by the presence of a well-marked interspace between the two. A firmly contracted anus with more or less hypertrophy of the internal sphincter is met with in cases of fissure ani, rendering the introduction of the finger oftentimes impossible, without the aid of an anesthetic, because of the pain and spasmodic contraction, whereas a loosely contracted anus may be due to atony or paralysis, or a sympathetic relaxation is often noticed coincident with an acute suppuration in this region, or that it has been stretched and weakened by the frequent prolapse of internal rectal tissue, as hemorrhoids, mucous membrane or invagination.

It is not at all uncommon for a physician to make the mistake of considering a certain amount of hypertrophy of the internal sphincter as present in a given case, where in reality the anal contraction is no more than normal.

On further introduction through this sphincteric portion of the rectum, the finger comes into the large cavity of the rectum proper called the rectal pouch, which unless distended with gas or feces is apparently without shape or form, the loose and flabby anterior and posterior walls being in apposition. In this manner it is possible to explore the lower four inches of the rectum, and a well-trained finger will in most cases comprehend the condition present before resorting to a speculum.

A great aid to a digital examination is the introduction of air or water through an ordinary bulb syringe. Here the rectum will be in the opposite condition, that of distention, with its loose and flabby walls put upon the stretch and having definite shape and form—any diseased condition of its surface can be most readily detected. A marked feature in this mode

of examining will be the presence of two or three well-marked transverse folds, semi-lunar in shape, on alternate sides of the rectum. This condition is undoubtedly the origin of the so-called third sphincter; but Dr. Otis has proved without a doubt by careful anatomical investigation that this idea of a third sphincter is erroneous, but that these folds are in reality the divisions between the sacculi, and if we could feel the entire length of the rectum we would find the condition prevailed throughout—in other words that the rectum is sacculated, a doctrine contrary to the teachings of all our anatomical text-books.

After the digital examination a very useful aid in diagnosis and carrying out treatment, is the examination with a speculum. There are so many different devices for this purpose, many of which are worthless, that I will only mention those which I prefer and have found most satisfactory, namely, the tubular ones, such as those of Ives, Otis's low-rectal, Kelly and Aloe's.

Most surgeons agree that successful rectal examination with specula requires anesthesia and forcible dilatation of the anus; but Dr. Otis has demonstrated, with his new rectal speculum, that high rectal inspection, nearly the entire length of the rectum, can be made satisfactorily and without much pain, without the aid of an anesthetic. This is done with the patient in the knee-chest position, which is the best position for inspection of the middle and upper portion of the rectum without ether. For inspection of the lower portion the back or the Sims position is preferable.

As a general rule all instruments that change their shape after introduction are to be avoided because of the greater amount of discomfort and pain caused by the spreading and closing of these instruments.

Of the pathological conditions of the rectum to which I will draw your attention, hemorrhoids, or piles, come first in order as to frequency. Of this condition there are to be distinguished two varieties, external and internal. The external piles are an affection of either the external hemorrhoidal veins or the circum-anal integument. As they are always outside and covered with skin they are dry and as a rule do not bleed. Internal piles are essentially a varicosity of the internal hemorrhoidal veins. These, on the other hand, are within the rectum, covered with mucous membrane, are moist, bright red, bleeding being a characteristic symptom.

External piles are either venous or cutaneous. Dr. Otis has recently suggested that these two groups can be still further subdivided. Of the venous pile he recognizes two kinds, first, a varicose condition of the external hemorrhoidal veins. This is about all that need be said of this form of venous pile as it is a condition that exists in all adults, due no doubt to the erect posture and the act of defecation. It can hardly be called pathological and requires no treatment.

The second variety he calls the thrombotic pile, due to a thrombosis in the external hemorrhoidal plexus of veins. Some claim that it is an extravasation of blood due to the rupture of a small vein; but others claim, Drs. Ball and Otis, that it is a thrombosis in the vein itself, and we have surely found it so at the dispensary, for on cutting down upon it the clot pops out pear-shaped, and is apparently a true cast of the vein, leaving a smooth lined cavity which Dr. Ball in his excellent treatise on rectal diseases has ascertained microscopically to be similar to the endothelial lining of the vein.

