lations. From time to time the wound was irrigated with a warm saline solution. The rectum having been shut off from the perineal wound, this was closed as in the Tait method, first burying a continuous strand of chromicized catgut for the deeper regions. The external wound was then closed with six silkworm-gut sutures.

On completion of the operation the caliber of the rectum at the site of stricture readily admitted three fingers. A rectal plug, four inches long, made by binding together three rubber drainage tubes with iodoform gauze and covering the whole with rubber dam, was inserted. The operation wound was such that no recto-vaginal fistula could follow but, if the wound had suppurated, only what would correspond to a fistula in ano would have resulted. The technic of the operation was not difficult, and all parts were readily accessible. The operation lasted about one hour and patient rallied well.

After-treatment: After operation patient suffered no particular discomfort. The diet consisted of liquids without milk for two or three days and this was increased gradually so that about eight days after operation patient was on full diet. The rectal plug was removed on the fourth day and the rectum irrigated with a warm boric acid solution. The small rubber tube was left in the rectum for a few days longer. On the fourteenth day the silkworm-gut sutures were removed. There was no swelling about the vulva or rectum. The stitches held perfectly and the wound healed without complication. Digital examination showed plainly two horizontal lines of sutures in the rectum. The bowels were kept quiet for one week, at the end of which time an oil enema was given followed two hours later by a suds enema. After that date patient was given regularly 10 minims of fluid extract of cascara three times a day. This served to keep the bowels regular. Patient had complete control of the sphincter muscles and the formed movements were normal in size, a circumstance which had not obtained for a number of years. Patient left the hospital about four weeks after entrance.

It is now thirteen months since operation. Patient is in excellent general health and suffers no local discomfort of any sort. Her bowels are regular and the stools are of normal size. There is an occasional streak of blood. About once in two months a rectal dilator has been passed for the purpose of guarding against any tendency to cicatricial contraction. On completion of the operation three fingers could be passed readily. At the present time the same fingers can be made to pass the site of stricture with some difficulty. The line of suture can be felt as a slightly constricted band. During the last six months there has been no very appreciable contraction.

It may be concluded that the method of treatment adopted was satisfactory for this particular case, and it should prove efficient in other strictures of a similar type. After any operation for stricture of the rectum, it is wise to continue the occasional introduction of a bougie for an indefinite period.

CHRONIC GONORRHEAL PROSTATITIS.

BY CHARLES GREENE CUMSTON, M.D., BOSTON, MASS.

THERE is not a surgeon who does not almost daily find in his consultation room at least one man anxiously awaiting the arrival of his turn, only to beg of him to rid him of a persistent gleet which has resisted every conceivable treatment.

I believe that but few surgeons and not many general practitioners realize how often the unique cause of the continuation of these urethral discharges is due to the involvement of the prostate. If one will only take the trouble to make a rectal examination of this gland he will soon discover how frequently it is the seat of lesions in old cases of gonorrhea. Fezzoli believes that prostatitis is a nearly constant complication of gonorrhea, while Casper found the prostate diseased in 80% of cases of chronic urethritis. Montagnon made a rectal examination in 100 patients at different stages of gonorrhea, and in 70 of them he found the prostate involved, while Franck of Berlin, found this complication 210 times in 210 cases. Our own experience would lead us to believe that in about 80% of patients suffering from gleet the prostate is involved.

The causes of this frequent complication, although numerous, can be classified easily under two heads, namely, chronic urethritis and prostatic congestion. In all these cases presenting prostatic lesions one will always find a certain degree of posterior urethritis. This is the road that the infection would naturally follow in order to reach the prostate, and if, at the time that the posterior urethritis arises, the prostate should be in a condition of lessened resistance, a chronic inflammation of the gland would not be long in taking place; what in the beginning was a simple congestion rapidly becomes an inflammatory process.

The causes which give rise to chronic posterior urethritis and congestion of the prostate may be rapidly summed up as follows: Posterior urethritis is far from being infrequent, even at the beginning of gonorrhea, and Eraud has even gone so far as to say that it is always present at some stage of the evolution of gonorrhea. Colombini found that extension of the gonorrheal process to the posterior urethra occurred during the first week in 39.7%, during the second week in 65%, during the third week in 62.15% and during the fourth week in 84%.

