

ABSTRACTS

EAR

Ménière's Disease. A. C. FURSTENBERG, G. RICHARDSON, and F. D. LATHROP. (*Archives of Otolaryngology*, December 1941, xxxiv, 6.)

In 1934 the writers undertook water-balance studies on patients with Ménière's disease, and suggested that cerebral hydration or water-logging might be the cause and that removal of body fluids, or dehydration, would restore the normal equilibrium.

Further investigation showed that it was not the water but its sodium content which produced the vertigo. The tissues responsible had an increased avidity for the sodium ion. The treatment, therefore, was to prescribe a sodium-free diet and to assist the elimination of sodium by administering the acid-forming salt, ammonium chloride. One hundred and fifty cases were satisfactorily treated by this method and the present paper is based upon a study of thirty-five of those patients who have reported after a lapse of several years. The exact cause of Ménière's disease has never been determined. Hallpike and Cairns believe that the pathological change is within the internal ear, and Crowe suggests that either chemical or pressure changes in the labyrinthine fluids are responsible. The lesion cannot be in the acoustic nerve, as the facial nerve is never involved. Nor can the lesion be in the medulla or pons, as there is no accompanying neurological lesion. Many attempts have been made to estimate the sodium content of the blood in Ménière's disease, but without encouraging results. Yet it need not be assumed that a retention of sodium in the otic labyrinth must of necessity be accompanied by an increase of sodium in the blood. In Addison's disease the sodium level of the blood may be normal, although the adrenal cortex, which is said to control sodium metabolism, may be extensively diseased. It is reasonable to presume that the slight retention of sodium which may occur in the labyrinth in cases of Ménière's disease need not be associated with a similar increase of sodium in the blood.

The thirty-five cases described in this paper were each treated for periods varying from three months to seven years, the average duration of treatment being thirty-two months. Each patient had a history of intense attacks of vertigo with nerve deafness, persistent tinnitus, and sometimes nausea and vomiting during the attacks. The ages varied from 16 to 67 years; the sex incidence is not mentioned. Every patient was in hospital for seven to ten days at the commencement of treatment. This the writers consider to be

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very important. As to the results, 83 per cent. were relieved of the vertigo, 48 per cent. of the tinnitus, and 9 per cent. of the deafness. In six patients the treatment was a failure and two of them subsequently submitted to division of the vestibular nerve.

The treatment consisted in a salt-free diet, with no restriction, but also no increase, of water taken. Animal protein and cereals were unrestricted, and enough was given to maintain desirable weight. Vegetables, fruit and milk were limited. As regards medication, six "7½ grain" capsules of ammonium chloride were given with meals for three days, then omitted for two days. Occasionally the drug is not tolerated and a fairly effective substitute is daily vigorous exercise combined with moderate but judicious starvation. Treatment must be continued for at least six weeks, after which the drug may be stopped, though the diet is continued. The large doses of ammonium chloride may be given for an indefinite time without any injurious effects.

DOUGLAS GUTHRIE.

Primary Pseudo-Cholesteatoma of the Ear. KENNETH M. DAY.
(*Archives of Otolaryngology*, December 1941, xxxiv, 6.)

The writer suggests that the term cholesteatoma should be limited to the rare condition of true congenital tumour, developing from a misplaced epidermal anlage. Cholesteatoma resulting from an ingrowth of epithelium through a defect of the drum membrane should be called pseudo-cholesteatoma. It may be primary, arising from a defect of Shrapnell's membrane, regarding which there has been much difference of opinion, or secondary, the more common type associated with suppurative otitis, in which the skin from the external canal grows into the middle ear to replace destroyed mucous membrane. The following observations may be confirmed in a series of cases with depression or perforation of Shrapnell's membrane :

1. There is usually a sclerotic type of mastoid.
2. Suppuration, if present, is confined to the attic.
3. Dry perforation of Shrapnell's membrane without otitis or cholesteatoma is not uncommon.
4. The hearing is slightly, if at all, affected.
5. Cholesteatoma may develop behind Shrapnell's membrane with perforation of the membrane but no sign of otitic infection.
6. The disease is insidious and there are rarely any symptoms.
7. If there is perforation of Shrapnell's membrane and also suppuration, cholesteatoma is always present.
8. Middle-ear suppuration, according to Nager, never perforates Shrapnell's membrane.
9. The Shrapnell perforation may close.

