strength and psychical irritability. The specific weight of the blood is also increased, and the amount of hæmoglobin greater than usual. Myxœdema produced by disease of the thyroid gland must therefore be regarded as a disease of nutrition. *Michael.*

Frank (Wien).—*Contribution to the Knowledge of Lymph Cysts.* "Internat. Klin. Rundschau," 1893, Nos. 13 and 14.

DESCRIPTION and illustration of a case of a large lymph cyst of the neck. *Michael.*

Karewsky.—*On Fistula Colli Congenita.* Berliner Med. Gesellschaft, Meetings, Mar. 1 and 8, 1893.

THE relation of these fistulæ to embryonic visceral arcus is not yet certain. The author has observed twelve cases, five complete and seven incomplete. Sometimes they resemble swollen glands. Sometimes an internal opening in the tonsil is found, or in the pharyngeal wall. All fistulæ have a relation to the glosso-pharyngeal nerve. As to treatment, deep dermoids must always be extirpated, because they may transform into cancers. Operation upon the fistulæ is only indicated when they cause severe symptoms, such as dyspnœa and difficulty in swallowing. Radical cure only is possible if nothing remains of the fistula. The complete fistulæ are all cured after the first operation; the incomplete often require secondary operations.

SCHLANGE believed that embryonic fistulæ are not so rare as is generally believed, and showed the specimens from two cases.

B. FRAENKEL mentioned the existence of fistulæ in the tonsillar region. *Michael.*

EAR.

Siebenmann (Basle).—*Functional Examination of the Normal Ear.* "Arch. of Otol.," Jan., 1893.

FROM the examination of a number of young adults with apparently normal ears and good hearing—whispering and Politzer's acoumeter at fifteen mètres—the observer arrived at the following conclusions:—

(1) The healthy ear in youth possesses a hearing distance of from twenty-five to twenty-six mètres for whispered numbers (German), and of at least fifteen mètres for the Politzer acoumeter. (2) Schwabach's test—absolute duration of "bone-conduction"—with the fork A reveals not inconsiderable differences even in perfectly normal ears. [Hence the necessity for being guided only by well-marked variations.—ED.] (3) In Weber's test—tuning-fork on vertex—the fork was heard louder in one ear in one-eighth of the normal cases. (4) Rinne's test—relative duration of "air-" and "bone-conduction"—with the Bezold-Katsch fork A gives in normal cases a "positive" result, *plus* forty-eight seconds, being the average length of persistence of hearing opposite the meatus after cessation of hearing through the bone. To get this at its maximum it

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was found necessary to allow a few seconds to intervene between the removal of the fork from the bone and its location opposite the meatus. [To allow for recovery of the auditory nerve from its normal exhaustion.—ED.] (5) The upper tone-limit is fairly constant, and lies between do^9 and mi^9 (C^7 and E^7), as determined by means of Koenig's rods. With Galton's whistle the range is within ·6 of the minor division of the particular note which represents the limit. (6) As regards the lower tone-limit, the Bezold-Katsch fork C–1 (thirty-three double vibrations per second) is perceived in all normal cases for about sixteen seconds with a medium blow. [The reader will in this connection find Bezold's more recent results in his paper in the "Zeitschrift für Ohrenheilkunde" for December, 1892, abstracted on page of this number of the JOURNAL OF LARYNGOLOGY.—ED.] (7) Aspiration of the tympanic cavity—inspiration with closed mouth and nostrils—shortens the duration of perception of the fork A both by air- and bone-conduction. (8) Valsalvan inflation diminishes air-conduction for the fork A, and usually increases bone-conduction. (9) Under the influence of Valsalvan inflation the upper tone-limit is usually raised; frequently also the perception of the highest notes of the scale is rendered more acute; less frequently the pitch of the middle notes of the scale is altered. Aspiration, on the other hand, either does not influence the upper tone-limit at all, or lowers it somewhat. (10) Air-conduction for the fork C–1 is diminished both by auto-inflation and aspiration. In isolated cases the lower tone-limit is raised a tone and a half. (11) Increased tension of the annular ligament of the stapes through direct pressure upon the stapes augments bone-conduction. This was shown by an interesting case in which the membrane was lost and the ossicles exposed by disease. The tuning-fork A was held lightly on the skull till its tone was lost, and it was again perceived when pressure was exercised on the incudo-stapedial articulation by means of a probe. [The apparent contradiction between this result and that of the well-known Gellé's experiment calls for closer examination.—ED.] (12) Tamponing the niches of both the labyrinthine windows does not influence the perception of high notes.

[The value of such time-consuming experiments as affording a basis for our functional examination of diseased ears cannot be over-rated, and their repeated confirmation and extension are much to be desired.—ED.]

Dundas Grant.

Siebenmann (Basle).—*Results of the Functional Examination in Cases of Pure Catarrh of the Eustachian Tubes.* "Arch. of Otol.," Jan., 1893.

IN a number of cases Siebenmann found the following results of functional examination:—(1) Diminution of air-conduction—considerable lowering of hearing-power for conversation as from 15 mètres down to 5, 1·5 or 1 mètre, or even 15 or 10 centimètres for whispering. (2) Increase of bone-conduction to the extent of 10 or 15 seconds. (3) Lateralization in the more affected ear of the sound of a tuning-fork placed on the vertex—Weber *plus*. (4) Shortening of Rinne's test or its reversal to negative. (5) Elevation of the lower tone-limit even up to A^{-1}. (6) Reduction of the upper tone-limit as tested by Galton's whistle.