There is no doubt in my mind but what chronic posterior urethritis is due in a large number of cases to a faulty régime and still more to defective treatment, especially by badly employed injections and their strength. The injection method or that of irrigation has become à la mode, and, as always happens, it has been carried altogether too far, so that at present a most salutary reaction is taking place in the amount given. Finger compared results of the treatment by injections given at the beginning and those procured by injections given towards the decline of the disease, and is absolutely against the former method. Montagnon also pointed out that in several of his cases injections prematurely given, or badly administered played a most evident part in the irritative process of the deep urethra.

Beside strong injections, strictures play a most important part in the genesis of chronic gonorrheal prostatitis. Their influence has been known for a long time, but it is only recently that surgeons have realized the fact that the stricture

need not be very tight in order to set up serious disorders back of it. The importance of stricture is all the greater inasmuch as it seems to be one of the causes, both of the chronicity of the posterior urethritis and prostatic congestion. By retaining the exudates in the posterior urethra and at the same time causing the treatment of the lesions which are seated here, often at the beginning of the gonorrhea, to be more difficult, posterior urethritis results, while causing difficulty in micturition the congestion of the prostate gland is produced and maintained. There are many sources of prostatic congestion, and frequently the congestion is one of neighborhood, whose starting point is in the bladder. Not unfrequently a calculous cystitis will give rise to prostatic congestion of considerable intensity, and when the gonococcus makes its apparition a prostatitis will inevitably result. Inflammation of the anus, rectum, ischio rectal fossa, hemorrhoids and obstinate constipation act in the same way. Other causes acting by direct congestion of the organ may be mentioned, such as sexual excess and masturbation, which I believe to be not an infrequent cause of prostatic disorders. Violent exercise, such as horseback and bicycle riding, must also be included in the list.

It is not our intention to mention the normal anatomy or histology of the prostate, and all that is necessary is to call to mind that it is an organ composed of glandular and connective tissue, that it is also contractile, its muscular elements being under the control of the erector nerves, as was pointed out in 1898, by Mislowsky and Bormann. We would also point out a more important fact in the history of chronic prostatitis, namely, the presence of minute muscular sphincters placed around the opening of the glands into the urethra. Under the influence of an inflammatory processus of the urethral mucosa, the contraction of these sphincters hinders the emptying of the cavities of the glands, and consequently sets up a stagnation of the normal secretions in the gland from which results glandular dilatation, and in which the bacteria coming from the diseased urethra find the pleasantest possible conditions for making their home and multiplying. From this time on the lesions rapidly multiply, the cavities of glands becoming filled by epithelium which proliferates, to which numerous leucocytes become added and which also invade the interstitial tissue.

The prostate being composed of glandular and connective tissue it is quite evident that both these elements may be the seat of the inflammation, but when one of them is diseased the other does not remain long time in a healthy condition, so that prostatitis is always a mixed process, with a predominance of the inflammation in one or the other of its constituent elements. When one is accustomed to massage of the prostate, one soon gets to learn that the diseased organ presents one of two types. In the first, the gland is greatly enlarged, soft and of uniform consistency, pain on pressure being very slight. In this case massage will express quite an amount of fluid.

In the second group one finds a prostate of much smaller size, having an unequal consistency with indurated foci which, on pressure, are extremely painful. In this class the amount of liquid secreted is small and sometimes one will not even be able to express any directly from the gland, but on the other hand numerous filaments will be found in the urine. In the first class of cases inflammation of the glandular tissue is more marked than that of the interstitial tissue, while in the second the contrary is the case.

The few autopsies that have been obtained do not allow a perfect description of the macroscopic and microscopic lesions which are present in chronic prostatic gonorrhea, but from what has been learned they may be briefly described as follows: On section of the prostate it will be seen that the normal tissue has been replaced by an areolar tissue filled with lacunæ, formed by trabeculæ which have become anastomosed in every direction and circumscribed the areolæ of variable size. Small cysts are frequently encountered in the fibrous tracts, all this tissue being impregnated with a viscid liquid, and some of the areolæ, which have developed into small cavities, are filled with muco-pus.

