3. The urine of the anaesthetic period was in all cases more concentrated than normal, in this respect also resembling the influence of ether.

4. The chlorides were increased, but to a less degree than with any of the previous anaesthetics. The effect closely resembled that of ether.

[Towards the expenses of the foregoing research a grant of £10 was made by the Science Committee of the British Medical Association.]

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TREATMENT OF CICATRICAL STRICTURES OF THE URETHRA WITH THE ELECTROLYTIC NEEDLE.

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THE far from satisfactory results obtained by me, during several years of my special practice, from the methods usually followed in the treatment of cicatricial strictures induced me to try another process that might lead to a complete recovery. In the Chirurgico-Urological Section of the Thirteenth International Medical Congress, held in Paris in 1900, Dr. Albarran declared, in the discussions on non-complicated inflammatory constrictions, that no treatment had hitherto led to a perfect cure. He stated that resection and the plastic method were still those that gave comparatively the best results. Internal urethrotomy gave less favourable results, relapses occurring not less frequently than after progressive dilatation. The most frequent cases of relapse had been met with by him in cases of circular and linear electrolysis.

Tripier and Mallez are of opinion that these operations are by no means free from danger, as they have often seen undoubted evidence of attendant complications; nor have I myself been able to obtain any better results, and the repeated relapses would compel the patients to have recourse to the bougie for years, followed, after a time, by deviations of the vesical passage, with all its injurious consequences. The same favourable effects obtained by Professor Oberländer from the treatment of the different degrees of infiltrations and constrictions of the urethra with his two-branched and afterwards a four-branched dilator, have also been verified by me in soft and in hard infiltrations of a slight and moderate degree; but in cases of the densest infiltrations and longest cicatricial strictures this method did not afford the desired results, and relapses always occurred.

In his book treating of strictures of the urethra, Hamonic gives the following definition:

The name of stricture of the urethra is given to any fibrous neo-formation of an inflammatory or cicatricial nature, deposited either in the form of a ferule or a ring on the inner circumference of the urethra, or in the form of a valvule or of a callosity on one of the wall coats, the direct consequence of which is to diminish gradually the calibre of the passage, thus giving rise to a number of different troubles, to produce secondary injuries to the genito-urinary organs, and finally to render various surgical operations imperative according to the nature of the case.

Looking upon the constriction as a new fibrous formation, I thought I might obliterate it by means of an electrolysis needle, a method sometimes used to destroy small cicatrices and glands in the skin, and one which Professor Oberländer recommends to remove the marks left by his treatment with a dilator.

The following is my method of procedure: After the dilatation of the constriction up to No. 23 of the Charrière gauge, either with Béniqué bougies or by internal urethrotomy, if the induration of the cicatrized tissue be very strong and the bore of the passage too small, I commence

the treatment with the electrolytic needle. I first make a thorough and minute irrigation of the urethra with a solution of oxycyanate of mercury; I then insert Oberländer's urethroscope tube, corresponding with No. 23-30 of the Charrière gauge, passing along the whole length of the stricture. In examining the urethra I slowly withdraw the tube until the surface of the constriction is shown in the opening. The needle, ending in a strong platinum point from 1½ cm. to 2 cm. in length, isolated almost quite close to its point, is forced to a depth of ½ cm. to 1 cm. into the fibrous tissue according to the dimension, thickness, and hardness of the tissue. The needle is the negative pole of a galvanic battery, the positive pole of which, a large moistened, wetted disc, is placed on the thigh or on the belly. I allow the electric current of from 4 to 6 milliamperes to work for three minutes. Before withdrawing the needle I interrupt the current, and drive the needle into another part. This operation may be repeated four or five times during a sitting, and, if executed by an expert hand, is not very painful.

In cases in which the constrictions are extensive and thick, the operation may be practised in the beginning at least twice a week. Later, one sitting a week will suffice. After each sitting the urethra is duly irrigated with a solution of oxycyanate of mercury or of nitrate of silver 1 in 4,000. These irrigations before and subsequent to each sitting are indispensable for the prevention of complications.

