REPORT ON DISEASES OF THE THROAT.

By F. I. Knight, M.D.

In General.

(1.) Aphonia. Andrew H. Smith, M.D. Philadelphia Med. Times, Oct. 4, 1873.

(2.) Notes on a solution of iodoform. Lewis Elsberg, M.D., Professor of Laryngology, &c.

(3.) Der Kehlkopf oder die Erkenntniss und Behandlung des Menschlichen Stimm-organs im gesunden und erkrankten Zustande. Merkel. Illustrirte Gesundheitsbücher. Leipsig. 1873.

(2.) Dr. Elsberg says that a great objection to the employment of iodoform (C_2 H I_3) in substance is its bad odor, which is very penetrating and persistent; furthermore, there has not been in use any effective solution for topical application in cases where ointments are inapplicable. Rhighini used an ethereal solution for direct inhalation, and Dr. Sass used an ethereal solution, and also a mixture of iodoform and sweet almond oil by means of a spray producer for inhalation. Dr. Gubler requested Messrs. Odin and Leymarie to ascertain the relative proportions in which iodoform is soluble in ether, and the most favorable conditions for its preparation; their experiments and conclusions are published in the *Pharmaceutical Journal*, Aug. 2, 1873. The *London Doctor* for Sept. 1st tells us that experiments were made with pure ether of 65° Baumè (specific gravity .724), and also with ether of 62° Baumè, and 56° Baumè, the temperature being 13° C. Eight grains of tincture obtained with these ethers contained iodoform in solution, respectively, to the following extent:—

Ether of 65° Baumè 1.61 grammes.
" 62° " 1.26 " "
" 56° " 1.13 " "

Their conclusions are,

1. To employ iodoform in the crystalline state.
2. To make the solution in a *red* glass flask by simple agitation.
3. To use the following proportions:—
   Crystallized iodoform, 1 gramme;
   Ether (60° Baumè) 4 grammes.

Dr. Elsberg had a solution prepared with Squibb's ether, and finds that it possesses all the advantages of iodoform in powder for local application, without its disadvantages. The solution smells only of ether, and the smarting produced on the mucous membrane is so momentary that the application is really painless. It may be applied to the mucous membrane of the throat, nose, mouth, larynx, vagina, rectum, &c. Its beneficial effects surpass Dr. Elsberg's expectations.

Nares.

(1.) On Fibrous Polypus of the Nose, with particulars of a case and operation. George Lichtenberg, M.D., Surgeon to the German Hospital, &c. Lancet, Nov. 30, 1873. [The operation was one of Langenbeck's, viz., by displacing the nasal bone, and the nasal process of the maxillary bone.]

Repr. from: Boet. M. & S. J., 1873, ✱ LXXXIX, 505–513; 530–534

(2.) Cure of a Naso-pharyngeal Polypus, by galvano-cautery. Cinnselli. Il Raccoglitore Medico, Jan. 10, 1873. Allg. Med. Central-Zeitung, Feb. 22, 1873.

(3.) An improved Method of plugging the Posterior Nares. A. Godrich. British Med. Journal, April 12, 1873

(4.) Magnus. Der Nasenrachenraum; eine Studie am Lebenden gemacht. Archiv f. Ohrenheilk. vi. 4, p. 246 (Schmidt's).

(5.) Schulze. Ein Beitrag zur Technik der Nasendusche. Arch. f. Ohrenheilk. vi. 4, p. 263.

(6.) Morin. Compression der Arteria Facialis bei Nasenbluten. (Revue de Thérap. Med. et Chirurg. 1873.) Allg. Med. Central-Zeitung, June 14, 1873.

(2.) Ciniselli's case, reported as one of naso-pharyngeal polypus, cured by galvano-caustic, seems to have been one in which the treatment may be considered to have been electrolytic as much as in the case of Bruns. The tumor occupied the whole wall of the pharynx, completely stopping up the left nostril and partially the right, posteriorly. It extended deep down in the pharynx, and pushed the epiglottis against the base of the tongue. Its point of origin could not be determined. As it was not admissible to subject the much emaciated anæmic patient to a bloody operation, Ciniselli decided to apply "galvano-caustic." On November 20, 1869, treatment was commenced with a small Grenet's battery, of eight elements. The steel electrodes were twelve centimetres long, and covered with caoutchouc to within two and a half centimetres of the end. The needle of the negative pole (zinc) was introduced into the polyp through the left nostril, the other through the mouth into the right side of the tumor. The electric current was passed through the tumor for fourteen minutes. On the 29th of November, an eschar came away from the throat, and a brownish yellow fluid, mixed with shreds of dead cellular tissue, began to flow from the left nostril. On the 8th of December, respiration and deglutition were already easier. The treatment was continued every twenty days till October, 1871, when the tumor was so much diminished in size that only an insignificant "bony" (knöcherne) prominence was to be seen on the posterior inferior wall of the pharynx.

Fauces.

(1.) Cook, A.B. Adhesion of the Soft Palate and Uvula with the posterior Wall of the Pharynx. Operation. Cure. Philadelphia Med. and Surg. Reporter, xxviii. 10, p. 203. March.

(2.) Depres. Retropharyngeal abscess; adenitis retropharyngealis. (Gaz. des Hôpitaux, No. 32.) Schmidt's Jahrb.

