4½ ozs. These included all my cases from January, 1890, to April, 5th 1891, that were capable of operation by litholapaxy. No case was refused operation no matter in what state of general health, so there was no selection of cases.

Moreover, subsequently to April 5th, 1891, I had a continuous series of 31 litholapaxies before I met with a fatal case in the person of an old man of 80 years, who, in addition to an oxalic stone of five years' duration, was suffering from fever and diarrhoea; he died of exhaustion two days after operation without any urinary symptoms. Litholapaxy could have no more eloquent advocacy than this continuous series of 133 cases without a death in the hands of one surgeon.

My friend, Surgeon-Lieutenant-Colonel Freyer, has published a series of 100 consecutive operations for stone without a death in his practice in India, and another brother officer, Surgeon-Major Stephen Little, has also recently completed a century of consecutive successful litholapaxies.

Of my 133 cases above alluded to, the specimens of which are amongst those on the table, I find that 39 were 60 years of age or over, 35 were 12 years or under, while 59 were of ages varying from 12 to 60.

As regards time under operation, eliminating 5 cases in which no time was recorded, the average was under thirteen minutes from the beginning of the use of instruments to the completion of the operation. The shortest time was four minutes and the longest sixty-three minutes.

A moment should never be wasted during the performance of a litholapaxy, and rapidity should always be aimed at, so as to minimise the amount of anæsthetic inhaled and the time under its influence.

NOTE.

¹ An illustration of the giant lithotrite recently modified on the suggestion of Dr. Keegan by Mr. Weiss was published in the JOURNAL of July 3rd, p. 23.

REMARKS ON A CASE OF NON-TYPICAL SYPHILIS (SYPHILIS GRAVIS) CURED BY THE AACHEN SPECIFIC METHOD COMBINED WITH SURGICAL TREATMENT.

BY DRs. B. BRANDIS AND T. THISSEN,
of Aachen (Aix-la-Chapelle).

A VIGOROUS man, 62 years old, without hereditary taint, had been suffering from frequent attacks of malarial fever as long as he lived in India; they quitted him only when he left that country and settled down in a healthy place in England. He lived a regular and abstemious life, and was thought to have rather overworked himself of late. In January, 1895, after having exposed himself to infection, he noticed a sore on the penis under the foreskin, with a slight gelatinous discharge. This sore soon healed under self-adopted treatment with calomel ointment.

In February he was laid up with severe influenza, followed by high fever and bronchitis. For two months more or less continuous fever and bronchial catarrh persisted, and his medical attendant at that time, unacquainted with what had passed in January, considering malaria might have something to do with the course of the illness, submitted him to a number of hypodermic injections of quinine. From these the patient derived no benefit, and in June he was sent a sea voyage to the North Cape. He returned no better, and in the beginning of August he was reduced to a very low state, having a continuous cough with copious purulent expectoration, and an evening rise of temperature to 102.7°.

On August 18th he was seen by Mr. H. B., who found him suffering from a septic bronchitis, but no tubercle bacilli could be found. There was also discovered a smooth rounded swelling situated on the right side of the thyroid cartilage projecting upwards below the vocal cords, and almost occluding the glottis. The nature of this growth was at first doubtful, as the patient denied all knowledge of having had syphilis. However, antisiphilitic treatment in the form of large doses of potassium iodide, together with intralaryngeal injections of a 20 per cent. solution of menthol in almond oil, and the use of creasote inhalations was adopted. Under this treatment the patient rapidly improved in every way. By the end of September he had regained much weight, and was

up and out most of the day, the cough having entirely disappeared.

On September 28th he complained of some painful swellings of the shins and forearms, which on examination proved to be periosteal nodes in an early stage of development. He was then ordered 20-grain doses of potassium iodide three times daily, with 4 grains of grey powder at night. Under this treatment the periosteal swellings subsided to a great extent. In November, 1895, the throat began to get worse again. The internal use of the specifics was not so efficacious this time. The swelling in the larynx reached the left side and both arytenoid eminences became much swollen and inflamed.

On January 10th, 1896, tracheotomy had to be performed for the relief of dyspnoea, and with the hope of benefiting the laryngeal disease by rest. In the course of some weeks two small pieces of cartilage, partially ossified, were expectorated. They evidently came from the sides of the thyroid cartilage. After this the tumefaction in the larynx subsided greatly, and the left vocal cord became free and movable. The right cord remained buried in the swollen mucous membrane of the false cord. In May the periosteal swelling on the left shin supplicated, and was opened, when a dense gumma extending through the bone to the medullary cavity was found. A distinct line of demarcation between the healthy and diseased bone being evident, the latter was removed by chiselling. During all this time (8 months) the patient had been taking iodide and mercury in varying quantities, but was far from being cured. In June, 1896, he was sent to Aachen to go through a regular course of baths and mercurial rubbings. So far the statements of the patient's medical attendant in England.