A thrombotic pile is inflamed more or less, tense, hard, very painful and the bluish appearance of the thrombus can be seen in most cases. The thrombotic pile is due to various causes, as a prolonged straining at stool either from constipation or diarrhea. It also occurs at other times, as for instance a run down state of the system or where a regular stool has been delayed or skipped or during pregnancy or neglect during debauchery. It generally comes on suddenly and the patient complains of considerable pain and a bunch at the anus. This form of pile will nearly always disappear without any treatment and leave no trace of its former existence; but if from the size of the tumor and the suffering of the patient interference seems necessary, immediate relief will be given by incising the pile and turning out the thrombus. A very important feature of the treatment after incision is pressure applied with a pad and a tight T-bandage to prevent the cavity from refilling.

The palliative treatment is often beneficial and when the patient will not consent to a cutting treatment it answers the purpose just as well, only taking a little longer to subside. A mixture of extract of belladonna and glycerine smeared on, followed by a warm stupe or some soothing lotion and the administration of some mild laxative to insure a soft and easy stool.

Cold applications are often very useful, especially the cooling anodyne preparations, such as Pond's Extract of hamamelis, liq. plumbi subacet. dil., etc. As for cutaneous piles, Dr. Otis recognizes and describes three varieties, the convenience of this classification being that the name of each variety suggests and indicates the nature of the process which produced it.

These varieties are, first, redundant cutaneous pile, which is a mere redundancy of the muco-cutaneous integument, a condition brought about by a stretching of the skin from the engorgement of the varicose veins beneath, in those individuals where there is a considerable straining at stool. This condition is most marked in those individuals suffering from internal piles and, in fact, may be regarded as diagnostic of internal piles with more or less weakness of the internal sphincter, due to the frequent prolapse of the internal piles.

The second form of cutaneous pile he calls a hyperplastic pile, because it is a hyperplasia of the connective tissue from the presence of abrasions, fissures or ulcerations. It is generally known as a cutaneous tab. It is most frequently seen at the posterior border of the anus in connection with fissure ani, and, in fact, is pathognomonic of that disease.

The third is the hypertrophic and differs from the former varieties by being a hypertrophy of one or more of the normal radiating folds at the anus, the result of an eczematous inflammation. In these last two varieties treatment consists in treating the ulceration and the eczema—in other words, treating the causes which produced them.

Internal piles, as stated above, are varicosities of the internal hemorrhoidal veins. They are often found singly or in clusters, sometimes entirely surrounding the bowel. The prominent feature of this form of pile is protrusion and bleeding. It is very important to distinguish between the internal and external piles, as a great deal of unnecessary suffering is caused by attempts to put back the thrombotic piles, as, for instance, under the supposition that they are internal

piles, a mistake which has been often made, not only by patients, but by physicians. The internal piles are moist, bleed freely, are bright red and covered with mucous membrane. The external that are liable to be mistaken for internal piles are the venous variety, particularly the thrombotic, especially where it is accompanied with a good deal of edema. They are covered with skin and have a bluish appearance where edema is not too much to obscure the vein. Another differential point is the ano-rectal groove, the junction of skin and mucous membrane, as described by Dr. Otis, and also divides the internal from the external piles.

The treatment of internal piles may be palliative or operative. A good deal can be done in way of palliative treatment, particularly in those cases where there is no redundancy of the external cutaneous tissue which shows that the internal piles have not sufficiently advanced to produce any weakening of the internal sphincter. It is in these cases that much can be accomplished by medical treatment and a cure looked for by regulating the diet to make sure of the proper proportion of liquids and solids. Diminish amount of meat, increase vegetables and fruits, stop tea and urge necessity of drinking water. To aid in bringing about this result it will often be necessary to administer a mild laxative and for this purpose there is nothing better than the fluid extract of cascara sagrada, which is best administered three times a day before eating, in ten- to twenty-drop doses, in water. Maltine with cascara sagrada is also valuable in this condition. Applications of an astringent ointment before and after stool are also beneficial, as also enemas of some astringent solution. Proper exercise is good, especially that form which will compress the liver to relieve engorgement of the portal veins, as horseback riding. It is only in this form of piles that treatment by injection ought to be thought of, because the internal sphincter is strong enough to hold the pile that has been treated in this way in its place and keep it within the rectum; but as this method of treatment is very uncertain in the amount of disturbance it will set up, and as I consider it more or less dangerous because of possible thrombosis, intra-venous injection, extensive suppuration and sloughing, and at its best not a permanent cure, I am opposed to this method of treatment and cannot recommend it.

