ELEVENTH INTERNATIONAL MEDICAL CONGRESS IN ROME.

SECTION OF LARYNGOLOGY.

(Continued.)

On INTRA-LARYNGEAL INJECTIONS in the TREATMENT of DISEASES of the LARYNX, TRACHEA, and BRONCHI.

By ADOLPH BRONNER, M.D.,

Surgeon to Bradford Eye and Ear Hospital; Laryngologist to Bradford Infirmary.

In the treatment of diseases of the larynx, trachea, and bronchi, it is naturally of great importance that we should apply remedies locally; and the better able we may be to do so, the better must be our chances of curing the diseased mucous membrane.

I take it that in treating laryngitis and bronchitis, accompanied as they mostly are by irritation and cough, we aim, roughly speaking, at two things: firstly to cure the disease and secondly to relieve the cough. We know that if once we can remove the irritation the chances of curing the disease are very much better. Now in cocaine and menthol, especially the latter, we have remedies, the local application of which in many cases relieves the cough at once, and sometimes for hours. I generally use a five to twenty per cent. solution of menthol in paroleine. This is a mineral oil, colourless and tasteless, and obtained by the fractional distillation of petroleum. It does not irritate the mucous membrane and does not become rancid. According to the prevalent method of treatment, we try to relieve the cough by sedatives which cannot but be injurious to the patient.

We know that the local application to the mucous membrane of other parts of the body of iodoform, nitrate of silver, lactic acid, menthol, salol, and europhen, is followed by excellent results. These are some of the drugs which can safely be injected into the larynx. I may add that in speaking of intra-laryngeal injections, I mean injections through the glottis into the cavity of the larynx and not injections under the mucous membrane. The injected fluid passes into the larynx and trachea and readily enters the larger bronchi.

Experience proves that large quantities of non-irritating and aseptic fluid can be safely injected into the trachea, and that they are absorbed. Botey ("Bulletin Med.," 2nd July, 1890, and "Annales des Maladies de l'Oreille," 8th August, 1890) injected one to two grammes of distilled water into the trachea of rabbits, with no bad results. He injected up to fifty grammes into his own larynx. Philip ("Edinburgh Med. Journ.," March, 1891), in speaking of intra-laryngeal injections in the treatment of tubercular disease of the lungs, says: "So simple indeed is this

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"method, that I have been led to make use of the respiratory mucous "membrane for the absorption of a variety of remedies, when the "gastro-intestinal tract was not available." Schmaltz ("Deutsche Med. Woch.," March 10th, 1888) speaks of injecting up to one hundred grammes of an alum and salt solution into the trachea of horses through the skin in the treatment of chronic atrophic laryngitis. In cases of morbus maculosus he injects ten to twelve grammes of a one per cent. iodine and five per cent. iodide of potassium solution.

As regards the larynx and trachea, I take them together, as in most cases, especially if chronic, we know that not only the vocal cords and the parts above, but also the parts below the vocal cords are affected. However much we may treat the vocal cords we cannot hope to effect a cure as long as the parts below remain diseased.

In cases of tubercular laryngitis, I use a five to twenty per cent. solution of menthol in paroleine. We owe a deep debt of gratitude to Prof. Rosenberg, who first recommended this remedy. In some cases, however, menthol causes great irritation, and cannot be used. Guaiacol two per cent. or salol twenty to thirty per cent. can be added.

Injections of salol seem to me to be very useful, and I should like to ask any of the gentlemen present if they have had any experience in the treatment of tubercular disease with salol. Guaiacol and salol act not only locally, but are also absorbed into the system. Balsam of Peru can also be injected. Philip (*loc. cit.*) used balsam of Peru and eucalyptus dissolved in chloroform and olive oil. Lactic acid up to thirty per cent. is recommended by Dr. Brehmer ("Mittheilungen aus Gerbersdorf," 1889).

Beehag ("Edinburgh Med. Journ.," Jan., 1888) injects menthol and olive oil in the treatment of tubercular disease of the lungs. Masini ("La Riforma Med. Journ.," November 3rd, 1890) also uses menthol and creosote. Downie ("Brit. Med. Journ.," April 18th, 1891) applied menthol and creosote or guaiacol. In the more severe cases we must of course also apply lactic acid with the brush and use the curette.

