SOCIETIES' PROCEEDINGS

ROYAL SOCIETY OF MEDICINE—SECTION OF OTOLOGY

President—G. J. JENKINS, O.B.E., F.R.C.S.

SUMMER MEETING.

June 4 and 5, 1926.

Cystic Serous Meningitis by G. J. JENKINS, O.B.E., F.R.C.S. The Paper is published in the *Journal of Laryngology and Otology*, vol. xli., December 1926, p. 781.

DISCUSSION.

Mr LIONEL COLLEDGE said he had seen a case comparable to those narrated by the President. It was that of a girl, aged 19, on whom a radical mastoid operation had been done at another hospital in 1914. The cavity was soundly healed. She was hysterical, and had been condemned as a hysterical patient. She complained, as did Mr Jenkins' patients, of vertigo, tinnitus and headache, and especially pain in the back of the head. The labyrinth was intact, but she had a pointing error. After keeping her under observation for some time, he (the speaker) opened the skull through the occipital bone with a trephine. The cerebellum bulged into the wound, and on his displacing it backwards with a spatula there was a gush of cerebro-spinal fluid, the cerebellum collapsed into the wound, and the brain began to pulsate. She was immediately relieved of her symptoms. However, they returned to some extent six months later. He had hesitated to re-open the ear, for fear of introducing some septic substance into the meninges, but, apart from that, the case followed the same course as the President had described in his. In his (Mr Colledge's) case there must have been at least two drachms of cerebro-spinal fluid locked up between the anterior part of the cerebellum and the posterior surface of the petrous. He asked whether the President had any fear that by means of drainage a fistula would be established.

Sir JAMES DUNDAS-GRANT said that Burger of Amsterdam, published a case in which there were symptoms of cerebellar abscess, and on exposure he found no abscess, but there was a considerable escape of cerebro-spinal fluid, so that it was thought that death would occur as a result. On the next day, however, the patient was very much better. In that case it was not hysteria which was suspected, but a serious organic disease.

Mr SYDNEY SCOTT said that the paper was an important addition to knowledge, testifying that an excess of cerebro-spinal fluid could be met with between the arachnoid and the dura mater in the cerebellar fossa. Possibly it occurred more frequently than had been suspected, one reason being that we deliberately avoided puncturing the dura mater in this region except on rare occasions.

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(Mr Scott gave details of several cases in which excess of cerebro-spinal fluid had been encountered during mastoid operations unexpectedly in patients who had no suspicion of signs attributable to infective meningitis.)

Dr GRAHAM FORBES asked whether the President had had experience of, or knew of records of, similar accumulations of cerebro-spinal fluid as the result of a post-basic or cerebro-spinal meningitis, from which recovery had taken place. He had recently been called to see a girl whose condition suggested that she had a cerebellar cyst, possibly attributable to collection of fluid developing long after meningitis. There was a very definite history of cerebro-spinal meningitis eleven years before, when she and her sister, a year younger, were attacked at the same time. The sister died and she recovered. When he (the speaker) saw her, she was then a fine well-developed girl of 14, but she had been obliged to give up her school work five weeks previously because of a sudden attack of giddiness with tendency to fall to the left, and headache, which had persisted intermittently ever since, with occasional vomiting—temperature was normal, pulse 80, somewhat arrhythmic. There was no clear evidence in favour of a recurrent meningitis, but there was marked occipital headache ; she strongly resented being disturbed and lay curled up in bed. On examination there was definite nystagmus on rotation of the eyeballs upwards and to the left ; no other abnormal physical signs could be found in the absence of opportunity for a complete aural and ophthalmoscopic examination at the time, but there was no history of middle-ear disease. On lumbar puncture, the cerebro-spinal fluid proved to be quite normal. He had suggested as a possible diagnosis either cerebellar tumour, abscess, or cyst. Although admission to hospital was strongly urged, nothing was done, and she died somewhat suddenly about three days later. Unfortunately, post-mortem examination was definitely refused and death was certified, on his purely tentative diagnosis, as due to cerebellar cyst. If correct, the condition, it seemed to him, might possibly have been due to a long delayed post-meningitic accumulation of fluid, which, from the evidence they had heard, might indeed have yielded to operation by trephining.