(3.) On Enlargement of the Tonsils as a cause of Nightmare. Haward. Brit. Med. Journal, June 7, 1873.

Growths.

(1.) On the Results of Thyrotomy for the Removal of Growths from the Larynx. Morell Mackenzie. British Medical Journal, April 26th, and May 3d, 1873.

(2.) Eine neue Methode zur Ausrottung von Kehlkopfpolypen. Von Dr. Jelenffy in Pest. Wiener Med. Woch., Nos. 11, 12 and 13. Jahrgang 23.

(3.) Critique on Jelenffy's method, &c. Wien. Med. Presse, No. 3, 1873.

(4.) Reply from Dr. Jelenffy. Wien. Med. Presse, No. 6, 1873.

(5.) Exhibition of Specimen of Epithelioma of the Tongue and Larynx. Bagshawe. Med. Times and Gazette, June 14, 1873.

(6.) Soft Tumors of the Larynx. Dr. Emile Nicolas Duranty. Lancet, Jan. 4, 1873.

(7.) Abstract of Lecture on Disease of the Neck with Dyspnœa, necessitating Tracheotomy: probable Cancerous nature of the Disease. De Morgan. Brit. Med. Journal, May 17, 1873.

(8.) Die Sogenuante Kehlkopfsguillotine. Bruns. Wiener Med. Presse, May 11, 1873.

(9.) Emele, Carl. (*a*) Hochgradige Stenose der untern Larynxhälfte; (*b*) Aphonie durch einen Kehlkopfpolypen bedingt. (Sitzungs-Bericht des Vereins der Aerzte in Steiermark, ix. p. 5, 1872.) Schmidt's Jahrb., June 23, 1873.

(10.) Zur electrolytischen Behandlung der Nasen-Rachenpolypen. P. Bruns. Berliner Klin. Woch., Aug. 11, 1873.

(11.) Du Traitement des Polypes Laryngiens. Charles Livon. Paris. 1873.

(12.) On Section of the Laryngeal Cartilages for the Removal of Morbid Growths. Durham. Med.-Chir. Trans., 2d series, vol. 37, 1872.

(1.) Dr. Mackenzie's article is a thorough and exhaustive reply to a paper by Mr. Arthur Durham in the current volume of the *Medico-Chirurgical Transactions*, "On Section of the Laryngeal Cartilages for the Removal of Morbid Growths." The summary of results, according to Mackenzie, reduced to percentages and placed in a tabular form, is as follows:—

	Per ct. on 48 cases.
Complete success,*	14.58
Partial "	22.91
Death,	8.33
Severe dyspnœa, requiring use of canula,	31.25
Severe dyspnœa, requiring fresh operation,	8.33
	Per ct. on 45 cases.
Aphonia,	40.0
Dysphonia,	20.0
Modified voice,	11.11
Not stated, but probably defective voice,	6.66
	Percentage based on 39 benign cases.
Recurrence, or incomplete removal,	38.46

These results differ considerably from the percentages derived from 37 cases, which Mr. Durham introduced into his article, but space will not allow us to give Dr. Mackenzie's reasons for classifying many of the same cases differently (for Dr. M.'s list includes all those of Mr. Durham), but those who are interested are referred to his paper.

Dr. Mackenzie closes his paper by saying that, as a result of his own experience and from the investigations he has made into the subject, he ventures to submit the following propositions:—

First, That the operation ought never to be performed for loss of voice alone.

* Complete success is understood to mean recovery of perfect voice and perfect respiration, and absence of recurrence of growth; partial success to mean recovery of one function, with injury to another or temporary recovery of both functions, with subsequent recurrence of growth.

Second, That in cases of cancer the operation is useless, except where the growth is very small and distinctly circumscribed.

Third, That the operation should be confined to those cases in which there is danger to life from suffocation or dysphagia, and then only to be performed after an experienced laryngoscopist has pronounced it impossible to remove the growth *per vias naturales*.

(10.) In our report published in this JOURNAL, November, 1872, we gave full particulars of a case of naso-pharyngeal polypus cured by Dr. Bruns by means of electrolysis, after very long treatment. Dr. Bruns now communicates a case in which a very large naso-pharyngeal polypus was cured by him in eleven applications of the electric current. Dr. B. publishes this case now partly to show that the treatment by electrolysis need not always be so prolonged as in his first case, which may have deterred others from trying it. The patient was a man of thirty years of age, who had had symptoms of the growth for fourteen years, and had undergone several ineffectual operations for removal.

On examination, a fibrous polypus was found filling the vault of the pharynx, attached on the right, reaching as low as the base of the uvula, covering the openings of the nares posteriorly, but not projecting into them. Besides this, the right nostril was filled with a number of mucous polypi. The treatment was continued from the 12th of March to the 7th of April.

Before treatment by electrolysis was commenced, a part of the mucous polypi were removed from the right nostril to facilitate the introduction of one of the electrodes. The battery used for obtaining the constant current was Frommhold's, of thirty-two elements. As electrodes at both poles, strong zinc needles were used, one being introduced into the tumor through the nostril, and the other through the mouth. The needle which was introduced through the nostril was covered with an Eustachian catheter of hard rubber. Nine applications were made in this way, both needle electrodes being inserted into the tumor. The number of elements included was six. On each attempt to increase the strength of the current the patient expressed pain. The circuit was closed with only one element and the number gradually increased, and in the same manner the number of elements was gradually diminished, in order to diminish the shock of opening and closing as much as possible. The length of the sittings was, usually, from fifteen to twenty-five minutes. The two other applications were made with the positive electrode covered with sponge held in the hand or upon the sternum. In these, the number of elements included was from ten to twenty, and the length of the sitting was thirty minutes.