While on this subject of treatment of piles by injection I would like to add that external piles ought never to be injected, as such treatment would only cause unnecessary torture and shows an erroneous conception of their pathology.

In those cases where the piles have sufficiently advanced to produce a weakness of the internal sphincter and a redundancy of the circum-anal integument, palliative treatment may stop the bleeding, but the prolapse will continue and the patient will sooner or later have to submit to operative interference. Of the various operations for internal piles, as ligature, clamp and cautery and excision (as Whitehead's operation), the clamp and cautery is the one generally preferred by the best surgeons. Dr. Kelsey and Dr. Otis both prefer the clamp and cautery to every other and my own observation and experience have led me to use that method in every case where the patient will take ether. If the clamp and cautery is used properly, there is no other method that is so quick or so free from pain and where the patient will be entirely cured

and able to resume his work in as short a time as this. I have watched several times hospital patients who have had the ligature operation and the clamp and cautery performed, lying side by side in the same ward, and almost invariably the patient who had clamp and cautery used was up earlier and discharged first. I will not go into detail with the operation, simply a few suggestions. The patient should have a good cathartic two days beforehand and a good enema the day before and the day of the operation.

The sphincter should be well stretched and temporarily paralyzed at time of operation, in order to facilitate exposure of the pile tumors and to prevent any spasmodic contraction of the internal sphincter after the operation, which might cause pain and interfere with the healing of the wounds. A precaution to take in applying the clamp is not to allow the margin of the external skin to catch between the blades, but to cut around it with scissors, because that is where most of the pain and swelling after the operation would come from.

The clamped pile can be partially cut off with scissors, leaving sufficient stump to be seared with the cautery, or it can be burnt down to the blades of the clamp with the cautery without any previous cutting. In the latter method less bleeding will result. The cautery should be used at a dull red heat and not at a white heat. This also will insure less bleeding if observed. In removing the clamp the pressure should be let up gradually to see if there are any bleeding points that need further cauterizing. No packing is necessary afterwards, except a good external pad with a T-bandage that can be tightened in case of necessity. There is no danger of secondary hemorrhage where the operation is done correctly. In forty-eight hours the bowels can be moved with liquorice powder, castor oil, salts, etc., and in five days the patient can be discharged.

I will next take up the subject of fistula, as they are met with next in frequency in general practice. Kelsey says that a fistula which is not due to ulceration and perforation of the rectal wall from within is the result of a previous abscess, and so it is that nearly every abscess around the anus or in the wall of the rectum is apt to terminate in a fistula which is complete when it has two openings, one without and one within the bowel, or incomplete or blind fistula with only one opening.

The external opening may be situated anywhere in the integument about the anus and the cleft between the nates. The internal opening will generally be found in that portion of the mucous membrane within the grasp of the internal sphincter. Occasionally it will be found situated higher up.

Oftentimes while the internal opening may be low down, yet the sinus may extend farther up the bowel and rarely a second opening may be found higher up. In the fistula resulting from a marginal abscess, the sinus is generally short and the two openings close together, making its treatment simple; while in the fistula following an ischio-rectal abscess, the sinus is apt to be tortuous, of varying lengths with off-shooting branches, making the treatment of this form more complicated. A better term for the blind forms of fistulae is, as Ball states, internal and external rectal sinus according as the opening is within or without.

An internal rectal sinus is a suppurating tract and if left to nature will sooner or later make an open-

ing in the skin, thus forming a complete rectal fistula. The external sinus is the result of an abscess and generally points to the rectum although often it runs away from it into the ischio-rectal fossa. The tracts of the fistula are seldom straight and it is very difficult many times to find the course which it takes. Sometimes it goes around the bowel and comes out on the opposite side, forming the horse-shoe fistula.

The symptoms vary somewhat. If there is an abscess, there will be all the symptoms of an abscess, pain, heat, redness and swelling. Little pain is felt when a fistula becomes complete but there will be a discharge staining the clothing and more or less blood at stool; but if the external opening becomes closed, the distention caused by the accumulation of the discharge will cause considerable pain and rise of temperature which will disappear on the opening being re-established again. The diagnosis is generally easily made when the external or internal opening is found.