During the six years that I have treated cicatricial constrictions in this manner, I have never met with such complications as epididymitis, cystitis, or "bacteriuria," etc.

During the whole period of treatment a bougie is introduced once a week, followed by an irrigation with a nitrate of silver solution to promote reabsorption, and to maintain the passage of the urethra at the size required. The number of the sittings will depend on the extent of the stricture as well as on its thickness and hardness. Sometimes three or four sittings will prove sufficient; sometimes, however, it does happen that the treatment has to be continued for several months.

With the help of the urethroscope the process of the cure may be verified by observing the progressive change in the aspect of the surface of the constriction, the greyish colour of which gradually changes to a pale red. The surfaces again become supple and level, and, later on, shiny.

Owing to the fact that the lacunae and the glands only partly show themselves, and the longitudinal folds and the longitudinal streaks but faintly, the place in the urethra where the stricture was situated will easily be found. When the whole surface of the mucous membrane has come to be of a reddish colour, I insert every fortnight a Béniqué bougie corresponding with No. 25-26 of the Charrière gauge, and from time to time I again use the needle to destroy the remaining traces of the cicatricial tissue.

The treatment here described has been productive of the best results during the six years I have applied it. In several cases in which I have had the advantage of again seeing my patients two years after the treatment, I have been able to verify and confirm the fact of the permanence of the cure by introducing with facility into the urethra a Béniqué probe corresponding with No. 26 and 27 of the Charrière gauge.

With the aid of the urethroscope the side of the urethra is seen to be quite flexible, limp and shiny at the site of the stricture, whilst the longitudinal folds and striae and the lacunae have not been quite restored, and are even almost completely wanting.

The results thus obtained have induced Dr. Schoemaker, chief of the surgical section of the Hague Municipal Hospital, and myself to try to reduce or obliterate hypertrophied prostates by way of the urethra, in accordance with the aforesaid method.

I insert, if possible, the largest tube of Oberländer's urethroscope right into the bladder, withdrawing it again until the tissue of the prostate is seen, which is easily verified with the aid of the urethroscope, and is further indicated by the suppression of the flow of urine. At the same time, with my finger in the anus, I determine the position of the tube. By these means the right place may exactly be chosen at which to force the needle

through the tube right into the tissue of the gland. The needle must be armed with a very sharp platinum or steel point, 4 to 5 cm. long at least, in order to be able to penetrate deep enough into the tissue of the prostate. The positive pole, a large moistened disc, is placed against the belly or the thigh, in the same manner as in the electrolysis of constrictions.

The needle—the negative pole—is thrust in to a depth of 2, 3, or 4 cm., according to the length and thickness of the prostate, whilst the needle may be traced with the assistance of the urethroscope, and with the finger in the anus. I now apply for three or four minutes a galvanic current of from 4 to 6 up to 8 milliampères. Before withdrawing the needle I stop the current. By altering the position of the tube the needle may be used in different directions, so that a large part of the prostatic tissue may be treated.

When the lateral lobes of the gland are very much enlarged, it would not be possible to reach them with the needles described above. In order to be able to treat glands so extensively enlarged I have had a needle made provided with springs, which, being thrust into the prostatic tissue, will bend into the lateral lobes.

To effect this manipulation we have placed the probe, ending in a steel point with a spring and very sharp, in a glass tube very smooth inside. This glass tube is inserted in the tube of the urethroscope, which is already placed ready for the operation.

The loss of blood and the pain are very slight, as well as the reaction that is apt to follow each sitting, which will quite allow of two or three sittings a week.

I intend to publish the results later, not having as yet experimented long enough to feel justified in coming to definitive conclusions.

One of the patients was able to pass urine without a catheter after the third sitting, though the bladder was only partly emptied.

I have published my experience here in the first instance because the operation is simple and easy enough to perform, and also because I hope that some of my colleagues will be willing to take the trouble to follow in my footsteps and put the operation to further tests.

Several methods of the electrolytic treatment of prostatic hypertrophy have been tried, but the results have not proved very favourable. Tripiér, Minervini, and Vautrin among others, have applied the faradic and galvanic current, often to 30 to 100 milliampères, with but little success however. Electrolysis and the electric puncture were performed first in France, and afterwards in Germany by Biedert and Casper, and in Switzerland by Roux.