In the treatment of chronic laryngo-tracheitis the injections are often very useful. This affection is very common in the North of England, and although not dangerous in itself, is certainly often accompanied by most distressing symptoms, and the patients are frequently not able to get a good night's rest for weeks or months. A similar cough is frequently met with in incipient phthisis. A patient of mine had been troubled with a tracheal cough for years, and was on that account refused by a well-known insurance company. About thirty injections of menthol and europhen completely cured the cough.

In cases of chronic laryngitis a one to five per cent. solution of nitrate of silver, or a five to thirty per cent. solution of lactic acid can be used. The injections also give excellent results in the treatment of chronic dry or atrophic catarrh of the larynx. This disease is very prevalent in Yorkshire among the poor, due I believe partly to the damp climate, and partly to the fact that so many people work in badly ventilated mills in which much gas is burnt.

The effect of intra-laryngeal injections is most marked in the treatment of fœtid bronchitis and of bronchiectasis ; after twenty to thirty injections

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the offensive odour of the expectoration may disappear altogether and for some time. Europhen, guaiacol and salol can be used. I have recently been trying weak solutions of myrtol and oleum pimenthæ, and find the results are excellent and lasting, and hope at some future time to publish a number of cases treated with these remedies.

Grainger Stewart ("Brit. Med. Journ.," June 2nd, 1893) has successfully treated several cases of bronchiectasis with injections of a solution of menthol (ten per cent.) and guaiacol (two per cent.) in olive oil. In former years strong solutions of nitrate of silver were injected in the treatment of laryngeal croup and diphtheria. Loiseau ("Bulletin M. de l'Acad.," 1857, page 118) recommends this method in preference to tracheotomy. Trousseau (*loc. cit.*) has also tried nitrate of silver, but prefers tracheotomy.

The stronger remedies can, of course, only be applied under the guidance of the laryngeal mirror. But the non-irritating injections, such as menthol and guaiacol, can be used without the mirror, and in many cases the patients learn to inject themselves. It is to this fact that I should like to draw your particular attention. It is not everybody who can afford the time or money to see a medical man daily for weeks or even months, as may be necessary in some cases. I use a silver and glass syringe which can be sterilized. A similar syringe can be ordered for the patient. Down (London) and Pfau (Berlin) make some very cheap aseptic syringes. If used by the patient the syringe should be sterilized at least once a week, and if used by the surgeon, after each injection, or each patient should have his own tube, which can be attached to the end of the syringe. Vulcanite syringes are difficult to sterilize and should never be used. The fluid injections should also be sterilized.

The use of intra-laryngeal injections in the treatment of diseases of the larynx and bronchi is nothing new or original. As far back as 1852 ("Lancet," June 19th) we find that Theophilus Thompson described a glass and silver laryngeal syringe at a meeting of the Medical Society of London. In 1865 ("Arch. Klin. Med.," page 219) Bing recommended a similar syringe.

The method is, however, not mentioned in most of the text-books, nor is it practised by many laryngologists. Dr. Max Schaeffer seems to be one of the few who recommend the method. I have found the injections so very useful in many cases, that I have ventured to bring the subject before you in the hope that some of the gentlemen present, who have had a much larger and more varied experience than myself, may give the meeting the benefit of their observations.

SYPHILITIC PARALYSES OF THE LARYNX.

By Dr. RICARDO BOTEY.

In my opinion, among the causes producing paralysis of the larynx, principally of the posticus, syphilis occupies a more important place than is generally accorded to it. It is, in my experience, far ahead of any other cause, aneurisms of the arch of the aorta coming next, in spite of the considerable place they hold in the etiology of these affections.

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The fortunes of the clinic, or perhaps the frequency of syphilis in the country where we now practice oto-laryngology, has permitted us to observe five cases, and almost always in circumstances where there was nothing apparent to explain any compression of either recurrent. Ever since our first observations we have held it to be almost a clinical aphorism to consider as syphilitic every paralysis of one or both abductors, when aneurism, œsophageal, mediastinal tumour, etc., do not explain the median position of the vocal cords. In other words, when we find one or both vocal cords in the median or cadaveric position, and our examination and questioning is negative as to the cause, we administer antisyphilitic treatment, and almost always the paralysis disappears, or improves considerably, often at the end of a few days. Sooner or later we end by finding traces of lues, in spite of its being very often hidden, and denied by the patient, as for instance in the following case :—

CASE I.