The three first sittings occurred from the 12th to the 14th of March. During the succeeding four days, there was a profuse discharge of pus and mucus, and small particles of the tumor. Rhinoscopic examination showed the inferior surface of the tumor ulcerated and gangrenous, besides a considerable shrinking of it. The next three sittings occurred from the 19th to the 21st of March. Then there was a suspension of the treatment for ten days, on account of an attack of angina. After this, rhinoscopic examination showed that the tumor had diminished in size by one half. The seventh to the eleventh sitting occurred from the 1st to the 7th of April. During this time, there was a rapid

diminution of the tumor in size. At the end of this time, treatment was suspended on account of the temporary absence of Dr. B., and the patient went home. On his return, four weeks after, none of the tumor remained, only a cicatrix at the place of insertion.

DIPHTHERIA AND CROUP.

(1.) C. J. EBERTH. Die Diphtheritischen Processe. Centralbl. für die Med. Wissensch, No. 8, 1873. Allg. Med. Central-Zeitung, Feb. 19, 1873.

(2.) LETZERICH. Kritische Bemerkungen über die verschiedenen Methoden zur Heilung der Diphtherie.

(3.) LETZERICH. Statistische Uebersicht der vom Jahre, 1868, an bis Ende 1872 in seinen verschiedenen Wohnozten behandelten Diphtheriekranken mit Angahe der Gestorbenen.

(4.) KUHN. Ueber innere Behandlung der Diphtheritis. Berl. Klin. Woch., Feb. 10, 1873.

(5.) HENRY REYNOLDS. Successful local treatment of Diphtheria. (E. Wilton, Me.) [Carbolic acid and glycerin p. æ.] Medical News, Dec., 1872.

(6.) WELSCH, jun. Iod als Mittel gegen Croup. [Aerzt. Int. Blat., No. 12, 1873.] Allg. Med. Central Zeitung, April 16, 1873.

(7.) RAPP, jun. Brom inhalationen und Bepinselungen gegen Croup. (Bayer, Arztl. Intell Bl. xx. 4) Schmidt's Jahrb., June 23.

(8.) BOHM. Iod als Mittel gegen Croup, Allg. Med, Central-Zeitung, May 28, 1873.

(9.) Ueber gewisse ätiologische Beziehungen der Diphtheritis zu anderen Krankenheiten, Zum Sande. Berl. Klin. Woch , July 7, 1873.

(10.) BINDER. Die Diphtheritis in Siebenbürgen, speziell in Agnetheln. Wiener Med. Woch., Aug. 16, 1873.

(11.) Dr. JOHN BARTLETT. Lime Baths in membranous Croup. Chicago Med. Examiner, Aug. 15. (Phil. Med. Times, Sept. 20, 1873.)

13. Des Complications Cardiaques du Croup et de la Diphtherie, et en particulier de l'endocardite secondaire diphtheritique. Par Le Dr. Labadie Lagrave. Paris. 1873.

TRACHEOTOMY AND LARYNGOTOMY.

(1.) MAUNDER. Cases of Laryngotomy. British Medical Journal, Feb. 1, 1873.

(2.) Tracheotomy performed by Galvano-caustic Apparatus. La France Médicale, Jan. 22, 1873. Practitioner, March, 1873.

(3.) MACKENZIE, SEMPLE and THORNTON. Eight cases of Tracheotomy. Med. Times and Gazette, June 7, 1873.

(4.) SCHECH. Ueber die Functionen der Nerven und Muskeln des Kohlkopfs. Berl. Klin. Woch., May 19, 1873.

(5.) DURHAM. On the Operation of Opening the Larynx by Section of the Cartilages, &c., for the removal of morbid growths. Med. Chir. Trans., 2d series, Vol. 37, 1872.

(6.) BOURDON. Tracheotomy by Galvano-caustic. Archiv. Gén. 6 Ser. xxi. p. 53. Jan. (Schmidt's).

(7.) B. W. RICHARDSON. On Artificial Respiration after the Operation of Tracheotomy. Med. Times and Gazette, Aug. 2, 1873.

(8.) DE RANSE. Nouveau procédé de Laryngotomie. Gazette Méd. de Paris, July 5, 1873.

(1.) Mr. Maunder reports three cases under this heading, which

occurred at the London Hospital. The first was one of naso-pharyngeal polypus, in which the breathing became so bad after an attempt at removal by the *écraseur*, that *tracheotomy* (the word used in the detailed report) was performed, and afterwards the growth was removed by slitting the soft palate, and perforating and cutting away sufficient of the hard to allow plenty of space. He then removed the growth by freely scraping bare all the bony surfaces from which it took its origin. The tumor was fibrous, and took its main origin from the basilar process of the occipital bone. Mr. Maunder remarked that these growths sprang from the periosteum, and, to remove them effectually, it was necessary to scrape off this completely. After the operation, the wound in the hard and soft palate was to be left open for some time, to examine the part readily, and to destroy, if necessary, with the galvanic cautery, any fresh growth.