Microscopically the glandular and interglandular lesions are to be noted. As to the lesions of the glands a proliferation of the epithelium of the culs-de-sac is remarked, which fills the cavity of the gland and to which numerous leucocytes become added; then suppurative destruction and disappearance of the epithelium takes place. As to the interglandular lesions we have, first, an infiltration of the interstitial tissue with leucocytes, and then a periacinous sclerosis occurs, and by the formation of bands of fibrous tissue extends through the prostate in every direction, marking off the areolæ which have already been referred to.

As to the pathogenic agents of all these disorders, it must be admitted that they are numerous, but the part played by the gonococcus is not always a preponderant one as might be inferred. The microbiological search should be undertaken with certain precautions, and it is quite necessary that one should know exactly if the pus to be examined really comes from the prostate, and in order to be certain on this point it is of the greatest necessity to rid the urethra of the secretion that it may contain. Consequently the patient should be requested to urinate and thus the first cleansing of the canal is accomplished. Then an abundant urethrovesical irrigation is given, with, for example, a solution of potassium permanganate, which the patient should expel from the bladder, and if it does not return absolutely clear, a second lavage should be given. Then by rectal massage the prostate is milked and the secretions coming from the culs-de-sac of its glands will accumulate in the prostatic urethra. An olive bougie is then gently introduced into the urethra as far as the prostatic cul-de-sac and the pus brought back on the bougie must necessarily be that coming from the prostate.

The pus thus obtained may not contain the gonococcus as might be expected, because this is the case in urethral secretions of old gonorrhea as well, but which in no way implies that the gonococcus is not the cause of the disease, or at least does not take part in the urethral and prostatic bacterial flora. It often happens that in the same patient one will only obtain several negative examinations and finally the last one will be positive. Thus may be explained, in all probability, the different results obtained by different observers. For example, Krögius only found the staphylococcus in twelve cases of chronic proctitis, while Finger says that the gonococcus is sometimes the pathogenic agent of the glandular infection, but that in the majority of cases there is a post-gonococcal secondary infection. In 30 cases of posterior urethritis and chronic prostatitis, Cohn found the gonococcus in one case, the staphylococcus in 11, the streptococcus in 3, the bacterium coli in one, some diplococci in 2, while in one the bacterium present could not be identified. On the other hand, Franck found in 210 cases that the gonococcus was present in 179, in 20 the staphylococcus and streptococcus were found, while in the remaining 11 only leucocytes could be discovered. In my 32 cases I was able to find the gonococcus in 19, the secretion in the remaining 13 contained the streptococcus twice and the staphylococcus 11 times. It may be said that no matter what the pathogenic agents may be, and whatever may be the cause of such different results, the prostate is invaded in the same way, namely, that when it presents a condition of lessened resistance it offers the same lesions which manifest themselves by the same symptoms.

Patients who come to the surgeon under these circumstances usually have had several attacks of gonorrhea. These have been treated badly and the patient has never been completely cured. He no longer suffers, but he still is the unfortunate possessor of a little drop of fluid present at the meatus upon arising, which occasionally almost entirely disappears and then, under the influence of an excess at the table it increases in amount. Driven to despair by the persistency of this condition, or preoccupied by the appearance of a new symptom, namely, pain, he decides to consult a surgeon. This pain affects essentially variable forms. Sometimes it is dull and gives rise to a sensation of weight in the perineum, extending down the thighs and to the lumbar region. A cutaneous hyperesthesia has been noted in one case by Deniau in the right lumbar region, and of the buttock on the same side.

In other cases the pain is not marked and only occurs at the time of micturition, and here the patient will complain of a sensation of heat when he first empties the bladder in the morning, this being due to the concentrated condition of the urine. The pain may be more intense, of a burning nature, and occurs at the moment of ejaculation, which becomes disagreeable to the patient and makes him fear coitus.

