in the nasal mucous membrane. The occurrence of interstitial hæmorrhages in leukæmia is almost the rule, but their development into abscesses is rare.

Thomas Guthrie.

## LARYNX.

Wilson, J. Gordon.—Some Points in the Comparative Anatomy of the Larynx in the Anthropoidea. "Annals of Otology, Rhinology and Laryngology," December, 1910, p. 951.

An interesting paper, the result of a study, macroscopic and microscopic, of the larynges of a Chinaman, an orang-outan, several macacus monkeys, and a marmoset. These organs the author compared with those of an adult and infant Caucasian, a young lion, the dog, cat, and horse. To be appreciated properly the paper should be read in the original. To one fact, however, prominence must be given: that in the larynx we have an organ whose recent phylogenetic history shows marked developmental progress, and whose present state is that of great variability, the latter fact suggesting developmental activity. The progress of the larynx is markedly forward, and it may be that we shall yet be able to demonstrate subtle anatomic differences comparable to the higher physiological functions in man.

Macleod Yearsley.

Shurly, B. R.—An Investigation of Post-operative Conditions Five to Ten Years after Intubation. "Ann. of Otol., Rhinol., and Laryngol.," vol. xix, No. 4, p. 1063.

The author deals in detail with thirty cases, all intubated for laryngeal diphtheria. The conclusions offered are: (1) Intubation in laryngeal diphtheria is required more frequently where marked tonsillar hypertrophy exists. (2) Pathological adenoids and tonsils are prominent predisposing factors in diphtheritic infections of the larynx. (3) No deleterious effects of antitoxin were noted. (4) Laryngeal paralysis is extremely rare after intubation. (5) Little attention is often given by the physician or patient to nasal obstruction until serious damage results to the general health. (6) Numerous pathological conditions of the upper respiratory tract may exist without symptoms or annoyance. (7) Scar-tissue was observed in two cases, insignificant and producing no modification of function. (8) No case of laryngeal paralysis was found. (9) The pathological effects of diphtheria upon the tonsillar ring are numerous and aggravated. (10) Children developing laryngeal diphtheria show a marked tendency to other infections of childhood. (11) Chronic catarrh of the upper respiratory tract is usual after severe diphtheria.

\*\*Macleod Yearsley\*\*

Claoné, R. (Bordeaux).—Calcined Magnesia in the Treatment of Laryngeal Papillomata of Children. "Ann. des Mal. de l'Oreille, du Larynx, du Nez, et du Pharynx," vol. xxxvi, Part I.

A child, aged six, was completely aphonic. No respiratory trouble. The thorax was deformed and the patient was markedly anæmic. Multiple papillomata occupied the vocal cords, ventricular bands, and aryepiglottis folds. The growths were removed under chloroform anæsthesia by the direct method. Recurrence took place after a month. A course of arsenic, and subsequently one of iodide, was tried without

result. Operative treatment was again carried out, only to be followed by another relapse. Aware of the happy results experienced by Dr. Frèche in the treatment of cutaneous papillomata by the internal administration of calcined magnesia, the author was induced to try the method: 5 grm. were administered daily; at the end of a fortnight there was a manifest improvement. Treatment was suspended for fourteen days, after which time a dose of 0.50 gr. was continued for four months. The papillomata gradually disappeared; the largest underwent thinning of their pedicles, withered, and were expectorated. Details of a second case, attended with a like result, are recorded. A third case, not published, was that of a child suffering from laryngeal and tracheal papillomata, under the care of M. Sargnon, to whom it had been sent for laryngostomy. Before operating on the larynx M. Sargnon endeavoured to clear the trachea; removal was carried out endoscopically twice a week for some months, but recurrence always ensued. At the writer's suggestion calcined magnesia was given internally and the growths were dusted with the same material. A very notable improve-

The author remarks that though the results of treatment in these cases may have been coincidental, he is inclined to take the contrary view, the more so as in veterinary practice, where papillomata are so common in the buccal cavity of the dog, calcined magnesia is the remedy.

H. Clayton Fox.

## EAR.

Shambaugh, G. E.—The Physiology of Tone-perception. "Ann. of Otol., Rhinol., and Laryngol.," vol. xix, No. 4, p. 983.

An able paper in support of the author's contention that the membrana tectoria is the chief factor in tone-perception. His interest in the question was aroused by certain anatomical conditions which convinced him that Helmholtz's basilar membrane theory is untenable. The study of the problem of tone-perception should be based upon anatomical investigation, since it is one which can be approached only indirectly and does not permit of actual demonstration. Theories have been worked out hitherto independent largely of anatomical considerations. Shambaugh points out the close structural analogies between the macula acustica of the utricle and saccule with its otolith membrane, the crista acustica of the ampullæ with its copula, and the organ of Corti of the cochlea with its membrana tectoria. The close structural analogy of these end-organs suggests that they react to stimuli in much the same manner. Helmholtz's theory is reviewed and the following anatomical objections indicated: (1) The fact that the fibres of the membrana basilaris are interwoven like those of a flat tendon. (2) The fibres are so embedded between cellular layers above and below that it is not easy to see how they can be acted upon by impulses in the labyrinthine fluids. (3) The fibres become thicker and less tense towards the lower end of the basal coil, instead of thinner and tenser. (4) A blood-vessel is attached to the under-surface of the basilar membrane throughout its length, which makes any response to impulse the same at all times impossible. This alone is sufficient to render the theory untenable. On the other hand, the hair-cells are normally in actual contact with the membrana tectoria.