The second case was one of syphilitic disease of the pharynx, in a syphilitic man, aged 30, who had had for several days severe attacks of dyspnœa. The soft palate and uvula were found to be united to the base of the tongue, completely closing up the fauces, with the exception of one small hole on the right side of the uvula, which admitted a No. 4 catheter. He said that he could eat meat after masticating it well, and seemed to make light of any great difficulty in swallowing. Laryngotomy was performed, and attempts were then regularly made to dilate the aperture above described by passing catheters and bougies, but the largest that could be passed was a No. 11 catheter. He could eat chop and vegetables without apparent difficulty. Mr. Maunder then enlarged the aperture by making an incision through it parallel with the uvula, and then forcibly dilating with his finger. The whole of the pharynx appeared to be filled up with diseased tissue. Five days afterwards, he had an attack of erysipelas of the face, which disappeared in twelve days. Mr. Maunder proposed still further to dilate the aperture in the pharynx by passing bougies at intervals, and, if necessary, by making incisions at right angles to the present opening.

The third case was one of inflammation of the floor of the mouth, tongue, pharynx, and left side of the neck, in a man of 21, who, on admission, attributed the swelling, redness, &c. of the above-named parts to a fight which he had had four days before. Two days after admission, the floor of the mouth was so much swollen that it reached about the level of the teeth, and was indented by them. The tongue so filled the mouth that the back of the mouth or fauces could not be seen. He could swallow nothing. He breathed moderately well. An incision into the side of the neck gave vent to a little pus. Dressing forceps were introduced into the wound, and through the deep fascia and withdrawn open. On the following evening, his breathing became rather worse; and, at 2, A.M., his condition was so urgent that the house surgeon performed laryngotomy. The neck was so much swollen and so brawny that the thyroid cartilage could not be felt; and after cutting through thickened and infiltrated tissue for more than an inch, the larynx was found to be pushed very much to the right of the median line. The operation afforded instantaneous relief. The swelling of the mouth, tongue and neck had so subsided two days after this operation that the fauces could readily be seen. In six days the tube was removed, and the patient was rapidly recovering.

(2.) This proceeding was originally introduced into practice by M. Amussat fils, in 1870, and was first performed on a boy, aged 13. Dr. Amussat passed a curved needle, carrying a double thread of platinum, through the integuments, so as to embrace at the same time about two centimetres of the trachea in the loop. After the removal of the needle, he seized one of the threads with two forceps in communication with an electric battery, and made the section of the tissues comprised in the loop without hæmorrhage. The trachea being opened, the child coughed violently, and expelled the foreign body which was in the trachea, and for which the operation had been performed. A week subsequently, the wound was healed and the patient well.

The first number of the *Archives Générales de Médecine* for 1873 contains a series of eight operations by different operators, the particulars being furnished by M. Bourdon.

The operation as performed by M. Verneuil is as follows: There are three steps; the incision of the skin and of the soft parts; the incision into the trachea, and the introduction of the canula. 1st. After having marked with the nail the point which corresponds to the inferior border of the cricoid cartilage, the extremity of the blade of the instrument is pressed in and made to cut downwards to an extent corresponding to the diameter of the canula that is desired to be introduced, and the thickness of the soft parts covering the trachea. In the infant, the first incision, which is made with great rapidity, ought not to be made deeper than the skin, lest the trachea should be opened at the outset, and there be a risk of cauterizing it, if not of perforating the posterior wall. 2d. The trachea being exposed, it should be seen that the wound corresponds to the middle line, and the point of the knife should be made to penetrate into the first interspace between the cartilages and the necessary number of rings divided. 3d. The introduction of the canula is the last and easiest of all. This proceeding, it is obvious, differs considerably from that of M. Amussat, but in view of the difficulties that are presented by the adult when tracheotomy is required, M. Bourdon prefers the latter.

Foreign Bodies.

(1.) Laboulbene. Foreign Bodies in the Larynx. Bulletin de Thérapeutique. Lancet, Nov. 16, 1872.

(2.) Trendeblenburg. Zur Extraction von Fremdkörpern aus dem Œsophagus. Langenbeck's Archiv, Band. xiv. Heft iii. Berliner Klinische Wochenschrift, Feb. 24, 1873.

(3.) Chevalier. Corps étranger dans le pharynx; abces rétropharyngean; congestion pulmonaire (?); mort. Archiv. Méd. Belges. Gazette Médicale de Paris, Mar. 8, 1873.

(4.) Landi. Corps étrangers dans la trachée; tracheotomie. Lo Sperimentale, 1872. Gazette Médicale de Paris, Jan. 25, 1873.

(5.) Cohen. Bone removed from the Larynx (post mortem). Phil. Med. Times, June 7, 1873.

(6.) Annandale. Foreign Bodies in the Larynx; appearance of Croup. Edinburgh Med. Journ., xviii. p. 849, March.

(7.) Donlos. Leech in the Pharynx ten days. Bull. de Thérapie, lxxxiv. p. 236, March. Schmidt's Jahrb., June 23.

Trachea.

(1.) Plugging the Trachea in Operations on the Mouth and Throat. British Medical Journal, May 24, 1873.