In other cases, which are far from infrequent,

the patient suffers during defecation. The subject will tell you that when he goes to stool he has the sensation as if a foreign body were in the anus and this description is in itself so special that one might almost make the diagnosis on it alone. These patients are constipated and every time that they go to stool they feel as if they had a large, hard fecal mass within the anus which can only be expelled with difficulty.

Besides the pain there are the subjective symptoms, such as disturbances of micturition, sexual functions and defecation. The urinary disturbances are not very marked and simply amount to a frequent and imperious desire to empty the bladder. In other words the patient is unable to stop urinating when he has once commenced or is about to begin. Another symptom which has been pointed out by Watson, and which is occasionally met with, is the impossibility to urinate at the time the desire is felt, the patient being obliged to wait a moment before the stream starts. This may be classified under the "urinary stuttering" of the French authors.

As to the genital functions a decrease in sexual power is noticed which in some cases may be completely abolished; erection is incomplete, ejaculation is too rapid, while the sperm is often tinted with blood.

Defecation is frequently disturbed and, besides constipation and the pain which have already been alluded to, there is another phenomenon which draws the attention of the patient, namely, at the time that the fecal mass is expelled he perceives a few drops of a thick, white, or yellowish liquid come out of the urethra. This discharge, that has been described under the name of prostatic ejaculation, may be said to be practically pathognomic of chronic prostatitis.

Frequency of micturition, an intermittent flow at the time of defecation and a decrease of the sexual power profoundly affect these patients and not infrequently conduct them to an advanced degree of neurasthenia. Guided by this symptomatic *ensemble* the physician should at once be led to suspect lesions of the deeply-seated genito-urinary organs, and he should make it a point to carefully examine the prostate. There are two ways of doing this: either by the way of the urethra or the rectum. Catheterization, which naturally should be done with an olive-pointed bougie, gives nothing that is absolutely characteristic. It has been said that ordinarily there is an exaggerated sensibility of the prostatic region and that the bougie will bring back a little pus from the posterior urethra, but all this is extremely vague and only shows that a posterior urethritis exists.

More important are the sensations perceived by the hand which guides the bougie, which should be a No. 15 French. The instrument is gently passed down the urethra. In a normal canal the hand distinctly perceives a jump produced by the olive as it passes through the median aponeurosis, but sometimes a sensation of constriction will be felt the entire length of the posterior urethra and this change appears to be in

all probability due to an increase in the size of the prostate. On the other hand the passage of the bougie will allow one to discover the stricture or strictures which may be seated at different portions of the urethra, and this is a point of capital importance as regards treatment. Endoscopic examination has been tried, but is of little value.

The results obtained by rectal examination are far more important, although opinions differ very greatly regarding this point, some surgeons considering that an atrophy of the prostate is more frequently met with, while others believe that a more or less pronounced hypertrophy is present, and as far as my personal experience goes I should say, that a more or less enlarged prostate is encountered in a large majority of cases.

Rectal examination gives very exact indications as to the sensibility, the size and consistency of the gland. Tenderness on pressure is always present to some extent, and in the greater number of cases the end of the finger pressing on the organ produces a real pain, which, sometimes, is localized exactly to the point on which pressure is exercised, while at others it is felt throughout the entire gland, extending down the penis to the glans. Generally, this pain is not very intense, but in some cases moderate pressure of the finger is intolerable, and then I believe that one is in the presence of a subacute, rather than a chronic, prostatitis. The increase in size of the prostate varies very greatly from one case to another. In some it is very considerable, while in others it is hard to make out; sometimes the entire gland is involved, while at others only a single lobe is increased in size. As to the consistency it also varies. The prostate is either entirely distended and soft to the feel, or else one finds a slightly hypertrophied gland presenting several indurated foci which are very painful on pressure. This latter form appears to represent the type in which the interstitial tissue is more particularly involved, and perhaps is the one most frequently met with.

The examination of the discharge is of help in a certain measure. One naturally would not have much hesitancy in making a diagnosis between an acute anterior urethritis and chronic prostatitis, but occasionally a case may present itself in which a differential diagnosis between chronic anterior urethritis and prostatitis must be made, although this event appears to me largely theoretical, because one never meets with an acute anterior urethritis without the posterior urethra being involved as well.