The patient on his arrival in Aachen put himself under Dr. Thissen's care, and was frequently seen by Dr. Brandis in consultation.

During the next two months mercurial inunctions were administered almost every day, combined with the use of the Aachen baths. All precautions were carefully used to prevent any ill effects of mercury. Iodide of potassium was also given for a short time. Enjoyment of fresh air, good food, plenty of milk were ordered. The leg was carefully dressed, otherwise it required not much treatment except once when the wound had to be enlarged on account of pain and fever, which both subsided almost immediately.

For local treatment of the laryngeal complaint, the patient was confided to the hands of Dr. Schmidhuysen, of Aachen, who on August 23rd succeeded in removing a large piece of necrotic ossified cartilage through the tracheal wound. Six days later another big piece of necrotic cartilage was taken out by means of a laryngeal forceps through the mouth. Those pieces proved to be parts of the right thyroid cartilage. The swelling of laryngeal mucous membrane quickly subsided, and on September 3rd the tracheal tube was removed for good. Breathing has been perfectly free ever since. Towards the middle of September the patient returned home, immensely improved in every way—in fact a different man.

When he returned on May 6th, 1897, for a short so-called safety cure, he had gained 1 st. 6 lbs. in weight, and showed all signs of recovered health and strength. All hoarseness had gone; his voice was good. Nothing abnormal was to be seen on laryngoscopic examination. The absence of the lost parts of cartilage could not be traced. The wound of the tibia was healed.

From the narrative of the case its pronounced peculiarity is easily noticed. A man past 60, without previous syphilitic history—a strong man—only in former days a victim of frequent attacks of malarial fever, contracts an ulcer on his penis which heals up by local treatment only. None of the well-known secondary symptoms appear, but instead of those, and apparently in combination with a severe attack of influenza, long and weakening fever comes on. The fever does not yield to quinine nor to change of climate, but is followed by necrosis of laryngeal cartilage and of tibia. Potassium iodide as well as grey powder are administered, not before seven months had elapsed after the infection, at first with strikingly favourable effect, but proving insufficient later on. Complete cure is at last brought on by the Aachen anti-syphilitic method as well as surgical treatment.

Now, how is such an extraordinary course of the malady to be understood? Has advanced age anything to do with it? Is it due to a mixed infection—syphilis combined with the poison of influenza—in a system where malarial fever may have left its traces? It is well known that erysipelas, scarlatina, typhoid fever, when contracted during the time that the constitution is under the influence of syphilis, can make the symptoms of the latter disappear. The syphilitic symptoms vanish although the antisyphilitic treatment is stopped, in most cases to reappear after the cure of the intercurrent fever, in rare cases as it seems for ever.

[In this regard Dr. Thissen says: In 1882, while resident physician at the Luisinhospital of Aachen, I attended under Dr. Brandt's direction a gentleman who had come to Aachen for treatment suffering from secondaries. During his cure he was seized with typhoid fever, and had to be received in the hospital. When I first saw him his body was covered with syphilitic rash and his throat was ulcerated. The antisyphilitic treatment was stopped at once when typhoid fever was ascertained, and the patient was treated by antipyretics and cold baths. I was struck to see the syphilitic symptoms vanish almost like magic, never to reappear.]

Perhaps we may express our theory in this way. On the one hand we have erysipelas, scarlatina, typhoid fever causing the syphilitic symptoms to disappear. On the other hand there is some other complicating organic virus influencing the syphilitic one so as to give its action a turn highly different from the rule and in a mischievous direction. In fact, it seems difficult otherwise to explain our case. It will be remembered that at the last International Congress of Dermatology in London, when Tarnowsky exhibited his excellent wax models of cases of what is called malignant syphilis, the question was discussed whether such cases might not be the consequence of more than one organic virus, for instance, the septic virus acting together with the syphilitic virus, as has been frequently observed in a similar way in diphtheria. The latter opinion was maintained in the discussion by Dr. Brandis, who stated that not a small number of such observations had fallen under his observation during his long practice. He also pointed out that according to his experience what is called malignant syphilis always, or at least generally, occurs in the early stage of the malady, and that it is accompanied by high fever, which very often bears the character of pyæmic fever. We may repeat that our case seems to support such views.