Casper performed the operation in the *à la vache* position. With his finger he determined the place to insert the needle on the posterior surface of the prostatic gland, at the same time introducing the isolated needle with the negative pole with his free hand. He used the 10 to 25 milliampères electric current for five minutes, applying it to several places. The number of sittings amounted to twenty or more. Notwithstanding the poor results, and the fact that in one case a vesico-rectal fistula followed upon the operation, Casper recommends further trials of the electrolytic treatment. While Casper employed needles of platina-iridium, Biedert used a curved platinum needle, and Roux a steel one. These various methods of treatment have not succeeded in gaining a permanent place among the recognized methods of treating prostatic hypertrophy, mainly on account of the likelihood of evil after-effects ensuing, such as abscesses, fistulas, etc.

In the surgical procedure that I have here described I have not as yet seen any evil consequences, and I am convinced that among the methods of treatment adopted in prostatic hypertrophy ours will in all probability prove to be of a lasting nature.

Cases treated with Electrolytic Needle.

The treatment of cicatricial strictures by the help of the electrolytic needle cannot be successful without a previous minute and precise diagnosis of the exact place, the depth, etc. It is, therefore, absolutely necessary for the patient to place himself in the hands of an expert accustomed to the daily use of the urethroscope, and it is even advisable for him to be kept under supervision for some time after the cure, in order to guard against relapse.

I append reports of four cases, all of a very serious nature, and affording an exact idea of the evolution of the malady. In the case of slight cicatricial infiltrations without complications, the treatment and the development are very simple.

I.—Chronic Urethritis: Cicatricial Stricture: Mixed Form: Glandular Urethritis: Dry Follicular Urethritis.

M.B., 40 years of age, had a gonorrhoea twenty-one years ago, which took several months to heal. In the morning the labia of the meatus were often stuck together, from which, upon a slight pressure being applied, a drop of purulent mucus issued. This induced the patient to consult me in March, 1894, after he had been treated in vain with bougies, irrigations, etc., besides having an attack of cystitis. On examination with a ball catheter, I found a long, hard, and callous constriction in the bulbous part of the urethra. The urethroscope showed a periglandular infiltration, a cicatricial tissue of a reddish-grey with a proliferation of epithelium. The longitudinal folds and the longitudinal striae had almost completely disappeared, as was likewise the case with the glandular orifices. On inserting the tube, there was no haemorrhage. Dilatation, followed by cauterization for five months, restored the mucous membrane to its normal aspect. I performed the ultimate extensions at much longer intervals. The patient married in the following year. He had two children, and his wife was never infected. In 1901, seven years after the last treatment, the patient again came to see me with his gleet droplet. An exploratory bougie showed an infiltration, about 5 or 6 cm. thick, dry and callous, in the bulbous and partly in the membranous part. On closer scrutiny a callous cord with indurated nodules was discovered. Thus, exactly in the same place, the infiltration had been developed as a relapse of the old inflammation, an infiltration which, after an enlargement of the urethra by means of Béniqué bougies up to No. 22 (Charrière gauge), showed itself in the form of a long cicatricial and callous tissue of about 6 cm., which had extended over the whole surface of the urethra. The long duration of the inflammatory process had given rise to a hard moist tissue, in which the longitudinal folds and the longitudinal fillets and striae were altogether absent, as well as the glandular orifices. The great hardness and the development of the cicatricial tissue in breadth as well as in depth led me to conclude that the electrolytic needle alone would be productive of lasting results.

Application of the Needle.—Current, 4 to 6 milliampères; duration of the application, three minutes; number of applications each visit, four; if possible, one visit a week. Once in the interval a bougie was introduced. Before and after the application of the needle, irrigation of the urethra with a solution of nitrate of silver of 1 in 4,000. Whenever this irrigation was omitted the patient became subject to a violent attack of urethral fever; the urine was very turbid, with numerous *B. coli*. During the summer season the patient was absent for two months, with a consequent interruption of the treatment.