(2.) D. S. Lamb, M.D., Act. Assist. Surgeon U. S. A. A Fatal Case of Congenital Tracheo-œsophageal Fistula. Philadelphia Medical Times, Aug. 9, 1873.

(2.) Dr. Lamb reports a very interesting case of tracheo-œsophageal fistula; he has not been able to find any case recorded which was exactly like it, those cases which have been recorded being conjoined with other malformation of the œsophagus, as, for instance, cul de sac termination. The patient in his case was seven weeks old at death, March 31, 1873. From its birth, almost every attempt at nursing was attended with strangling, and sometimes with lividity of skin. The mother stated that, during a portion of the previous summer, she had been roughly treated by her husband while he was intoxicated; on several occasions he had violently choked her. Dr. Lamb saw the child for the first time about sixty hours before death. The most prominent symptom was flatulence, which was abundant and very painful; no vomiting; several thin greenish stools daily; it nursed but little. At the autopsy, a small granular deposit was found upon the mucous membrane of the trachea, just below the fistulous opening; it was suspected to be from a milk-clot, but was washed off and lost before its composition could be made out with certainty. The right lung was very dark and hepatized throughout; there was also slight pleuritic adhesion between the upper and middle lobes; no fluid or lymph in the cavity. The left lung was somewhat emphysematous in its upper lobe; the anterior lower margin, to the extent of about a square inch, was in the same condition as the right lung; there was neither fluid, lymph nor adhesion in the left pleura. Heart normal. Stomach and intestines distended with flatus. Liver, spleen and kidneys normal. Mesentery somewhat congested.

The head was not examined, except so far as to notice the condition of the palate, which was found normal. The hyoid bone, larynx and portions of the trachea and œsophagus were removed. In the median line, nearly half an inch below the lower border of the cricoid cartilage, was a fistulous communication between the tubes, having a longitudinal diameter of three lines and a transverse diameter of one line; the direction of the fistula was downwards and backwards, the opening in the œsophagus being at a lower level than that in the trachea; the edges were smooth and rounded, and the mucous membrane normal.

This specimen is now in the Army Medical Museum, No. 1161 of the medical section. Dr. Lamb concludes his paper with abstracts of the descriptions of the cul de sac pharynx or œsophagus, with or without fistulous communications with the air-passages, found in various museum catalogues. He calls attention to the similarity in the cause of death in several of the cases. The two cases from which were obtained specimens 456 and 457 of the Boston Society for Medical Improvement appear to have terminated fatally from *pneumonia*, as did the case reported by him.

Dr. L. also remarks that it seems to be quite possible for fluids to find their way into the trachea of an infant, even without any obstruction of the œsophagus. He quotes from the *Lancet* of May 10th, 1873, the case of a child aged "one year, which was fed by the bottle, put to bed at six o'clock, and died at midnight with all the signs of intense dyspnœa. At the post-mortem examination (ten hours after death), the two lower lobes of the lungs were found quite softened,

grayish, having a smell of butter, and, in a word, having undergone the action of gastric juice. Altered milk was found in the trachea and bronchi. In this case, the milk contained in the stomach, which doubtless had been taken in excess, was vomited, and, on account of the horizontal posture, had penetrated into the air-passages. Dr. Panot drew the attention of his colleagues to the importance of the fact from a medico-legal point of view. He thinks that this occurrence must be rather frequent, as he has already witnessed two cases in his own sphere of observation."

Œsophagus.

(1.) Emminghaus. Einiges über Diagnostik und Therapie mit der Schlundsonde. Deutsches Archiv für Klinische Medicin, xi. Band, iii. Heft.

(2.) Francis Mason. Carcinoma Œsophagi; Gastrotomy; Death. Lancet, Jan. 25th, 1873.

(3.) Totherick and Jackson. Impassable Stricture of the Œsophagus; Gastrotomy; Death. Brit. Med. Journal, May 24, 1873.

(4.) Heyfelder, O. Krebsige Striktur des Œsophagus, Ernärung durch die Schlundsonde und Fleisch-Pankreas-Klystir. Deutsche Ztschr. f. Chir. ii. 3, p. 324. Schmidt's Jahrb.

(5.) Weichselbaum. Strictura Œsophagi; Œsophagotomie; Death. (Von Podrazki's Klinik.) Wien. Med., Aug. 16, 1873.

Œsophagotomy.

(1.) Tillaux. Œsophagotomy. Bull de Thér., lxxxiv. p. 14, Jan 15. Schmidt's.

Instruments.

(1.) Dobell's Tongue Spatula. Brit. Med. Journal, March 1, p. 228. Schmidt's.

(2.) Welsch. Ueber Anwendung von Hohlspiegeln als Kehlkopfspiegel. Deutsche Klinik, 14.

(3.) An improved Tonsillotome. (Said to have been suggested by Dr. J. S. Billings, U. S. A.) Phil. Medical Times, June 28, 1873. [Seems to be identical with the tonsillotome made by Mayer and Metzer, of London.]

(4.) Boeker. Ein Handgriff zur Anwendung des Galvanokaustik innerhalb des Kehlkopfs. Berliner Klin. Woch., July 28, 1873.

Laryngitis.

(1.) Gerhardt. Chorditis vocalis inferior hypertrophica. Deutsches Archiv, Bd. ii. Heft. 7, p. 583.