Sometimes it is very difficult to find the internal opening. If the external opening is found and the probe carefully run in and the internal opening cannot be found easily (it is never wise to force the probe through the rectal wall no matter how thin may be the tissue between probe and finger to make an internal opening), by injecting peroxide of hydrogen either with a glass syringe or better still with a hollow probe and syringe, it will often find its way through and the disorganized pus can be seen foaming into the rectum.

All external abscesses should be opened as early as possible and curetted and treated antiseptically. They can often be done in the office under cocaine, as can also the fistulae be incised and curetted or the tract dissected out. At the Boston Dispensary we have treated ten or twelve cases of complete fistula with the openings from half an inch to three inches apart with the elastic ligature with very good success. We draw it tight and allow the patient to go about his or her work with more or less pain the first day after. In three to seven days it has often cut nearly through and one interesting thing to notice is the fact that while the ligature is cutting, the tract is beginning to granulate behind it, so that in some cases we have noticed that where a fistula is entirely cut through, two-thirds of the tract will be healed and covered with a healthy epithelium. The rest of the tract generally heals after a few applications of the nitrate stick and euophen, aristol or Metcalf's powder. We are now trying euophen and aristol, in equal parts, for the granulating surface and old fissures and ulcers, with very good results. If the patient can take ether, cutting is the best treatment, and curetting or else dissection of the fistulous tract with stitching afterwards.

Directions to patients are generally to keep the bowels open, and we also give them boracic-acid ointment to use before stool, and some antiseptic powder to place in the wound on a little cotton after stool, after thorough cleansing.

Fissures or irritable ulcers are also a very common trouble and are generally the result of either overstretching at stool by large-size feces, or a tear in the mucous membrane of the sphincter ani, or an excoriation the result of syphilis, dirt or the irritating discharge of a diarrhea, etc. The pain is very severe, and is worse at period of defecation—most severe immediately or shortly afterwards, lasting sometimes many hours. The patient therefore avoids going to stool

oftener than he can help, and therefore becomes more or less constipated, and when he does have a stool, the pain is very severe. With severe pain at stool and lasting a long time afterwards, one may generally suspect a fissure as the cause. On examination a small pile, sometimes called the sentinel pile, or Dr. Otis's hyperplastic pile above mentioned, is found at the base of the fissure. Bleeding is also a prominent symptom with persons suffering with fissures, and in fact such persons are apt to think that because of the bleeding, with the pain, they are suffering from internal piles. A deaf and dumb man came to the dispensary a few days ago, and wrote on paper the following: "I have tried different remedies for the cure of my piles, but without any benefit. Perhaps the reason is I could not reach the internal parts, which are inflamed and swollen. Can you recommend any sure and quick cure for my inflamed piles?" On further questioning his symptoms were pain, bleeding and constipation. On examination he was found to have a bad fissure, but no sign of an internal pile. He had been treated for a long time for internal hemorrhoids and thus the result. This case illustrates the uselessness of treating patients by taking their word for their trouble without an ocular examination by the physician, who in every case should insist on an examination, or refuse treatment.

The best treatment (according to Kelsey) is a deep incision through it and the sphincter. At the Boston Dispensary, frequent local applications with nitrate of silver and some dry powder, as euophen and aristol, equal parts, with a cotton packing, has proved successful in every case.

Non-malignant ulcerations of the rectum are also very frequently met with, and there are many different varieties. Kelsey has classified them into the following group: Traumatic, catarrhal, tubercular, scrofulous, dysenteric, venereal. I will not have time to describe them or to give the various lines of treatment for the same. The best treatment, however, for extensive ulcerations in the rectum is rest in bed and fluid diet, with possibly hot saturated solution of boracic-acid douches twice a day. Good results may be obtained by local treatment, as, for instance, equal parts of calomel, zinc oxide and subnitrate of bismuth brushed on. To small ulcers strong acids are beneficial if used properly: silver-nitrate solutions, ten, thirty or sixty grains to an ounce, or the nitrate stick.

The knife is also useful at times. I saw a case of extensive dysenteric ulceration, in the Post-Graduate Hospital, that would not yield to local applications, treated by Dr. Kelsey by inguinal colotomy. This gave absolute rest to the ulcerated surfaces by preventing the irritating discharges from passing over them, and in a short while they were healed. The inguinal opening was then closed and the function of the bowel re-established.