The second point of importance to which we should like to draw attention is the efficacy of energetic specific treatment. It was only too natural that it should have come late, very late indeed—not before seven months after the infection—syphilitic symptoms having been undiagnosed all that time. Whatever could have been done in order to cure malarial fever—namely, quinine and change of climate—had been tried in vain, and the syphilitic virus was allowed to do all the mischief before it was recognised. The first specific treatment—potassium iodide and grey powder—showed its good effect almost immediately; however, these remedies proved insufficient afterwards, and the disease went on in its course of destruction. One year after infection tracheotomy was necessary. At last the patient was sent to Aachen, where he underwent the inunction cure for more than two months, which in combination with the use of the Aachen waters is well known to be one of the strongest, if not the most powerful, antidote to the syphilitic poison.

Lastly, we may be allowed to add a few remarks regarding the local treatment of the laryngeal complaint. Although a piece of necrotic cartilage had been previously expectorated, from which fact it was almost certain that more necrotic cartilage had to come away, the swelling of the laryngeal mucous membrane rendered examination of the larynx very difficult; and it took Dr. Schmidthuyssen some time before he discovered where the necrotic part was located. Another difficulty was to prevent the latter from slipping down into the trachea. For that purpose Dr. Schmidthuyssen used an instrument the shape of which was that of a hook. The handle is short and concave for the thumb of the left hand, by which, when the longer part of the instrument is introduced through the tracheal fistula into the trachea, it is held *in situ*. The longer part is also a little concave, and blunt at the end. The latter part of it is sieve-like, so as to allow free respiration

below, while it leaves sufficient room above for a small, sharp hook, which is passed through the tracheal fistula into the larynx in order to loosen the necrotic piece. A fit of coughing facilitated the elimination after several attempts with a sharp hook. Six days later another necrotic piece was removed through the mouth. It was most gratifying to observe how soon after the operation all swelling subsided, so that the patient could be left without cannula, and also how very little remains of the complaint could be traced on the patient's return to Aachen this year.

A NOTE ON THE MICROSCOPIC APPEARANCES OF THE SPINAL CORD IN TETANUS.

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THE importance of the examination of the spinal cord in tetanus has for long been recognised, and many careful and exhaustive observations as to its microscopic appearances have been put on record. But these observations by no means homologue one another, and, indeed, the variety of changes described as occurring in the cord in this disease is very considerable. The relation, too, of many of these changes to one another is difficult of interpretation; and the conclusion that presents itself to one's mind is that the essential changes to be found in the cord in tetanus have not yet been clearly and satisfactorily laid down. The subject is one of great interest, and I think I need urge no excuse for adding to its literature the record of three cases I recently investigated.

In each of these cases the cord was fixed and hardened in formol for twenty-four hours, and then placed in alcohol till ready for use. Sections were stained with methyl blue, with fuchsin and with congo red, all according to Nissl's method.¹ Two other spinal cords, considered as perfectly healthy, were fixed and stained in a precisely similar manner, and used as standards of comparison.

The first case was a boy aged 12. It was a typical case of tetanus supervening upon a septic wound of the subcutaneous tissue of the thigh, and the whole duration was not more than twenty-four hours from the onset of the convulsions. To the naked eye the necropsy was practically negative, and if the spinal cord differed from the normal it was in the presence of a slight hyperæmia of its posterior surface. The tetani bacillus was cultivated from the wound both before and after death. No antitoxin was administered, as the patient died a short time after admission to the hospital.

Sections from five levels of the cord, from three levels of the medulla, and from two of the pons were examined microscopically. All these showed a marked dilatation of the vessels, and this was more noticeable in the grey matter than in the white. In nearly all the sections minute hæmorrhages were to be made out. The hyperæmia and hæmorrhages, however, seemed less intense in the pons, medulla, and upper cervical than in the lumbar region of the cord. No inflammatory corpuscles were to be seen, and the only exudation present was the red blood corpuscles of the hæmorrhages. The nuclei of the neuroglia were not increased unless round the central canal, where they were collected in considerable numbers. There was no sclerosis in any of the white columns. The ganglion cells were well formed, showing no deficiency in processes, and in almost all nucleus and nucleolus were well defined. Very few of the cells contained any considerable amount of pigment. Their plasma, however, was different from that seen in the sections of the normal cords. Instead of the triangular-shaped collections of deeper stained granules in the more faintly stained groundwork of the cell the whole plasma had a more or less uniform staining and showed none of this differentiation of its substance. It was only in the upper parts of the medulla and in the pons that the ganglion cells in this respect presented a normal appearance.

The second case, a man, aged 45, was successfully treated by means of antitoxin. He subsequently developed exfoliative dermatitis, to which he succumbed after five days' illness, and fifteen days after the onset of the tetanoid con-