Mr A. R. TWEEDIE said these conditions seemed to be associated with post-operative and existing inflammatory states, in that way differing from some of the original cases which Bárány described, which were not associated with demonstrable middle-ear disease. Bárány suggested the condition was due to a disturbance of the balance of secretion and excretion in the lateral cisterns. If that were so, the relief after operation was explained in cases in which a cerebellar tumour had been suspected but not found. This theory Bárány considered to be supported by the fact that he had noted relief in such cases due to the effects of reducing the secretion by atropin and also as the result of excessive alcohol, which latter, he submitted, might be supposed to have broken down adhesions obstructing excretion. (See *Monatschr. f. Ohrenheilk.*, 1912, p. 781, and 1913, p. 1208.)

Mr F. W. WATKYN-THOMAS said that he had recently seen a similar case with Dr Andrew Wylie. A year ago the patient had undergone a right radical mastoid operation. At that time the labyrinth was dead.

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Two months later she had severe vertigo and headache low down in the right occipital region. When he saw her there was a dead labyrinth on the right side; there was nystagmus to the left, with falling and past-pointing to the right; there was also some weakness on outward-pointing to the right, which Karlefors had found to be associated with pressure on the lateral surface of the cerebellum. A tentative diagnosis of some pre-cerebellar condition was made, and Dr Wylie decided to explore. Before any operation was done there was a gush of serous fluid from the mastoid cavity, with complete relief of all symptoms.

He had seen another case in which Karlefors' reaction was present. A boy had an extradural abscess over the lateral sinus, and there was a large exposure of the posterior fossa low down. A few days after operation there was vertigo, and weakness of outward-pointing to the operated side. The symptoms were relieved by lumbar puncture. There was a slight recurrence afterwards, which completely cleared up after another puncture.

For the diagnosis of these conditions it was important to ascertain whether the pressure was in front of or behind the sinus, and this sign should be valuable.

In the two cases on which Bárány operated there was falling and past-pointing to the affected side, and in both cases an accumulation of fluid was found. In one case a labyrinth operation had been done previously.

Mr G. J. JENKINS (President) (in reply) said that he did not think a fistula would be likely to occur in this region. He thought the condition he had described must be regarded as a partial shutting off of the subarachnoid space; it was due to a meningitis. Probably organisms were not present, but they might have been in the neighbourhood.

The Chemistry of the Cerebro-Spinal Fluid in Otitic Meningitis, by J. G. GREENFIELD, M.D. The paper is published in the *Journal of Laryngology and Otology*, vol. xli., December 1926, p. 785.

DISCUSSION.

Mr G. WILKINSON asked how long a time it took to estimate the chlorides in the fluid; *i.e.*, how long was it before one could expect to get a report on the subject. Also how much fluid did the chemist want in order to carry out his investigations?

Dr GREENFIELD replied that the examination of the fluid for chlorides occupied five minutes, and 2 c.c. of fluid sufficed for making the examination.

An Aqueduct in the Bird's Labyrinth not previously recorded, and its Evolutionary Significance, by ALBERT A. GRAY, M.D. The paper is published in the *Journal of Laryngology and Otology*, vol. xli., December 1926, p. 790.

DISCUSSION.

Mr G. J. JENKINS (President) said that once again the Section had to thank Dr Gray for a wonderful demonstration. The evidence of pigmentation was very important indeed.

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Mr J. F. O'MALLEY asked whether Dr Gray had ever come across, in the development of the labyrinth of the higher species, such as man, the persistence of structures which were considered rudimentary in higher vertebrates as they disappeared in the course of evolution, but were normal to the lower vertebrata. One might imagine that an ill-developed labyrinth, which in man had not completely evolved, might still retain some of the features existing in the lower forms.