Number of visits, twenty-three. A few weeks after the last treatment the mucous membrane presented a palish red colour with a regular surface, level and smooth, and a bougie 27 (Charrière gauge) was passed through the urethra pretty easily.

In December, 1902, and in January, 1903, I again used the needle at certain intervals on account of a few plaques of a suspicious nature; from this time forward there was no electrolysis.

From time to time I examined the patient and introduced bougies of 27 and 28 (Fil. Ch.) for in these forms of infiltration cases of relapse are well known to be very frequent.

At the commencement of 1904 I had not seen the patient for seven months. On inserting tube No. 26 (Charrière gauge) there was a slight haemorrhage, probably originating in a small plaque of infiltration.

II.—Chronic Urethritis: Cicatricial Tissue: Glandular Hypertrophic Urethritis: Urethritis Glandularis Stringens.

M. M., a student, contracted gonorrhoea in February, 1899. Four months and a half afterwards he placed himself under my treatment, and by means of the ball-sound and the urethroscope I ascertained the existence of a subacute gonorrhoea and of a simple glandular infiltration in the bulb of the urethra. The urethra was very wide. The patient had no leisure to have irrigations applied regularly, and so used injections himself, at the same time leading the life of a student.

In the month of November I saw him again. In the meantime a surgeon had performed an internal urethrotomy, probably on account of the infiltration in the bulbous region. The gonorrhoea was still subacute, with an abundant discharge. After the cure of the acute symptoms I again saw the patient in May, 1900. The infiltrations in the bulb were already of the nature of proliferous urethritis glandularis; the mucous membrane was swollen, thick in several places, of a pale-red colour, showing granulations with proliferations of the epithelium.

Treatment.—Dilatation and cauterization. After a few months he was cured.

In 1901 a fresh gonorrhoea. After the cure, in September, there remained a constriction at the place where the old

infiltrations had been. Treatment: Dilatation and cauterization. Nevertheless fresh relapses continually occurred.

In March, 1903, the patient submitted to an examination, and I discovered an indurated stricture which the tube could pass only with some difficulty. At this point the longitudinal folds and the longitudinal striae had disappeared. I had clearly and fully before me all the aspects of a urethritis glandularis hypertrophica stringens.

After applying the electrolytic needle six or seven times I effected a cure. In October of the same year I again made two more applications of the needle on a little plaque, after which no further application was deemed necessary, and there was no relapse.

III.—*Chronic Urethritis: Cicatricial Stricture: Glandular Hypertrophied (Proliferous) Urethritis: Follicular, Dry Urethritis.*

M. de R., aged 38. In October, 1893, the patient had for the first time an attack of gonorrhoea which lasted a long time. In 1894 there was no further discharge, and M. de R. was pronounced to be cured. In 1895, however, there was a relapse, since when a drop of white purulent matter showed itself every morning at the urinary meatus.

In June, 1903, he returned from India, and was treated by massage, bougies, and instillations, but without benefit. In October he came to me, when on examining him with a ball bougie I found a constriction of the urethra in the pars pendula, which presented itself to the touch in the shape of a filament of a callous nature, formed of little hard nodes. Upon examination with the urethroscope, the organ had the aspect of a dry glandular hypertrophied and follicular urethritis. It was difficult to introduce the apparatus. There was no longer any trace of longitudinal folds or longitudinal striae, but some red and gaping glandular openings were visible. The infiltrated plaques were about 2 cm. by 3 cm. in length. After inserting a Bénéqué bougie several times with subsequent irrigations of ichthargan of 1 in 4,000, I applied the electrolytic needle, the operation being preceded and followed by an irrigation of nitrate of silver of 1 in 4,000.

At the commencement the visits were weekly; the force of the current was 4 milliamperes and the duration of the application three minutes. The number of punctures was four. Two or three days after each sitting I introduce a Bénéqué bougie. After the fourth visit a longer interval was required on account of a reaction that supervened. The patient imbibed too much liquor the previous night and had indulged in sexual connexion. This irritation yielded to irrigations with a solution of ichthargan. I was soon able to allow of a space of ten or twelve days between the sittings until a perfect cure was effected. The total number of sittings since the month of April, 1904, was fifteen. In December, 1904, there was a slight relapse, necessitating a few more punctures in the hard and white plaques on the mucous membrane, which for the rest presented a normal aspect.