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The effects of successful inflation were :—(1) Improvement in air-conduction—enormous increase in the hearing-power for conversation, watch, etc. (2) Augmentation—lowering—of the lower tone-limit. (3) Shortening of the negative Rinne test, which may even become positive—relative increase of air- as compared with bone-conduction. (4) The upper tone-limit remains unchanged, or the changes are scarcely appreciable. This is attributed to the hyperæmia *e vacuo* affecting the portion of the cochlea nearest the fenestra rotunda, namely, the portion of the membrana basilaris which has the shortest fibres, and, therefore, corresponds to the highest tones. This hyperæmia does not pass off with the first inflation. (5) Bone-conduction is not appreciably diminished. It is supposed that the hyperæmia affects the annular—stapedio-vestibular—ligament and produces a rigidity of the joint which the first inflation cannot dispel. [It will be remembered that in such cases auscultation during inflation reveals sounds indicative of Eustachian obstruction, but the process is followed by extreme improvement in hearing. Inspection shows little beyond indrawing of the membrane, which disappears almost entirely after inflation. Bacterioscopic examination gives negative results, as shown by the observations of Arno Scheibe, abstracted on page 404 of the JOURNAL OF LARYNGOLOGY for September, 1892, from the original article in the "Zeitschrift für Ohrenheilkunde" for April, 1892.—ED.] *Dundas Grant.*

Bezold (Munich).—*A Further Communication on the Continuous Tone-Range, especially on the Physiological Upper and Lower Limits of Audition.* "Zeitschrift für Ohrenheilk.," Dec., 1892.

THE author finds as *average uppermost limit* of audition in a number of normal ears that indicated by the mark 2·03 of Galton's whistle, the variations being between 1·5 and 3·6. Like Zwaardemaker, he found a lowering of the limit as age advanced, but to a less extent and with less regularity than did that observer. The *average highest limit for the different ages* was :—

	Age 10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	Above 60.
Galton's whistle	1·86 ...	1·81 ...	1·97 ...	2·22 ...	2·16 ...	2·29

As regards the *average lowest limit*, he considered comparatively negative results obtained with forks vibrating no more slowly than 19½ times per second as insufficient, and he got forks giving all rates from 30 down to 16, by which he found as the average 17·04. The *averages according to age* were shown thus :—

	Age 10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	Above 60.
Vibrations per second...	16·72 ...	16·26 ...	16·92 ...	17·02 ...	17·20 ...	19·92

The comparative smallness of these variations is evident, and Bezold promises to publish the results of investigations with regard to the diminution of hearing-power for speech as age advances.

Dundas Grant.

Milligan (Manchester).—*Mastoid Operation.* "Brit. Med. Journ.," Apr. 8, 1893.

THE author refers to two patients on whom he had performed successfully Stacke's modified mastoid operation for chronic suppurative middle-ear

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disease. The process of repair took two and a half months. This procedure was recommended when a fair trial had been given to local treatment, so as to free the patient from a source of ever-present danger.

Wm. Robertson.

Crawford (Liverpool).—*Squamous Epithelioma of the External Ear.* "Brit. Med. Journ.," Mar. 18, 1893.

THE growth, in a man aged sixty-four, began as a small wart in the upper part of the helix, which increased gradually for seven months, when traumatism accelerated its development, so that in fourteen months it occupied the whole of the external ear except the concha and lobule. The mass averaged an inch in thickness, being particularly soft and papillomatous. It was removed by slicing it off, leaving the deeper part of the concha, the antetragus, and the lobule. Sections showed well-marked squamous epithelioma. *Wm. Robertson.*

Gruber (Vienna).—*The "Secondary Suture" in Mastoid Operations.* "Monats. für Ohrenheilk.," Dec., 1892, page 352.

PROF. GRUBER recommends the use of sutures after mastoid operations, not in the first instance, but after the wound has for a shorter or longer time been plugged with antiseptic gauze. By this he believes that the treatment in suitable cases is much shorter than when the wound is made to granulate from the bottom only. He follows this plan in cases where the operation is of an exploratory character, and where, for some reason or other, instant closure of the wound is undesirable, but seems justifiable later on. He finds it valuable in all cases in which it is not necessary to keep the wound open, even in cases where it is very deep, and not lined with granulations, but with healthy osseous substance. Depth is no contra-indication, and especially if there is no communication with the tympanum, the mastoid disease being shut off from that cavity in some cases in which the tympanum has been affected. It must be avoided whenever the wound communicates with a neighbouring suppurating cavity until that suppuration has ceased. It is sometimes difficult to say when this cessation is permanent. In doubtful cases the wound may be stitched in part, a small "wick" of antiseptic gauze being left in at the most suitable situation. In the operations all surgeons are most careful to preserve the periosteum, a practice directly at variance with the principle of keeping the wound open for any considerable time, and Gruber in his endeavours to obtain early closure includes it in his suture, the needle being passed deeply through this structure. [This progressive step is worthy of every operator's careful consideration.—ED.]

Dundas Grant.

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