Many cases of pruritus ani will be found in general practice, and they are often very annoying to the patient and trying to the physician, and will often tax his powers to the utmost to relieve it. It is generally a symptom of some other trouble, as eczema, hemorrhoids or from the presence of oxyuris vermicularis in the rectum. When a patient comes to us suffering with pruritus, the first thing to do is to examine for the cause. If due to eczema it will be discovered immediately on examining the anus and surrounding issues. The eczema may be either moist or dry or it

may be the result of the scratching of the patient to relieve the intense itching. In the moist form there will be a reddening of the skin surrounding the anus and a gummy exudation. It is attended with more or less smarting pain, with severe itching, particularly at night when the parts get warm. In the dry form the skin is dry and cracked, and the surface covered with dry scales; the itching is severe.

The most successful treatment we have found for eczema of the anus is black wash and unguentum zinci oxidi, or else black wash and calomel, pulverized, bismuth and zinc oxide, equal parts, and a little cotton to keep the parts separated. Almost immediately there is a marked improvement in the character of the eczema, and the itching gradually subsides.

The presence of oxyurides is a very common and a very obstinate disease, and causes more or less pruritus, and the diagnosis can be made by finding the little worms around the anal folds or in the rectum. Heller claims "that these worms live principally in the cecum and lower part of the ileum, and the females when about to deposit their eggs descend to the rectum." If this is so, then it is almost futile to use simply enemas of lime-water, infusion of quassia, etc. Our treatment in the dispensary has been to use a stomach tube as a rectal tube, washing out the colon and rectum with large clysters of salt and water. This will bring away large quantities of the worms. We then direct the patient to wash his finger-nails twice a day with green soap, using a nail-brush, because from scratching, the hands carry the eggs to the mouth and they enter the system again. We also give cathartics as a means to detach them higher up and bring them down. We have treated with benefit several cases with this line of treatment. But further experience with this affection shows us that oxyurides are very persistent, and we have come to the conclusion that all injections are useless as a cure; but we use them now as a means of diagnosis, because we find cases that we supposed were cured by the above local and prophylactic treatment are coming back again in as bad a condition as ever. At present Dr. Otis is using with apparent success in adults and children naphthalin in doses of two to eight grains according to age, given in capsules four times a day between meals, for ten doses, then waiting a week and repeating the same. A precaution in treatment is not to take any fatty food during the time of taking the capsules.

There are many cases of pruritus where no appreciable cause can be found. In these cases several plans of treatment may have to be tried. Kelsey cured several such cases during my service with him by placing the patient under ether and using the Paquelin cautery. He passed the cautery lightly over the whole affected surface, and where there was much induration he made a few stripes radiating from the anus directly through the derma. When the burns were healed, which they did in a few days, the patient was cured. Pruritus can also be caused by chronic constipation, derangements of the functions of the liver, etc. These need general dietetic treatment, with perhaps more or less local treatment. Other causes may be hysterical conditions, a gouty diathesis and others.

Where there is no appreciable cause, I have found that a prescription of a five-per-cent. solution of salicylic acid in peppermint water, to which a little alcohol must be added, is very valuable, often curing

it. It always relieves it, however. Then again, an ointment of menthol, twelve grains to the ounce, is useful.

Stretching the sphincter forcibly with dilators will sometimes cure a case of pruritus where no other cause can be discovered, no other treatment having succeeded in effecting a cure. A most important precaution is to caution the patient to resist the temptation to scratch the parts, and to have the hands tied at night to prevent the unconscious scratching during sleep.

We have treated several cases of non-malignant strictures of the rectum in the dispensary very successfully with the use of Dr. Otis's new rectal sound, a metal sound curved to follow the shape of the rectum. It is very much easier and more effectual than Wales's rubber bougie. I will not go into the etiology, pathology or symptoms of non-malignant diseases. There are many varieties, but almost all can be benefited by dilatation, bearing in mind, of course, that this affection is probably incurable.