(2.) James Sawyer, M.B., Birmingham. On the Treatment of Chronic Inflammatory Diseases of the Larynx. Brit. Med. Journal, July 12, 1873.

Laryngoscopy.

(1.) Weil. } Entgegnung.
Tobold. } Schlussbemerkungen. Deutsches Archiv für Klinische Medicin, xi. Band, iii. Heft.

(2.) Review of Voltolini. Schnitzler. Wiener Med. Presse, xiv. Nos. 1, 2 and 4.

(3.) Von der allgemeinen Poliklinik in Wien. ii. Sektion. Ab-

theilung für Hals und Brustkrankheiten des Docenten Dr. Schnitzler. Spezialbericht, erstattet von Dr. R. Coen, Assistenten, &c. Wiener Med. Presse, Feb. 23, 1873.

(4.) Lectures on the Surgery of the Nares, Larynx and Trachea. Cohen. Philadelphia Medical Times, Jan. 25.

(5.) Aus dem K. K. Garrisons-Spital, No 1, zu Wien, Mittheilungen über die daselbst im Jahre 1872 behandelten Kehlkopf, Hals, und Nasenkranken. Von Dr. Sidlo. Wiener Med. Woch., June 28, 1873.

(6.) The Laryngoscope an American Invention. By G. Troup Maxwell, M.D., of Middletown, Del. New York Medical Record, Jan. 15, 1873.

(6.) Dr. Maxwell claims that the idea of examining the larynx by means of a mirror occurred to him before he had heard of Czermak's experiments, and before any notice of them was published in this country; and that he had an instrument constructed for this purpose. He has made no public mention of this before, in the first place, on account of the war, and afterwards he had waited until now for Tiemann & Co., who had made the instrument, to find a note of it upon their books.

Parasitic Diseases.

(1.) Scheff. Soor im Kehlkopfe. Wiener Med. Presse, No. 25, 1873. (Allg. Med. Central-Zeitung, June 25, 1873.)

(2.) Fraenkel. Vorstellung eines Falles von gutartiger Mycosis des Pharynx. Allg. Med. Central-Zeitung, xlii. Jahrgang, 17 Stück.

(2.) At the meeting of the Berlin Medical Society Jan. 29th, 1873, Herr B. Fränkel presented a case of benign mycosis of the pharynx. This was discovered accidentally in the beginning of the previous month in one of his pupils in the laryngoscopic course, and had existed since that time without any symptom of disease, except a slight chronic pharyngeal catarrh. Over the tonsils and follicles at the base of the tongue were to be seen separate white elevations, a line in height, and as large as the follicles under them. They did not give one the impression of hard pellicles, but resembled rather formations of mould; when removed, they rapidly re-formed. When examined under the microscope, they were seen to consist of epithelial cells; many little round bodies (micrococci) sticking to them, and also in active motion in the surrounding fluid; and numerous little rods of various lengths, also partly in motion. Herr F. remarked that without thorough examination such a case might be confounded with diphtheria.

Paralysis and Cramp.

(1.) On Palsy of the vocal cord from intra-cranial Syphilis. J. Hughlings Jackson, M.D., F.R.C.P. &c. British Medical Journal, Jan. 25, 1873.

(2.) Eigenthümliche Sprachkrämpfe. Von cand. Med. Moeli in Leipzig. Archiv der Heilkunde, xiv. Jahrgang, i. Heft.

(3.) Aneurism of the Arch of the Aorta, with laryngeal Symptoms; death; clinical remarks. G. Johnson. Lancet, Dec. 7, 1872.

(4.) Changes produced in the Recurrent Laryngeal Nerves in Cases of Thoracic Aneurism. R. J. Lee, M.D. Lancet, Jan. 25, 1873.

(5.) A Case of Diphtheritic Paralysis (Headland) Lancet, Feb. 8, 1873.

(6.) Paralysis of left vocal cord; relief to dyspnœa from tracheoto-

my; death. Autopsy—aneurism of arch of aorta. TEALE. Lancet, Feb. 8, 1873.

(7.) Paralysis of both posterior crico-arytenoids; aneurism of arch of aorta; relief from tracheotomy. On autopsy, only the left vagus and recurrent found implicated in the walls of the aneurism. GEORGE JOHNSON. Lancet, Jan. 4, 1873.

(8.) Paralysis of vocal cords; tumor in the œsophagus, involving both recurrent laryngeal nerves. LE FORT. L'Union Médicale, April 10, 1873.

(9.) Pharynxpolypen mit reflectorischer Stimmbandlähmung. Bd. 11, Heft 7, p. 575. GERHARDT. Deutsches Archiv f. Klin. Med.

(10.) Functioneller Larynxkrampf. GERHARDT. Deutsches Archiv f. Klin. Med. Bd. 11, Heft 7, p. 580.

(11.) Frequently recurring spasm of the glottis dependent upon chronic hyperæmia of the larynx. A. H. SMITH, M.D. N. Y. Med. Record, Aug. 15. [Relieved by four applications of perchloride of iron and glycerine (℥i., ℥i.)].

(12.) Die Laryngoscopie an Thieren. SCHMIDT. Tübingen. 1873. Pp. 106.