On April 5th, 1891, I was called into consultation by Prof. Pi y Suner of Barcelona, to examine one of his patients, who for some hours had breathed with extreme difficulty, producing marked stridor. Mad. A. N. belonged to one of the first families in Barcelona, was forty-four years of age, and the mother of two robust children. She had a good external appearance. There was nothing special in the history of father and mother, who were still both alive in spite of advanced age. The patient's own history was excellent. She had never been seriously ill except for a little nervousness and anæmia. From the commencement of the winter she had coughed occasionally, had short breath, and was often dyspnœic at nights. During the latter five or six weeks the voice had been a little veiled and respiration more and more difficult, but she was not ill, and swallowed perfectly. On examination of the larynx the left vocal cord was not in the cadaveric but in the median position, *i.e.*, in the position of complete paralysis of the crico-arytenoid muscles. The right vocal cord was reddened and slightly infiltrated, principally at the centre, where it formed a marked convexity, the centre of which touched the opposite vocal cord, and air passed with a whistling noise through the two small spaces in front and behind this convexity. This vocal cord was also paralyzed, probably in the median position, and the central eminence on the right cord had happily prevented the patient dying from suffocation. There was, therefore, a complete paralysis of both postici. Her ordinary physician was unable to find any cause for the explanation of this double paralysis ; the heart, lungs, thyroid gland, cervical glands, and nervous centres, all appeared to be in a condition of health. As this was not the first occasion I had observed this state of things, I stated to Dr. Pi that the condition was probably one of syphilitic paralysis of the abductors. It was difficult to convince him, but under doses of mercury and iodide of potassium—small at first because of the laryngeal congestion which often occurs, and which might suddenly suffocate the patient—at the end of forty-eight hours the patient breathed much better. The left vocal cord began to separate two millimètres from the median line during inspiration and approached during phonation. All the rest of the laryngeal cavity

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offered, with the exception of swelling and paralysis of the right cord, a normal aspect. I then administered a mixed and very energetic treatment, and at the end of three months the functions of the larynx became normal, respiration was normal, and the vocal cords moved physiologically.

CASE II.

Eduardo C., forty years of age, consulted me on January 15th, 1890, for hoarseness lasting three months. He confessed to having had syphilis at twenty-six, skin manifestations, alopecia, onychia of the left index. The right vocal cord was in adduction and immovable, the left cord was perfectly normal. The larynx was congested and red, but there was no infiltration.

Examination of the neck and chest did not explain the condition, and there was no nervous affection. Iodide of potassium and mercurial frictions ended in cure, which was complete at the end of five months.

CASE III.

Maria M., twenty-seven years of age, married six months previously, consulted me for nocturnal dyspnœa, from which she had suffered a few days after her marriage. Her voice was, at intervals, deep and bitonal. There was nothing in the nose, but a stellate cicatrix in the pharynx, nothing in the neck or chest, and not the least nervous affection. The left vocal cord was in the cadaveric position; beyond this, the larynx was perfectly normal. The right vocal cord passed beyond the median line during phonation in order to meet its fellow, which was immovable. Nothing apparently explained this paralysis. Under antisyphilitic treatment, cure was effected in four months. This patient has always denied syphilis.

CASE IV.

Enrique S., aged thirty-seven, denied syphilis, had been dyspeptic for three years, and a little neurasthenic at intervals. He consulted me on May 10th, 1892, for a feeling of pricking and heat in the throat, principally in the interval between meals. Nose normal, pharynx a little anæmic, no granulations. I thought his symptoms due to a pharyngeal paræsthesia. He has been hoarse for the last five or six months. At the second visit I examined the larynx, which I had neglected to do at the first visit, not thinking it necessary, and having but little time. To my great surprise I found the right vocal cord in complete adduction. Respiration was easy. During phonation the left vocal cord was compensatory, and the voice consequently normal. There was no affection of the nervous centres, no tabes, nothing in the neck and cheek. The patient denied having had syphilis, but confessed to a blenorrhagia at twenty years of age. Iodides and mercury in large doses produced complete cure in two and a half months.

CASE V.