As in all chronic processes of infiltration, the relapses are also very numerous in such a case, and it is indispensable that this fact should be taken into account.

IV.—*Chronic Urethritis: Cicatricial Stricture: Proliferous Glandular Urethritis.*

M. H. was affected in 1888, and again in 1891, with a gonorrhoea, which passed into the chronic state, with epididymitis and other complications. This chronic urethritis gave rise in 1893 to a stricture, which was treated until the spring of 1895. In 1900 the patient showed symptoms of a stricture, with a slight discharge. After having been unavailingly subjected to treatment by means of bougies and injections, the patient called on me in the middle of November.

Examination showed a slight discharge and a stricture of the urethra in the pars pendula, extending to the pars bulbosa. There was also inflammation of the prostate gland. By means of the urethroscope I discerned all the signs of a proliferous glandular urethritis.

After inserting a Bénéqué bougie several times and massaging the prostate, in the middle of January, 1901, I applied the electrolytic needle in the manner described above. I gave five sittings up to February 15th, making four punctures on each occasion.

After a slight reaction had shown itself the patient was soon cured by means of irrigations, and stayed away until the middle of May.

At the urethroscopic examination I found a remarkable amelioration in the infiltrated part of the urethra. A Bénéqué bougie 52 (Charrière gauge) passed through very easily. But, at this place the mucous membrane presented almost entirely the same appearance.

The patient was not able to remain under treatment, and on his return (at the end of September, 1901) I found that the disease had become worse. Up to October 26th I applied the needle on four occasions. Long marches and frequent rides on horseback brought about an epididymitis and colli-cystitis, which, however, were completely cured in a few weeks. I did not see him again before January 30th, 1903.

The infiltrations had resumed their old form; but I had the opportunity of treating the sufferer regularly, and after twelve sittings the infiltrations were destroyed.

Some months afterwards, on Mr. H.'s departure for

India, I found no sign whatever of a relapse. We can here confirm the advantageous results of the electrolytic treatment, to which, however, the patient must regularly submit.

The favourable results everywhere obtained by this method have induced Dr. Schoemaker and myself to apply it in combating prostatic hypertrophy of the urethra. The operation is effected in the following manner: We insert the large tube of Oberländer's urethroscope, if possible right into the bladder; we then withdraw it until the anterior lobe of the prostate is visible, which can easily be recognized with the aid of the urethroscope; another sign is a flow of urine. At the same time by introducing the finger into the rectum we feel the extremity of the tube and we are thus enabled to determine pretty fairly the place where the tissue of the prostate must be touched by passing the needle through the tube.

The needle must be very sharp, and provided with a platinum point at least from 4 to 3 cm. long in order that it may penetrate deep enough into the tissues. In the electrolysis of strictures, the positive pole, a thick disc, is placed on the abdomen or thigh of the patient and thoroughly moistened. The needle of the negative pole is thrust in to a depth of 2, 3, and up to 4 cm., according to the length and thickness of the prostate. The situation of the needle must always be controlled by means of the urethroscope. A galvanic current of 4, 6, or 8 milliamperes is then allowed to circulate during three or four minutes. Before withdrawing the needle the current is interrupted. By modifying the position of the tube the needle may be displaced, and a large part of it, if not the entire gland, may be treated.

For cases of very great hypertrophy of the lateral lobes we have constructed an elastic needle in order to be able to reach the whole of the enlargement, and by means of this needle we can traverse the whole of the tissue. This needle, consisting of a flexible steel point, is contained in a glass tube which completely isolates it, and which, owing to its smooth walls, greatly facilitates the various movements.

When the tube of the urethroscope is inserted and stopped at the desired point of the prostatic tissue, the glass tube together with the needle are introduced into the urethroscope. If the needle is projected still further its point penetrates into the lateral lobes of the gland. The loss of blood and the pain are but very slight, as well as the reaction following upon each *séance*. Two sittings a week may safely be given.