(1.) Dr. Jackson calls attention to the occasional nervous origin, so to speak, of syphilitic aphonia. He says it would be unsafe, when a patient who is manifestly the subject of syphilis, becomes aphonic, especially if he has any nervous symptoms, to conclude, without looking into that organ itself, that he had syphilitic disease of the larynx. It would be as unjustifiable as concluding, without ophthalmoscopic examination, that his blindness, if he were blind too, was owing to syphilitic changes in the eye itself. The fact is that in some cases of "syphilitic aphonia" there is no other abnormality discernible in the larynx than paralysis of one vocal cord. In these cases, the palsy may safely, in a person presenting outward signs of syphilis, be put down to syphilitic disease affecting the rootlets of the eighth nerve. Dr. Jackson is convinced that, in practice, aphonia from intra-cranial syphilis is not exceedingly uncommon. He refers to two cases corroborative in clinical and *post-mortem* appearances of the above statements, which cases were published in the London Hospital Report, vol. iv., 1868, pp. 314 and 318.

(12.) In our last report, we gave an abstract of an article by Schmidt, in which he gave an account of the appearances in the larynx of a cat, after section of one recurrent laryngeal nerve. In the present monograph, he gives the results of further experiments, giving the results of section of various laryngeal nerve branches and muscles, singly and in combination, as seen in the laryngeal mirror. The series of experiments is quite complete, the notable exception being that of section of the spinal accessory, which it may be very hard or impossible to make in the cat before anastomosis. The only reference to the spinal accessory seems to be an interrogation mark after one of the conclusions quoted from the results of Navratil's experiments, i. e. that this nerve (the spinal accessory) "has no influence on the muscles of the vocal cords."

The experiments are preceded by an account of the anatomy and the normal laryngoscopic appearance of the cat's larynx.

After section of *both recurrents*, the following appearances were noted: on inspiration, the vocal cords approached each other so that

they almost touched, and during forcible inspiration approached still nearer each other, and separated a little during expiration. Touching the vocal cords, ventricular bands and the epiglottis with the sound did not excite cough so quickly as in the normal condition. Respiration was much less frequent, deeper, and was for some hours after the operation accompanied by loud râles. The inspirations lasted much longer than the expirations. After a few hours, the respiration became quiet, and remained so unless the animal was disturbed, as by laryngoscopic examination. On the third day, the respiration was quiet, even during the examination. The laryngoscopic examination showed that the glottis was always open, and was somewhat wider than it was on the preceding day, even at the end of expiration.

In the account of the effects of section of one recurrent laryngeal nerve, an additional fact, besides those mentioned in our last report, and one of considerable importance, is given, i. e. that the sensibility seemed to be somewhat diminished on the affected side. After section of *one superior laryngeal* nerve, at the first glance, it was difficult to notice any variation from the normal condition, but careful observation showed clearly that the vocal cord of the side on which the section had been made, was a little longer than that of the opposite side, and that the vocal process of this side stood a little further outward and backward. The sensibility of the side on which the section was made was much diminished. In a second animal, the sensibility on the side of the operation was completely lost.

The voice in the first case immediately after the operation was strong, but hoarse and somewhat lower in pitch.

In the second case, it was much hoarser and deeper, and the animal, which before the operation had frequently mewed, in the two first days after the operation was remarkably quiet, but on the third day mewed again frequently. The variation in the form of the glottis is due to the paralysis of the left crico-thyroid muscle. The left crico-arytenoideus posticus obtains a little preponderance, and draws the left arytenoid cartilage outward a little more forcibly.

After section of *both superior laryngeal nerves*, laryngoscopic examination showed that the glottis had a symmetrical form and offered no noticeable departure from the normal condition. The changes described above, now having occurred on both sides, were so slight as to be unnoticeable. In one animal, the sensibility was much less than in the normal condition, and in the other it was completely abolished. The voice was deeper and much hoarser than after section of one superior laryngeal nerve. Dr. Schmidt says that the function of approximating the lower edge of the thyroid cartilage to the upper border of the cricoid, and thereby increasing the tension of the cords, is often very erroneously ascribed to the crico-thyroid muscle.

According to others, the muscle draws the upper border of the cricoid cartilage upwards. If the crico-thyroid muscles, having been laid bare, are irritated by the electric current, the latter movement is in fact accomplished.

The function of the crico-thyroid muscles in phonation, therefore, according to this result, would be to maintain the anterior insertions of the vocal cords in a fixed position.

Division of the *crico-thyroid muscle* on one side gave a little different result from division of one superior laryngeal nerve, inasmuch as the

vocal cord on that side presented a rectilinear edge, which was not the case when the nerve was divided. Farther experience can alone determine whether this was an individual peculiarity or whether the division of the superior laryngeal nerve in fact causes a little variation in the form of the glottis from that seen in division of the muscle simply.

Division of the *crico-thyroid* muscle and of the lateral *crico-arytenoid* muscle on one side produced the following laryngoscopic appearances. During ordinary respiration, the glottis had the same form as after division of the crico-thyroid alone.

On phonation, however, the arytenoid cartilage, with its vocal cord, did not move up to the median line on the side which had been operated upon, but the other arytenoid cartilage and vocal cord crossed the median line, producing a bend in the line of the glottis with its convexity towards the side which had been operated upon. Moreover, the arytenoid cartilage of the affected side stood farther backward and upward in consequence of the action of the posterior crico-arytenoid. The voice was still deeper and hoarser than in paralysis of the crico-thyroid alone.