Nose

To those findings the writer adds the observation that closure of the Eustachian tube will not cause retraction of Shrapnell's membrane. The retraction is caused by a closure of the attic from the middle ear to the entrance of irritating fluids or foreign material into the latter. This is analogous to the reaction of the middle ear following a closure of the Eustachian tube.

The writer considers that the common practice of bottle feeding of an infant when lying on its back is the likeliest way of causing fluid to enter the Eustachian tubes and middle ears. No adult can swallow satisfactorily when lying on his back, as the fluid tends to enter the nasopharynx. In the writer's examination of ears it has been found that about 12 per cent. show a depression or defect of Shrapnell's membrane. When surgical intervention is indicated, the Bondy operation gives the best results. A series of six cases is reported in support of the above contentions, and there are fifteen references to literature.

DOUGLAS GUTHRIE.

NOSE

Diagnosis of Allergy of the Nose and Paranasal Sinuses.

F. K. HANSEL. (*Archives of Otolaryngology*, December 1941, xxxiv, 6.)

The author, whose researches on allergy are already well known through the medium of his excellent book, discusses in the present paper some problems of diagnosis. The incidence of allergy has been estimated by various writers with widely varying results but it is agreed that about 3 per cent. of all ear, nose and throat cases, and about 30 per cent. of all nasal cases, show evidence of allergy. Many of the allergic patients had already undergone various unsuccessful operations. In spite of the vast literature on the subject, the diagnosis of allergy is still frequently missed. Many children suffering from frequent colds and bronchitis are subjected to tonsillectomy for insufficient reasons. This operation should never be performed primarily for the relief of allergic symptoms. The operation of submucous resection of the septum is also often needlessly performed in cases of nasal allergy.

Typical allergy is easily recognized. The symptoms are sneezing, itching of the nose, profuse discharge of mucus, nasal obstruction, and the signs include pallor of the mucosa, presence of eosinophils in the sections and cloudiness of the sinuses on X-ray examination.

Atypical nasal allergy may simulate a common cold at the onset, but the cessation is often sudden and complete. Sometimes the chief complaint is nasal obstruction with no sneezing and little discharge.

Nasal allergy is often mistaken for non-allergic vasomotor rhinitis or for ethmoiditis. Diagnosis may be obscured by some

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other sign such as aural discharge, swelling of the palate, frontal headache and cough.

The paper is illustrated by brief histories of fifteen cases and there are twenty-nine references to literature.

DOUGLAS GUTHRIE.

Persistent Myalgia following Sore Throat. L. E. HOUGHTON and E. IDRIS JONES. (*Lancet*, 1942, i, 196.)

The authors review seven cases of the nursing staff of a hospital, who developed sore throat. From eight to twenty-nine days later, six of them developed pains in the muscles and severe headache. Two cases showed subungual hæmorrhages in the toes. Pyrexia and pains lasted for up to five months and there were menstrual disturbances and spontaneous epistaxis. All investigations done, including skin tests and precipitin reactions for trichiniasis, gave a negative result. Biopsy of a painful indurated area in a muscle showed no abnormal findings and no treatment was found to be of any value. All the cases made a complete recovery without any sequelae. It is suggested that the condition was due to an unidentified myotropic strain of virus.

MACLEOD YEARSLEY.

MISCELLANEOUS

Absorption of Quinine into the Cerebrospinal Fluid of the Fœtus in Utero. MARSHALL TAYLOR, DYRENFORTH and POLLARD. (*Annals Otol. (St. Louis)*, 1941, 1, 1030.)

It has been shown that quinine has the status of a protoplasmic poison, and its harmful effects may readily be exerted on the sense organs. In the case of the ear, the external hair cells of the organ of Corti are particularly affected. Administration of this drug, therefore, may damage this apparatus in the adult, child, or even more so, perhaps, in the fœtus. In addition to the effects of quinine on the hair cells, the ganglion cells and the endothelium of the small blood vessels, there is a reduction of pressure in the endolymph and the result is an ischæmia, an anoxæmia and eventual degeneration of the cells and fibres of the basal turn of the cochlea.

It can be shown that quinine is present in the cerebrospinal fluid of new-born infants whose mothers have been treated with quinine before labour. The cerebrospinal fluid is secreted by the choroid plexus and it can be assumed that the endolymph is secreted by the stria vascularis. It can be also assumed with confidence that where quinine is excreted into the cerebrospinal fluid it will also be excreted into the endolymph. It was shown that quinine was present in the cerebrospinal fluid of women in whom labour had been induced by administration of quinine.