Fernando M., aged forty-two, a labourer from the province of Tarragon, and living at Falset, consulted me on June 20th, 1893, for a dry cough and nasal obstruction, dating from three years previously. His

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history was good, his father dying at eighty-three of pneumonia; his mother is still alive and works in the fields. He himself has always had excellent health. Ten years ago he had syphilis, chancre, papular roseola, etc., which was treated by a specialist in Tarragon without leaving any traces. He was well treated and the patient conscientiously carried it out. The nasal fossæ were filled with mucous polypi completely obstructing the cavity. Chronic pharyngitis, and congestion and catarrh of the larynx existed, especially over the arytenoids, and the left vocal cord was paralyzed in the cadaveric position; respiration was easy, the voice was a little raucous, and thick and eunuchoid—he had spoken for seven or eight months almost entirely in falsetto and head voice. During phonation the right vocal cord approached its fellow by passing over the mid-line. On the glosso-epiglottic fold was an ulceration, crateriform, deep, sanious, covered with grey pus; this ulceration was about one centimètre in length and six or seven millimetres in breadth. It had the appearance of a specific lesion. The nasal polypi were extirpated in several sittings with the cold wire snare. The ulcer was cauterized with pure chromic acid fused on a probe. Internal treatment was energetically followed with the poli-iodides and biniodide of mercury, and intramuscular injections of bichloride were given every forty-eight hours, sprays of corrosive sublimate 1—1000 also being employed.

On the ninth day of this treatment the left cord commenced to move a little outwards during inspiration; little by little it acquired more mobility. I still see this patient, but in spite of medication for a long time, this vocal cord does not separate completely during deep inspiration; its excursions are more limited than that of the opposite side; it is sluggish, and sometimes during a deep inspiration it approaches the median line suddenly, as if fatigued. In spite of this, the voice is now absolutely normal, and respiration quite easy. The ulcer at the base of the tongue has been completely healed for a long time. It is scarcely necessary to add that the mucous polypi of the nose no longer exist, and that probably he will return in a few months to have others removed.

We may state the opinion that syphilitic laryngeal paralyses have nothing special, and only that, further, in all the cases observed, including our own, we may declare that they are of the nature of a complete recurrent paralysis. These paralytic laryngeal affections, besides, constitute often an external sign of the existence of a morbid process of specific nature, and we must not forget that these paralyses may exist, and very often, without syphilitic lesions of the larynx or throat, and without marked alteration of the voice or respiration.

As from our bibliographical researches it appears that there are very few complete works upon this subject, we have desired to publish some further observations upon this interesting subject, which we shall develop more completely in a memoir of which this is only an abridged clinical abstract. I designedly do not therefore enter into the pathogeny of syphilitic laryngoplegias, beyond that I believe that it resides almost always in the peripheral nerves and nervous centres, and never, or scarcely ever in the muscles of the larynx or in the crico-arytenoid articulation.

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CONCLUSIONS.

1. The most frequent paralysis of the larynx of syphilitic origin is paralysis of the recurrent, or of one of the posterior crico-arytenoids.

2. This paralysis is very often bilateral, but monolateral paralysis may exist more frequently, since the physician has not the opportunity of observing them, because they do not affect the respiration nor deeply alter the voice.

3. These paralyses are very rarely accompanied with material syphilitic lesions of the larynx, and when they exist they are quite independent of the syphilitic lesions coexisting in the same organ.

Note by Dr. MICHEL DANSAC.

RESEARCHES on the Condition of the NERVES in TUBERCULAR ARYTENOIDITIS and in the Stump of the CICATRIX after Surgical Ablation.

It is to Gouguenheim and Balzer that belongs the honour of having first described the nervous lesions of the endo-laryngeal tissues in laryngeal tuberculosis.

In 1883 and on many occasions Dr. Gouguenheim showed the importance and *rôle* of the pathological nervous filaments in the dyspnœic and dysphagic symptoms. It is to him that we owe the analysis of all the affections formerly confused and grouped under the term "œdema of the glottis." This year, under the direction of our master, reviewing this subject of the study of arytenoiditis, we have sought the histological nature of the nervous lesions.

Fixing, in our picro-chromo-nitric liquid, the fragments after their ablation, we have obtained, thanks to a new *technique*, unexpected results.

Up to the present all authors have fixed their attention only on the myeline or Wallerian degeneration. Gombault, alone, recently remarked the constant neglect of the axis cylinder, and we can confirm to-day that which he clearly demonstrated in 1889—to wit, that there is no constant and necessary correlation between the condition of the myeline and that of the axis cylinder.