This instrument can be used with safety in the hands of the physician or surgeon in his office. We have had several cases where the stricture when first examined would not admit the tip of the finger; and after several treatments, beginning with the smallest, it would finally allow the largest size to go through. We also use internally, particularly if the stricture is specific, the compound tincture of iodine, beginning with five drops three times a day after eating, in milk, and increasing until twenty drops three times a day are taken, and continuing the same several weeks (and perhaps months) with good results. These bougies of Dr. Otis's cannot be used by the patients; but they are generally given one of Wales's soft-rubber bougies to be used at night on going to bed. A very good ointment for lubricating the bougie is boric-acid ointment (two drachms to one ounce of vaseline).

The last condition I will speak of to-night is prolapsus ani, which is most common in children. It is a distressing condition when it happens, but the physician can assure the parents or friends that it need cause no anxiety, because it can be readily corrected, by correcting the faulty habits of the child which tend to produce it. In almost all cases it is brought about by constipation and too long-continued sitting and straining on the part of the child while at daily stool.

The treatment consists in regulating the diet, by suitable laxatives, insisting on the child's being in a horizontal position at every movement of the bowels, which has a tendency to keep the bowel up and relieve the straining or tenesmus. Astringent enemata (alum, vinegar, hydrastis, Pond's Extract, etc.) may possibly aid expulsion of the feces. If these are persisted in a few weeks or months, a cure will be produced.

Prolapse in adults, however, is quite a different affair, is much more serious, and may require some form of surgical interference, as the cauterization. Several cases, in which the cautery was drawn over the mucous surface in various places, I saw successfully treated in the hospital by Dr. Kelsey. Excision, plastic operations, removal of some of the rectal folds, and other methods have cured the condition in many cases.

There are many conditions that I have not touched upon, because not so common as those I have mentioned, and also for want of time: for instance, malformation, malignant diseases, polypi, venereal diseases, proctitis, the presence of foreign bodies and

others. I have only tried to give a few observations on some of the more common troubles which one will find in general practice.

In the above observations I have attempted to show that a large majority of rectal disorders are amenable to treatment; and if the general practitioner can recognize the condition present in the case in hand, and apply appropriate treatment, many cases that are allowed to run into a chronic condition could be cured or very materially benefited.

PROCREATION OF SEX AT WILL, ETC.

A LETTER FROM PETRUS TRUONG VINHKY OF ANNAM.¹

BY F. B. STEPHENSON, M.D.,

Surgeon U. S. Navy, Member of the Asiatic Society of Japan.

IN the *New York Medical Journal* of March 2, 1895, page 269, appeared a letter from the Annamite savant, Petrus Truong Vinhky, with some remarks concerning his work as linguist and *littérateur*.

Mr. Vinhky has lately written to me, referring to a problem in physiology, and giving his experience in attempts to solve the same. I herewith subjoin some extracts translated from his communication:

"Inasmuch as you occupy a position enabling you to reach the public ear, as to professional and scientific matters, in the great country of the New World, I beg that you will allow me to make known to you my theory concerning the procreation of children of different sex at will (*faire des enfants, garçons et filles, à volonté*).

"I will tell you in a few words, how I came upon this discovery.

"In 1861, as I was about to marry, the idea came to me to examine carefully the particular laws that control generation in man. After having consulted the various books on medicine, of both the Eastern and the Western civilizations, I found that the wise men who had devoted their time to the investigation of this subject, seemed to have been wandering rather indefinitely all about the truth, without daring to determine and fix, once for all, the veritable fact. Therefore, I made up my mind to proceed in a rational manner; and, through combinations intelligently made, to attain the object of my researches and experiments, hoping for the desired result. First of all, I founded my plan of action on the system known as dualism, or the *binā principia* (*âm et duong*) male and female principles (*principes opposés*), alternating and constituent of the life of human beings, as well as of the existence of things in nature. In all that is, we must recognize the control of definite laws (conditions of existence). Moreover, the procreation of male and female is one of the fundamental bases of terrestrial life. It is for us, therefore, as investigators, to determine these laws. Furthermore, physicians all recognize that there are, in the ovary of woman, both male and female germs (potentially?). These two opposite elements should act alternately. Knowing, then, the beginning and the duration of this alternate action, our course of procedure becomes plain.

"Once having determined both the time of beginning (*point de départ*) and the duration — point x — I contracted marriage. I succeeded perfectly in alternating son and daughter. In this manner I engen-

¹ Read before the Boston Society for Medical Improvement, January 13, 1896.