Miscellaneous

The writers have carried out an investigation in seven cases in which primiparae were given five grains of quinine three or four times a day in an attempt to induce labour. The women received total amounts of quinine varying from 30 to 120 grains. In each case labour resulted in a live child and forty-eight hours after birth each child was subjected to lumbar puncture on one occasion only. From seven to ten cubic centimetres of fluid were withdrawn and tested for quinine. The test is a complicated and lengthy chemico-physical proceeding consisting of the extraction and separation of quinine and its deposition in crystalline form by the addition of solution of potassium chromate. The crystals are recognized under the microscope as characteristic long needles. In the last two cases quinine was also found in the urine of the foetuses, but was not looked for in the other five.

The authors sum up by saying that the indiscriminate use of cocaine in inducing labour may have malignant influences on the foetal ear.

F. C. ORMEROD.

The Psychophonasthenis Syndrome. JAMES S. GREEN. (*Annals Otol.* (St. Louis), 1941, 1, 1177.)

The author describes a condition of the voice which simulates a legitimate somatic condition (myasthenia laryngis) but which is itself psychic in origin. The symptoms are those of sensitiveness of the throat, which feels tight and constricted, with choking sensations on attempting to speak. The voice is tremulous, pinched and grating with sudden variations in pitch or equally sudden cessation and later return. Its symptoms are almost identical with those of phonasthenia or weak voice as it occurs in singers, public speakers, etc. This condition has been recognized since 1600 and has been discussed from time to time in recent years.

There is usually some pathological condition, however small, to account for it. In psychophonasthenia there is no discoverable lesion but the personality of the patient usually gives some clue as to the functional nature of the voice changes. The patient is usually very suggestible, and in the majority of cases is cultured, well educated and intelligent, though shy and retiring and desirous of avoiding social contacts. These peculiarities have usually antedated the voice trouble by some considerable time. Clinically, the patient shows signs of sympathicotonia—a labile pulse and blood pressure with undue tachycardia when under emotional stress. He is nervous and tense and his reactions are uncontrolled. The outstanding finding is the marked instability of the vegetative nervous system with special dysfunction of the vasomotor apparatus.

There is evidence of a neurotic tendency in the family, particularly in the parents, where intellectual or artistic achievements have

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been given undue importance and the patient approaches life with a one-sided viewpoint. His achievements fall below his own standards and those of others, and as he gets older and more responsibility is demanded of him, he develops a sense of inadequacy and inferiority. It is not far from this stage to that of the psychic disturbances such as the one under consideration. The critical point when these disturbances first appear is often that at which the individual is asked, or has the opportunity, to take on work of a more important nature, carrying with it greater responsibilities. The feelings of hesitation and uncertainty give rise to the psychic phenomena described and which provide a subconscious method of "escape".

F. C. ORMEROD.

Cocaine Addiction — does it Concern the Otolaryngologist?

WALTER J. BRISTOW. (*Annals Otol. (St. Louis)*, 1941, 1, 1161.)

The writer notes that it is a common belief amongst the lay public and in a fair proportion of the medical profession that cocaine addiction is prevalent. Because of the considerable extent to which the otolaryngologist uses the alkaloid during his work the question is of interest and importance. By gathering information direct from otolaryngologists, from druggists, psychiatrists, and general practitioners, and from superintendents of hospitals for mental and nervous diseases the writer is able to establish that the cocaine habit is comparatively rare. It appears that forty to fifty years ago the habit was much more common, but now it was rarely met as an isolated addiction, the few cases being in individuals who consistently took any and every drug that they could obtain. Cocaine is usually taken in the form of snuff and is said to give rise to an exhilarating abandon and a disregard for future consequences. As is well known to laryngologists the application of cocaine by spray, painting or packing in the nose or throat do not produce such results and instead of exhilaration there is usually anxiety, sweating, rapid pulse and sometimes collapse. In the past it used to be thought that addiction was caused by the use of cocaine sprays for hay-fever and sinusitis. It does not, however, produce such a need for its use as in the case of morphia. An addict may want the drug but if he cannot get it he will manage to do without it, without suffering the violent mental and physical torments of the morphine addict. A well-known American surgeon achieved the habit whilst carrying out experiments with the drug shortly after its introduction, but he was easily and completely cured. The writer is of the opinion that addiction is hardly ever caused by spraying of cocaine solution and that the laryngologist should be exonerated from the charge of causing such habits.

F. C. ORMEROD.