The technical methods generally employed — viz., Wiegert's and Golgi's—have given us negative or nearly negative results. Rarely could we find some sheaths of myeline, spaces in the axis cylinder, fragmentary or interrupted. In all cases these myeline lesions were accompanied with connective tissue lesions of perineuritis entirely agreeing with those described by Gouguenheim and Balzer. This rarity of nerves appeared to us discordant with the dyspnœic and dysphagic phenomena, and with the hypertrophy of the laryngeal tissues, and we employed then the methods of Sahli (methylene blue), Dopil, and other colouring matters, such as negrocine and chloride of gold, the action of which is especially upon the axis cylinder. This last reagent, employed according to the directions of Rauvier, has demonstrated to us an extraordinary richness of nerves. The abundance was such that, from the possibility of the

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concomitant action of gold upon fibrine, vascular walls and amorphou ground tissue, we sought to differentiate by a special process the impregnation of the axis cylinder from that of these latter elements. The results of these histological researches will be found in the "Bulletins de la Société Anatomique," October and November, 1893, and in the "Annales des Maladies de l'Oreille" of Gouguenheim and Lermoyez, December, 1893, along with the description of the methods. Reviewing them, we may say that side by side with rare lesions of the myeline there always exists a proliferation of the nervous terminations of the peripheral nervous filaments—in a word, and more correctly speaking, a veritable neuroma of regeneration. The nerve proliferation is the more abundant as the tubercular process, with its characteristic lesions, is more pronounced. The centre of the tubercle in process of organization, the circumference of the glandular acini invaded by the bacilli, the periphery of fibrous tubercular nodules, are constituted in our sections essentially by axis cylinder elements. These latter, hypertrophied, tumefied, guide and regulate the inflammatory sclerosis, always proportional to the richness and abundance of axis cylinders. It is, therefore, easy to see that the perineuritis described by Balzer as the only characteristic lesion is in reality only sclerosis secondary to the proliferation of the nerve axis cylinder. It is, as we have said, a pseudo-neuroma—*i.e.*, a lesion having at once the characters of tumours properly so called (nerve hyperplasias) and of inflammations. The hypertrophy and multiplicity of the axis cylinders, as far as their finest superficial nerve terminations, explain why in certain arytenoidites hyperæsthesia is so pronounced at the same time as the tissues of this region are hypertrophied, sometimes so much as to simulate glottic œdema. It explains how ablation of this hyperplastic nervous production of inflammatory infectious origin is followed by immediate and definitive disappearance of dyspnœa and dysphagia, which depend directly upon the excitation, permanent or temporary, of hyperplastic and proliferating filaments. These nervous alterations cannot be constantly so characterized, because the aryteno-epiglottic tubercular masses are not always accompanied with such violent dysphagia. In certain patients dysphagia, however, appears when the tissue is not tumefied beyond measure. We have been struck by the relief which surgical treatment nearly always gives to the sufferings of these patients, and at the same time the pain diminishes or disappears, respiration is conducted more easily, air enters freely into the respiratory passages, and, yet more interesting, the voice assumes a *timbre* unknown before, provided that the false cords are not too greatly altered.

The TREATMENT of VERTICAL DEVIATIONS of the NASAL SEPTUM without THICKENING.

By Dr. RICARDO BOTEY.

For a long time we have treated deviations, thickenings, and spurs of the nasal septum by mono- and bipolar electrolysis, with Fraenkel's cutting forceps (spurs principally), and Bosworth's saw. Generally in

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our practice we rather prefer electrolysis for horizontal inferior deviations (Loewenberg's classification) with thickening, and cutting forceps for spurs; but when there are vertical deviations of the cartilaginous septum, and in these cases the cause is very often traumatic, it is only the quadrangular cartilage which is affected, and there is scarcely ever any thickening, then the destruction of the projecting portion, which more or less completely obstructs the anterior part of one of the nasal fossæ, leads almost surely to a more or less large perforation of the septum, because as that is only doubled vertically, the projecting portion is empty, and I believe consequently that it is quite irrational to endeavour to eliminate it.

We therefore understand that in these cases it is necessary to replace the deviated cartilaginous septum. But we must acknowledge that in practice it is nearly always very difficult to obtain this with the instruments used; to maintain it in a given position is very often impracticable, since it frequently returns to its first position when the apparatus is removed.

We know that this occurs because the septum is large, and possesses an extraordinary tendency to preserve the curved form, for it is necessary to remember that this septum is fixed above by the vault of the nose, and below by the floor of the nasal fossæ, fixing it strongly in this position.