Dr A. A. GRAY (in reply) said there was absorption of the bone which separated the perilymph recess from the cochlea. In reply to Mr O'Malley, he said that he had never come across any abnormality so far, but it was possible such might be encountered; that was one of the reasons why he had read this paper. The membrane of the round window was situated at the bottom of a bony basin, and the bone projected out into the cavity of the tympanum. That projection, he thought, was a remnant of the bony walls of the perilymph recess, while the membrane had come to be flush against the wall of the cochlea. In reply to Mr Scott, he thought the condition referred to would indicate that the bone had been absorbed more completely in the cases referred to than in the typical ones, so that the bony ring as well as the membrane itself had been brought up flush with the wall of the cochlea.

Sudden and Complete Unilateral Nerve Deafness—A. R. TWEEDIE, F.R.C.S., and M. VLASTO, F.R.C.S.—On 25th January a man, aged 36, was walking downstairs, when he felt a buzzing noise in the left ear and noticed that he had become stone deaf on that side. There was no giddiness at the time of the occurrence, and his general health was, so far as he knew, excellent.

On 27th January he felt giddy on rising in the morning, but the giddiness passed off very soon. The tinnitus and the deafness persisted and are still present.

On 28th January the giddiness was more marked and was accentuated by movement of the head. It was accompanied by vomiting.

Examination.—Patient looks healthy; Wassermann reaction negative; blood-pressure 115 mm.; fundi and central nervous system (apart from the 8th nerve) normal.

Auditory System.—Tympanic membranes normal; Eustachian tubes patent; functional tests show a complete nerve deafness on the left side. There is no spontaneous nystagmus and no by-pointing, horizontal or vertical, nor is such induced by alterations of the position of the head.

Caloric Tests.—On 13th February no nystagmus could be induced on the left side with cold water.

On 27th February a cold caloric test (Kobrak) gave the following result:—

Applied to the right ear, 5 c.c. at 45° F. gave rotatory nystagmus to left after 25 seconds, lasting 30 seconds.

Applied to the left ear, 5 c.c. at 45° F. gave rotatory nystagmus to right after 40 seconds, lasting 35 seconds.

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On 18th March a hot caloric test gave the following result:—

No reaction obtained on either side with 10 c.c. water at 108° F.

With 60 c.c. water at 108° F., when applied to the right side, a rotatory nystagmus to the right appeared after 38 seconds.

When applied to the left, a rotatory nystagmus to the left appeared after 25 seconds.

Galvanic Tests.—Kathode right; anode left; rotatory nystagmus to right with 7 ma; head inclined to left with 11 ma.

Kathode left; anode right; rotatory nystagmus to left with 4-5 ma. Head inclination to right with same amperage.

Rotation Tests.—Normal and symmetrical responses.

The case is shown for opinions on the probable pathological cause of the condition.

Mr TWEEDIE said that whereas at first all the vestibular responses had been lost, a hypersensitive condition had now supervened. With the galvanic test the nystagmus had preceded the head inclination, a reversed sequence to that normally observed.

Mr J. F. O'MALLEY said that he had known a similar case in which deafness in one ear had followed a cold. He had found cerumen against the drum. When the wax had been removed and the ear inflated the hearing had become normal. Four months later the patient had returned with a history of influenza a week previously, and a week after that he had suddenly once more become deaf in the left ear. There had then been complete nerve deafness. There was no history of any vestibular disturbance, but there had been some passing tinnitus. The left ear had probably permanently lost its function. He (the speaker) thought the most likely explanation of these cases was that given by Neumann, seventeen years ago, namely, that they were due to a toxic condition, the incidence of the toxin falling on the spiral ganglion, the most vulnerable point in the cochlear apparatus.

Mr SYDNEY SCOTT said that this case reminded him of the nerve deafness associated with mumps. He (the speaker) had never seen a post-mortem examination on one of these cases, but the pathological condition had been described in a neurological journal by Dr Bruce, petechial hæmorrhages being discovered in the medulla in the region of the auditory nerve in a French soldier who died shortly after an attack of mumps which had caused sudden absolute deafness.