One might have some hesitancy in distinguishing the discharge from a diseased prostate from certain normal discharges coming from the urethra, or the gland. Urethrorrhea is caused by a secretion coming from Cowper's or Littré's glands and is composed of a transparent sticky liquid, which normally appears at the meatus after an erection. This liquid resembles in no way the whitish or whitish yellow muco-purulent fluid which is present, especially in the morning,

in chronic urethritis and prostatitis. Simple prostaticorrhea may be also easily distinguished from the fluid coming from an inflamed gland, and is more frequently met with in people who give themselves up to illicit practices. The fluid coming from the former is transparent, and microscopically does not show any fat corpuscles or leucocytes, while in the case of chronic prostatitis numerous leucocytes are present and oftentimes also the debris of spermatozooids. Spermatorrhea is easily distinguished from chronic prostatitis by the presence of numerous active spermatozooids.

All this is quite simple, but oftentimes it is quite a difficult affair to make a diagnosis between a chronic posterior urethritis and prostatitis. If a patient describes a prostatic ejaculation, one may immediately diagnose the case as a chronic prostatitis, but such cases are of extreme infrequency. In absence of this symptom it is quite impossible to make a differential diagnosis between chronic posterior urethritis and prostatitis from a simple inspection of the discharge, and all the techniques which are usually employed for collecting the fluid are more theoretical than real. According to our way of thinking it is safe to say that a patient who presents a drop of whitish discharge at the meatus in the morning, accompanied by a slight increase in the frequency of micturition, which may also be slightly painful, is, without any doubt, the subject of a chronic posterior urethritis, and it then simply remains to ascertain whether or not the prostate is involved in the inflammatory process. Under these circumstances a rectal examination of the gland will complete the diagnosis and gives us precise data.

From its immediate complications as well as remote ones, chronic gonorrheal prostatitis is by no manner of means an affection to be disdained. Inflammation of the prostate may give rise to lesions of the ejaculatory canals and by extension of the inflammation to the seminal vesicles, sterility may result. It not infrequently is the cause of relapsing epididymitis and it may also be the means of keeping up a chronic urethritis which cannot be cured until the prostate itself has been dealt with. Then again prostatitis quite possibly plays an important part in the etiology of senile hypertrophy, although on this point nothing definite can as yet be said.

The various treatments proposed for curing chronic prostatitis are extremely numerous, and a fairly large volume would be necessary should one undertake the description of all of them. Without attributing as much influence to general treatment as was formerly given it, I would, however, point out that in a measure it is necessary. These patients should be advised against violent and prolonged exercise, excess at the table, and in drinking. Their genital life should be carefully regulated, and in some cases hydrotherapy is advisable. Starch, sulphur, or carbonated tepid baths may be employed. The rectal pain, which is often quite intense, should

be calmed by the use of suppositories containing camphor and belladonna. Another excellent method is the use of hot water injections which act on the prostate through the rectal walls. The intestinal mucosa can easily support quite high temperatures and the action of heat on the prostate is extremely useful if kept up for a sufficiently long time. Simple water injections at a temperature of 45° or 48° C. may be ordered which should be retained within the rectum for about ten minutes. These therapeutic measures may have their utility, but it is of only slight value.

Given the pathological anatomy of the affection the foremost therapeutic indication is naturally to empty the glandular *culs-de-sac* of their mucopurulent contents, and in order to accomplish this massage of the prostate by the rectum is of the highest importance and fulfills a double rôle. In the first place, massage should consist of frictions as energetic as the sensibility of the gland will permit, extending from the periphery to the center of the prostate and thus one follows the direction of the excretory canals. The products of secretion of the dilated glands are thus milked out, as is proven by the appearance of a certain quantity of yellowish white liquid at the meatus.