Fig. 1.

Fig. 1.—A, needle withdrawn; B, tube of the urethroscope; C, glass sheath to isolate the needle; D, stem of the needle; E, small shank of the tube inserted in cork for the purpose of fixing the tube; F, cork; G, knob to hold back the needle when introduced; H, opening for the electrode; I, point of the needle A.

Fig. 2.

Fig. 2.—A, needle in action; B, tube of the urethroscope; C, glass sheath to isolate the stem of the needle; D, stem of the needle; E, shank of the tube piercing the cork; F, cork for fixing the tube; G, knob to hold the needle on insertion; H, opening for the electrode.

As regards the results, our investigations have not yet been pursued long enough to allow of our coming to a definitive conclusion. We shall pronounce our opinion on the subject later, and go more into details.

One of the patients was able to void urine without the aid of a catheter after the third sitting, though the bladder was only partly emptied.

We have made this communication because the operation is simple and easy enough to perform, and also in the hope that some of our colleagues may pursue our researches.

The treatment of cicatricial strictures as well as of hypertrophy of the prostate by means of the electrolytic

needle is sure to prove effectual only when a precise diagnosis can be made of the place and of the depth of the injury. These can be ascertained only by specialists who are in the daily habit of using the urethroscope.

The method of treatment in prostatic hypertrophy by means of electricity has been studied in several ways and with variable results. Tripier, Minervini, Mallez, and Vautrin have applied the faradic and constant current of an energy of 30 to 100 milliamperes, but with slight success.

Electrolysis, or electropuncture, was first applied in France, at a later period in Germany also by Biedert and Casper, and in Switzerland by Roux. Casper operated on the lateral lobes; he determined with the finger the site of the posterior wall of the prostate, and with the other hand he forced in the glass-protected needle charged from the negative pole. The current lasted five minutes, and was applied in different places; the energy of the current was from 10 to 25 milliamperes; the number of sittings was twenty and higher. Though the results were not very favourable, and though once a vesico-rectal fistula supervened, Casper nevertheless recommends the electrolytic treatment, so that further experience may be gained. He used a platino-iridium needle, Biedert a curved platinum needle, and Roux a steel one.

The electrolytic method of treatment does not as yet rank among the recognized and lasting treatments of prostatic hypertrophy, on account of the incidental complications—abscesses, fistulas—and also owing to uncertain results. May I again call my colleagues' attention to this method, which assuredly has a great future before it?

INTRACRANIAL HAEMORRHAGE IN THE NEWBORN.

By J. CAMERON TURNBULL, M.D. GLAS.,
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As a commentary on your article on the above subject in a recent number,¹ may I be permitted to give the following notes of a case which occurred about eighteen months ago:

I was called one night by a midwife to attend a multipara. She had been in labour for three days, and during the previous day had had severe pains without making much progress. When I saw her she was in a state of nervous prostration and her pulse was rapid. The pains were almost continuous, their character suggesting uterine fatigue. On vaginal examination, the os was found fully dilated, and the head engaging in left oblique, occiput anterior. The pelvis was capacious and there was no deformity. Forceps were introduced, and grasped the head over the left frontal and right occipital regions. Very moderate traction was required to bring the head past the brim, and the instruments were reintroduced in the transverse diameter, delivery being completed easily. The child was well developed, and not asphyxiated to any great extent. Within a few minutes it was crying lustily. During the first day it appeared perfectly well except for a slight ecchymosis over the left eyebrow. About twenty-four hours after birth the mother noticed that it had a strange cry, and a short time afterwards I was sent for to see it in convulsions. These were tonic in character and affected the whole body; and, except that the right arm was thrown about more than the left, they were equal on both sides. The pupils were equal and moderately contracted, and there was no squint. The respirations were jerky and stridulous, and at times would cease, the face becoming suffused with a deep flush. Deglutition was very imperfect. The application of ice to the head seemed to quieten the child, but on the slightest movement or sound in the room the fits would recommence as severely as before. The child gradually became comatose, and died forty-five hours after birth.