Remembering these well-known facts, it necessarily follows that the inferior insertion of the cartilaginous septum must be dislocated, a small portion of the septum must be resected, and one or two vertical incisions must be made in order afterwards to easily replace the septum and maintain it definitely in the desired position, by placing simply in each nasal fossa a small tampon of iodoform gauze. That is at least our own practice, and has given us excellent results in the two patients upon whom we have last operated. Without entering into anatomico-pathological considerations or bibliographical researches which would prolong this work uselessly, I will simply expose my method of procedure.

In the first place, I must say that in order to succeed in cutting the mucous membrane and the cartilage more or less perpendicularly to its surface, and to avoid making the cutting penetrate too deeply into the tissues—that is to say, piercing the septum from one side to the other—I have had small cutting bistouries constructed only two or three millimètres from the point, and having at the same time a special double curve, on the blade and stem, appropriate to each side of the septum, according as the deviation is right or left. By this means I operate always much more rapidly and correctly, for the operative field is very restricted, and we have to operate with extreme difficulty, and often more slowly than we could desire, and the abundant hæmorrhage, which is absolutely inevitable, impedes very often the operative procedure. This obliges us to extend it over two sittings.

I commence by anæsthetizing with a twenty per cent. solution of cocaine by placing tampons of wool on the region to be operated upon for eight to ten minutes. I then make a horizontal incision from the point of junction of the septum with the floor of the nasal fossæ as long as possible, and on the side of the nasal fossæ corresponding to the concavity—*i.e.*, in the largest nasal fossa, and as far as the commencement

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of this concavity. This incision ought to take in all or nearly all of the inferior insertion of the cartilaginous septum, respecting, however, the mucous membrane of the opposite side.

I then make three vertical incisions over the membrane from the vault to the floor of the fossa. These are deep and through the mucous membrane, the perichondrium and the cartilage, but care must be taken not to penetrate into the opposite side, which is sometimes difficult to avoid—the first vertical incision over the most distant point where the vertical deviation commences, the second over the centre of the concavity, and the third, which is sometimes useless, over the anterior part of the cartilaginous septum, some millimètres behind the point of junction of this with the lobule of the nose and the sub-septum. I then bare the mucous membrane and the perichondrium of the triangular flap formed by the vertical, central and horizontal incisions, and also the cartilage to a sufficient extent, with small curved scissors. I resect a portion of cartilage, large or small according to the case, on the posterior edge of the vertical incision, and another small portion on the inferior edge which touches the septum, pushing the septum through the other fossa with a plane spatula to facilitate operation.

I then replace the flap of mucous membrane and mobilize the septum through the other fossa, which is easily replaced, as it is broken by the vertical incisions into two quadrangular segments which are juxtaposed on the same vertical plane. The inferior edge of the septum is also displaced, and directed on the median plane. An iodoform gauze tampon suffices to maintain the parts in position and contact without suturing.

The vertical anterior incision serves to expose the anterior extremity of the septal cartilage, which sometimes makes, especially after its replacement, a pretty evident projection into the vestibule. When, after having exposed a small portion of these two faces, a small portion can be removed with scissors, this perfects the operation from an æsthetic point of view.

At the end of twenty-four hours I remove the first tampon, which is soiled by the blood and mucus, for hæmorrhage often much impedes the operation. This tampon is replaced by another, which is removed after forty-eight hours, and this is repeated once or twice afterwards. Iodoform insufflations for a few days then suffice, and after the second or third tampon the wounds are already united. There is then no perforation if the mucous membrane of the opposite side is preserved, even when this has been pierced with the bistoury, which is very easily done. But if a small perforation has unhappily occurred, its importance will not be great, provided we have obtained a good replacement of the cartilaginous septum. When I devised and practised this operation in 1892 I had no knowledge of any similar operations. Bibliographical researches, which I have lately made, have apprised me that Petersen ("Berliner Klin. Woch.," 1893) had already devised something of the same kind, but with different procedure (horizontal incision and vertical incision to the base and centre of the convexity of the septum, resection of the projecting portions), and that Cholewa had also dealt with it ("Monats. für Ohrenheilk.," September, 1891), and Chatellier had devised it without

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knowing in 1887 ("Arch. de Laryngol.," May, June, 1892). If I had then been aware of these works I should perhaps have tried this method, which I believe to be applicable to certain brusque projecting deviations, and which I believe, besides, easier to execute than mine, but I reserve to myself later the trial of these two on a larger scale, and I shall then publish a more complete work.