Division of *both crico-thyroid and lateral crico-arytenoid muscles* produced the following appearances. The glottis was of a perfectly symmetrical, regular, triangular form. The two sides of this triangle formed perfectly straight lines, so that no projection was noticed in the place of the vocal processes. The arytenoid cartilages were strongly rotated outward, and executed scarcely any respiratory movement.

On phonation, the arytenoid cartilages touched quite symmetrically in the median line; they executed no movement backwards and upwards. Between the vocal cords and the processus vocales there remained a large, triangular opening. The voice was replaced by a very hoarse, deep and rather weak noise, as was to be expected on account of the large opening remaining in the glottis, even during attempted phonation. The sensibility of the vocal cord in the last three cases was completely normal. The last experiment shows that the thyreo-arytenoidei muscles, which are here uninjured, bring the vocal cords considerably nearer the median line on attempted phonation. A complete approximation, however, is impossible, because the conjoint action of the lateral crico-arytenoid is wanting.

According to these experiments, then, we find the results (1) of paralysis of one crico-thyroid muscle to be rotation of the arytenoid cartilage outward, and a rectilinear position of the edge of the vocal cord during ordinary inspiration; (2) of paralysis of both crico-thyroid muscles to be a symmetrical triangular glottis with rectilinear edges of the vocal cords and strong rotation of the arytenoid cartilages outward.

The principal results of paralysis of the lateral crico-arytenoid muscle are as follows: (1.) On one side, during ordinary respiration, no change; during phonation, a curve of the line of the glottis towards the affected side and two chinks, between the vocal cords and between the processus vocales. (2.) On both sides, during phonation, a large, triangular opening remains between the vocal cords and the processus vocales.

So we see that on section of the crico-thyroid muscle changes were found only on ordinary respiration, and, on section of the lateral crico-arytenoid, only on phonation.

Section of the arytenoideus transversus muscle.—Immediately after the section, the cartilaginous glottis was widened a little posteriorly. The interstium inter-arytenoideum became somewhat larger. During quiet respiration, the rima glottidis, between the posterior ends of the vocal cords, the processus vocales and anterior ends of the cartilaginous glottis, is somewhat narrower than normal. It strikes the eye so much the more, as the ary-glottis is somewhat broader. On intonation, the vocal cords and vocal processes touched each other, but a triangular opening remained between the arytenoid cartilages posteriorly. The voice was hoarse, deeper and weaker. Diplophonia (Gibb) at times existed.

Section of the thyreo-arytenoideus muscles and the recurrent branches going to them.—On intonation, the edges of the cords, instead of being straight, were concave, thus leaving a small, elliptical opening. The voice was weak, hoarse, and lower than usual.

Section of both crico-arytenoidei postici muscles.—On respiration, both vocal cords stood near the median line. The arytenoid cartilages were nearer each other than after section of both recurrent nerves. On inspiration, the vocal cords approached each other, and on expiration separated. After section of the second muscle, the dyspnœa was so great that tracheotomy was performed. There was no voice, even when the tracheal opening was closed.

Dr. Schmidt also tried the application of morphia, and morphia and chloroform to the larynx of the cat without much effect upon its sensibility.

We have given above only a mere outline of a few of the experiments made by Dr. Schmidt. The monograph contains many others, and we recommend its perusal to those interested in the physiology of the larynx.

Bronchocele.

(1.) Ein Fall von acutem Kropf. Ludwig, in Pontresina. Archiv der Heilkunde, xiv. Jahrgang, i. Heft. Berliner Klinische Wochenschrift, March 3, 1873.

(2.) Goitre. Gross. Phil. Med. Times, May 17th, 1873.

(3.) Exstirpation eines Kropfes. Fenwick. (Presse Med. xxv. 13, p. 101.) Schmidt's Jahrb. June 23.

Ulceration and Tuberculosis.

(1.) Specimen of complete loss of substance of the larynx from spphilitic (?) ulceration. Silver. Med. Times and Gazette, June 14, 1873.

(2.) Isambert. Prèsentation des pieces anatomiques (pharynx et larynx) [tuberculous granulations] L'Union Medicale, Jan. 28, 1873.

(3.) Syphilitic ulceration of the larynx; dyspnœa—tracheotomy; death. White. Phil. Med. Times, June 28, 1873.

Abscess and Perichondritis.

(1.) Ein Abscess der linken Ary-epiglottischen Falte. B. Wagner. Archiv der Heilkunde, xiv. Jahrgang, i. Heft.

(2.) Retro-pharyngeal abscess, in a child of twenty-five months, opened and cured. Roustan. Bulletin Médical du Nord de la France, March, 1872, Lancet, Nov. 16, 1872.

(3.) Abscess of the larynx in young children. PARRY. Phil. Med. Times, June 14, 1873.

(4.) Perichondritis nach Typhus. Heilung. GERHARDT. Deutches Archiv f. Klin. Med. Bd. ii. Heft 7, p. 578.

(5.) Laryngeal abscess simulating croup. Dr. STEPHENSON. Edinburgh Med. Journal, Aug. 1873, p. 174.

STRICTURE.

(1.) SCHROETTER. Ueber Larynxstrikturen. Wien. Med. Woch. xxiii. 11, p. 251. (Schmidt's.)

Reprinted from the Boston Medical and Surgical Journal, Nov. 27, 1873.