With the assistance of my friend, Dr. J. Dunlop Lickley, the head was opened, and the following condition of affairs revealed. There was no fracture, and no extradural haemorrhage. The brain matter was soft and pulpy and the pial vessels congested. The whole base of the skull on both sides, but chiefly on the left, was filled with dark fluid blood and blood clot, up to the level of the Sylvian fissure, the upper aspect of the hemispheres being clear.

On the left side it extended over the temporo-sphenoidal lobe, into the lips of the Sylvian fissure, and backwards on to the occipital lobe. On both sides it was found between the occipital lobes and cerebellum, and on the orbital surfaces of the frontal lobes. On removal of the brain, all the subarachnoid spaces were found filled with blood-stained fluid. The main arteries and venous sinuses were followed out but no trace of rupture or disease was discovered. None of the fissures contained any effused blood, the Sylvian fissures being notably clear except for the small amount previously mentioned as extending between the lips on the left side. No *ante-mortem* clot was found anywhere. Section of the brain substance showed it to be markedly congested and oedematous, but free from extravasation. The lateral ventricles were considerably distended with clear fluid and the choroid plexuses were engorged.

The appearances, therefore, seemed to indicate a haemorrhage into the subdural space, probably from rupture of one or more vessels in the pia covering the lower aspect of the left hemisphere. The pressure of the effused blood on the veins of Galen and cranial sinuses had given rise to oedema of the brain and internal hydrocephalus.

The inferences which I draw from this case are: (1) That the haemorrhage cannot wholly be accounted for by direct injury to the head from either forceps or pelvic bones. To my mind, the high cerebral blood pressure which must result from rigid contraction of the uterus on the placenta and soft parts is a much more important factor, and indicates delivery before the uterus is fatigued, as a prophylactic measure. (2) That it would be extremely difficult to locate and ligature a ruptured vessel if craniotomy were performed, as Cushing suggests.

REFERENCE.

¹ BRITISH MEDICAL JOURNAL, February 10th, 1906, p. 342.

ASCARIS LUMBRICOIDES AND APPENDICITIS.

By F. E. ANLEY, M.R.C.S., L.R.C.P.,
SURGEON, R.N.

THE following remarks concern a possibility which I have never yet seen discussed, and may prove of some interest to medical men, especially those serving in foreign countries, where the above nematode is more commonly met with than in Europe. China may be looked upon as the particular happy hunting grounds of the *Ascaris lumbricoides*. In some parts of the country it is so common that many people go through a regular course of *santonin* every year in the spring, and it is often heard said of the Chinese that they are not healthy without one of these inhabitants of the intestines. While serving in H.M.S. *Leviathan* on the China station I found how common the *ascaris* was, but it was not until I was lent to the Royal Navy sick quarters at Wei-hai-Wei that the idea of connecting them with the above disease occurred to me. The following are cases in point:

Lieutenant X, H.M.S. *Leviathan*, while bringing a destroyer up from Hong Kong, was suddenly seized with what appears to have been a typical attack of appendicitis (catarrhal). The attack began with vomiting, accompanied by pain, tenderness, and rigidity in the right iliac region, constipation; temperature, 100.8°; pulse, 100; tongue furred, etc. When admitted to Wei-hai-Wei sick quarters he was beginning to improve, the abdominal symptoms were still present, and a tumour could be felt in the region of the appendix; temperature, 99.4°. He passed a typical convalescence, and returned to duty. A few days later he passed a round worm.

The second case is that of Midshipman Z, H.M.S. *Centurion*; the history of his case is very similar: catarrhal appendicitis with nausea, vomiting, pain, tenderness and tumour; temperature, 102°. As the patient did not improve on treatment in hospital it was decided one evening to operate on the following morning, examination of the blood having shown leucocytosis to be present. In the morning, however, he passed a small motion containing a round worm, and from that time made an uninterrupted recovery.

On speaking to Fleet Surgeon Vidal Thorpe I learned that he had had 2 similar cases in Wei-hai-Wei sick quarters one of which was operated upon and the appendix