CONCLUSIONS.

1. The treatment of vertical deviations without thickening cannot be conducted with electrolysis, and less still with the galvano-cautery.

2. In the destruction of the projecting portion of these two agents, there is necessarily produced a more or less considerable perforation of the septum, without correction of the deviation.

3. The best treatment is my method of sub-perichondrial resection of a portion of the quadrangular cartilage, followed by consecutive replacement.

HYPODERMIC MEDICINE: PHOSPHORUS and PHTHISIS.

By Dr. L. ROUSSEL.

(*Résumé.*)

After having in 1865 perfected the method of transfusion of blood, which I have performed over two hundred times with my direct transfuser, and after the intra-venous infusion of medicated liquids, I developed the method of subcutaneous injection. I studied upon myself and published in 1863 the injectable formula for sulphate of atropine, and in 1880 the formulæ and indications for injections of salicylate of iron, arseniate of strychnine, sparteïne, antipyrin, phosphate of soda, lithine, pilocarpin, cyanide of mercury, chloride of gold, etc. All were employed in aqueous solution, injected into the buttock with a syringe of aseptic celluloid and needle, of 0·05 centimètre in length, and were painless and very active.

I published in 1885 a method of making deep interstitial injections and pulverizations of the trachea through the crico-thyroid membrane by a long needle for laryngeal phthisis.

Finding that the most active antiseptics — the volatile vegetable essences and aromatic substances—cannot be injected by reason of their insolubility in water and caustics, I have invented the methods of injecting sterilized vegetable oil and assimilable oily solutions, non-caustic, of crystallizable essences, which I published in 1884 ; eucalyptol, menthol, thymol, gerainol, etc., twenty per cent., paraldehyde, camphor, phenol, iodine, apiol, etc., by solution in an essence. I have demonstrated the harmlessness of creosote-guaiacol and of non-assimilable vaseline.

In 1893 I published the oily injection of phosphorus, from five to fifteen milligrammes. This terrible poison has become the most powerful reparative drug for cerebro-medullary and nervous lesions, and affections of the intellect caused by dephosphoration of the brain.

In 1884 I published the treatment of phthisis by eucalyptol, arseniate

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of strychnine and sparteïne, phenol and phosphate of iron. I have obtained numerous definitive cures, many dating from five, seven and nine years, demonstrated by the reparation of hippocratism of the nails, the cicatrization of cavities, and by the absolute destruction of tubercle bacilli, and I can produce medical and microscopical reports which are indisputable.

Hypodermic therapeutics suffices to-day for all. This method, addressed to the central circulation, without leaving the remedies to the chance of digestion, is all-powerful in simple dyscrasias of the blood, and for infectious dyscrasias of internal or external origin. It prevents or aborts them often, it cures more quickly and better than any other, and prevents their degenerative consequences. Preventive antiseptic injection is useful in all morbid conditions, and is never hurtful. In no case does this method of medication, when applied by an expert, have hurtful consequences, near or far.

Conclusion.—Direct therapeusis by the central circulation, transfusion, injection, infusion by means of definite substances, powderable, assimilable and aseptic, will soon be the only method worthy of *savants* and of the practice of physicians who endeavour, before all, to cure and prevent without hurting.

ELEVENTH INTERNATIONAL MEDICAL CONGRESS IN ROME.

SECTION OF OTOLOGY.

(Continued.)

CONCLUSIONS derived from One Hundred and Twenty Cases of MASTOIDITIS observed and treated at the CLINICAL HOSPITAL OF NAPLES from 1883 up to the month of February, 1894.

By Prof. VINCENZO COZZOLINO.

1. The total number of cases of mastoiditis observed from 1883 to the month of February, 1894, was one hundred and twenty.

2. The author's triple classification: first class—endo-mastoiditis treated by perforation of the mastoid, or by the enlargement of osteo-cutaneous fistulæ; second class—the same treated by Wilde's incision and antisepsis of the auricular cavities; third class—the same treated by antisepsis of the auditory meatus, the tympanic, the mastoid antrum, &c.

3. Relation of mastoiditis to suppuration of the tympanum. Cases of suppuration observed from 1883 to 1894, two thousand and ten; mastoiditis during the same period, one hundred and twenty—showing six per cent.

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