The part played by massage is purely mechanical so far, but it also produces contraction of the muscular elements of the prostate and by modifying the glandular circulation by diminishing venous stasis and increasing the arterial circulation, absorption of the exudates still remaining in the gland takes place. The patient is asked to kneel on a table, or simply leans over the back of a chair and the operator, after having inserted his index finger in a rubber cot smeared with glycerine, introduces it into the rectum with the palmar aspect towards the prostate. Friction is then commenced from the periphery to the center of the prostate, as we have already indicated, and should be particularly carried out on those points which are more hypertrophied and painful or indurated. The energy of the frictions should be controlled by the state of tenderness of the organ and the intensity of the pain complained of by the patient. The duration of the massage should be from three to five minutes, which is quite sufficient. Carried out as we have indicated, this treatment is very simple and in no way necessitates any special installation. The first indication of the treatment is fulfilled and it is now necessary to attend to the urethra whose inflammation always accompanies that of the prostate. Silver nitrate is a friend of the mucous membrane and should be used in the form of instillations, which cauterizes the posterior urethra as perfectly as is possible without setting up any lesion of its walls. Casper's experiments on dogs and rabbits showed that a 1-50 solution of silver nitrate never produces any changes which would result in a cicatricial contraction of the mucosa or the submucosa. Silver nitrate carried into the posterior urethra may also act on the prostate itself, because massage may allow the penetration of the solu-

tion into the orifices of the excretory canals of the gland after they have been relieved of their secretions. The unfortunate results which have sometimes followed the use of silver nitrate are usually due to the fact that the solution was too concentrated. As to the pain when it is really sufficiently intense, a solution of cocaine may be instilled into the posterior urethra a few minutes before the nitrate of silver, but I have rarely seen a case in which this was necessary.

The technic is simple. An olive-pointed bougie preferably made of flexible black rubber such as only can be obtained from the French market, No. 15 or 16 French, sterilized and smeared with sterile glycerine, is slowly introduced into the urethra until the hand of the surgeon feels a slight jump. The bougie is then in place and the olive is lying in the prostatic urethra. By means of a small syringe containing from 2 cc. to 4 cc. of solution of silver nitrate the prostatic urethra will receive the desired quantity of the caustic. When the instillation has been done the bougie is withdrawn and the patient should be, if possible, kept in a recumbent position for a little while and should be instructed not to urinate for about half an hour unless the pain should become too great.

There are two points to which I desire particularly to call attention, namely, the strength of the solution and the quantity which should be instilled. One frequently uses a 1-20 solution of which from 10 to 12 drops are instilled in the posterior urethra, but I believe that it is just this intense treatment which has lent a bad name to instillation. I always commence with 1-100 solution for the first few instillations and according to the case increase it, little by little, until 1-50 is reached. The latter strength has always appeared to me quite sufficient and by proceeding as described, the patients tolerate the instillations well. As to quantity, we inject 2 cc. which is just about the amount requisite to cauterize the entire prostatic urethra. The relatively mild strength of the solutions that we employ have never caused any marked reaction.

Such are the principal points in the rational treatment of chronic gonorrheal prostatic, and we may sum up as follows: Dilate the stricture or strictures, especially those seated in the membranous urethra, proceeding with delicacy so as never to cause hemorrhage. Secondly, rectal massage of the prostate for from three to five minutes. Thirdly, request the patient to urinate in order to wash out the prostatic urethra and thus remove the secretions that the massage has caused to accumulate there. I believe that this is quite sufficient and preferable to large irrigations of potassium permanganate which are dirty and often produce useless traumatism. Fourthly instill 1 cc. or 2 cc. of a solution of silver nitrate into the prostatic urethra, at the strength 1-100 for the first few times and rapidly arriving at 1-50. The treatment should be carried out every other day and the length of time that it must be kept up varies very considerably, but I have rarely met with a case where a cure could

be accomplished in less than six or seven weeks, and usually about three months is required.

The results that I have obtained have been, on the whole, excellent, and 27 of the 32 cases thus treated have been absolutely cured. I say this because they have been closely followed for periods varying from eight months to four years after all treatment had been stopped, and have been submitted on several occasions to the beer test, which has always remained negative.

THE EMPLOYMENT OF THE BLIND FOR MASSAGE.*

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THE object of this article is to stimulate interest in supplying the blind with another profitable means of livelihood, massage.

I am not going to take up your time by quoting a mass of statistics in order to show you how many people in the world are blind and so unable to support themselves, nor do I intend to expound either the theory or the practice of massage, but what I do wish, is to give you a brief outline of the work which has already been accomplished in training blind masseurs, and to suggest a few ideas, so that some of you may be interested to help.

I had planned to have at this meeting a blind man whom Mr. Hallbeck has been kind enough to teach massage, so that he could show you practically how expert and skillful a masseur a blind man can become, even after a comparatively short and imperfect training. Unfortunately, however, this man in whom Mr. Hallbeck and I have been interested, is in Canada, sick. I shall, therefore, give you a brief summary of some of the results of teaching massage to the blind in other places and then relate the main facts about his teaching, and tell you how expert he has become.

Many if not most of the efforts directed toward utilizing blind people for giving massage have naturally been stimulated by the custom which has existed in Japan for a great many centuries, of employing blind masseurs. There, the blind have enjoyed a special protection and indulgence from the emperor. They have been exempt from taxation; they have formed a sort of guild. Practically all the massage employed in Japan is given by the blind. Most of them learn massage when quite young. There, a very complete treatment is within the means of a jinrikisha man or ordinary laborer. A treatment costs a European ten to twenty sen. The masseurs can be found in almost any street of a town and summoned to the person's house, or their services secured at various depots, or at the large hospitals and clinics.

Although this universal custom of employing

* Read before the Medical Section of the New York Academy of Medicine, Dec. 20, 1904.

massage by the blind in Japan has existed for a great many hundred years, comparatively few well-organized attempts have been made in other countries. Most of such attempts have been made in quite recent years and a few of them have been reasonably successful.

In Russia, A. v. Goustowsky¹ mentions that at the time of writing (1900) the only school in Europe where the blind were taught massage was in St. Petersburg. In this school the pupils were taught anatomy, physiology and massage technic.

Dr. v. Nädler, director of the Alexander-Marien Blind Asylum for Children at St. Petersburg, has also attempted to have appropriate blind pupils taught. He regards two years as necessary for the study, and considers it advisable to teach the pupils another occupation as well. Their teacher is a medical student who became blind while studying medicine, went to Japan, and learned massage within two years.

Mrs. Z. I. Venguéroff began teaching massage to the blind in St. Petersburg, May, 1903. She selected a young girl who was born blind, who learned so quickly and became so adept that Mrs. Venguéroff was encouraged to continue her work with the blind. At the time of publication of her article,² there were eleven blind pupils at the school. Apparently her results have been very satisfactory. Her exhibition of photographs of the blind pupils at work evoked considerable interest last year at the Congress in Paris.

"The 16th of May, 1903, I was called to a blind patient who had a fracture of the arm. The plaster being removed, I began massage. After having had a long talk with my patient I asked myself if it were not possible to give the blind the possibility of learning massage, in order to make them able to help their fellowmen. I went to the Curator of a Blind Institution and expressed my intention. Soon after a young girl, Miss B., came to me and expressed a desire to learn massage. Miss B. was born blind, but the difficult task that she undertook was facilitated by the extremely developed feeling that she possesses, a feeling that we who see find almost supernatural. After having once been present at the dissection of a corpse Miss B. was able the second time to distinguish the different organs, the muscles, etc. As to the bones of the skull and the face, she could show the very smallest, and astonished the examiners by her answers. The press says of this case as follows: 'Yesterday at the school of massage founded by Mrs. Z. I. Venguéroff, took place the first examination of the pupils finishing their course of studies. The pupils knew anatomy and physiology exceedingly well and skillfully performed the practical massage at the Infirmary of the school. The inspector especially noticed the detailed and judicious answers of a blind pupil, her explanations of anatomical preparations, and her techni-

¹ Congrès International pour l'amélioration du sort des aveugles à Paris. August, 1900, quoted in *Zeitschrift für Diätetische und Physikalische Therapie*. 1902. Band v, Heft 2.

² Quoted from her pamphlet, page 16, in the "Enseignement du massage aux aveugles," 1904.