Sir JAMES DUNDAS-GRANT said that galvanic tests were more satisfactory when not applied to both ears at the same time. Nystagmus might be induced by the tests on the good ear, and this would conflict with the evidence sought from the affected one.

Mr G. J. JENKINS (President) said the condition in this case might be due to a toxin, but why it should select the auditory rather than the vestibular path he did not know.

Chronic Middle-ear Suppuration, Labyrinthitis and Meningitis; Operation; Recovery—ARTHUR CHEATLE, F.R.C.S.—A girl, aged 14, came to the hospital suffering from a chronic offensive

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discharge from the right ear with deep-seated pain behind and below it. Fourteen days previously she had had an attack of giddiness and vomiting with frontal headache and greatly increased deafness; temperature, 103.6° F.; pulse 120. The labyrinth was found to be dead. With the tuning-fork on any part of the head the sound was referred to the healthy ear. Rotation to the left gave no nystagmus, to the right nystagmus for ten seconds. There was no Rombergism nor spontaneous nystagmus; slight past-pointing to the left. The fundus was occupied by granulations. There was no mastoid œdema nor swelling. Reflexes normal; mentally clear; slight stiffness of the posterior neck muscles; lumbar puncture, fluid turbid and under pressure. Cells, 100.0 per c.mm.; polymorphs, 25 per cent.; lymphocytes, 22 per cent.; ependyma cells, 3 per cent.; proteid, 0.14 per cent.; sugar, 0.0 per cent.

Radical mastoid operation; cholesteatoma and granulations were found in the antrum and middle ear, and an opening in the external semicircular canal. Superior and inferior vestibulotomy was performed and an opening was made into the internal auditory meatus through the inner vestibular wall. As no flow could be established from the internal auditory meatus, the front of the cerebellum was exposed, the dura mater incised, and the cisterna pontis opened; turbid cerebro-spinal fluid escaped; a gauze drain was inserted, the drainage being maintained for four days. Slight facial paralysis was noticed the day after operation but soon disappeared. The temperature gradually came down in about fourteen days. It is interesting to note how quickly the original vestibular disturbance subsided.

Acute Middle-ear Suppuration, Mastoiditis and Cerebellar Abscess; Operations; Recovery—ARTHUR CHEATLE, F.R.C.S.—A boy, aged 18, came to the hospital with left mastoid infection following an acute inflammation of the middle ear. After the mastoid operation the temperature did not settle down, and fine nystagmus to the left was noticed. Lumbar puncture revealed twelve leucocytes per c.mm. A week after the mastoid operation the posterior fossa was opened and the cerebellum explored without finding pus, but the cisterna pontis was opened and clear cerebro-spinal fluid escaped under considerable tension; a gauze drain was inserted and left for forty-eight hours. The condition seemed satisfactory until twelve days after the exploratory operation, when the patient complained of frontal and occipital headache with vomiting, coarse nystagmus to the left and dysdiadokokinesis. The cerebellum was explored again and a large abscess at once opened in front of the lateral sinus; the bone was then removed from over the sinus to below and behind it, and a counter-opening made into the abscess cavity which was drained with gauze in both situations. The packing was continued until it was

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pushed out. Recovery quickly took place. A left facial paralysis, for which no cause could be found, came on gradually during convalescence but quickly disappeared.

Six Cases of Facial Paralysis—Sir JAMES DUNDAS-GRANT, K.B.E., M.D.—(I) *Progressive Facial Paralysis cured by Radical Mastoid Operation.*—A boy, aged 12, first seen in December 1925, was recommended for removal of tonsils and adenoids on account of general ill-health, wasting and lethargy; he had also a cough of two or three weeks' duration, and had had suppurative discharge from his right ear for seven or eight months. When he presented himself for removal of tonsils and adenoids his temperature was found to be raised and the operation was postponed. He returned a month later and then showed signs of partial facial paralysis on the right side, having had earache a week previously. The tonsils and adenoids were removed two days later, but the facial paralysis had become complete; he was admitted, and I performed the radical mastoid operation the next day without attempting to expose the facial nerve, but carefully avoiding injury to it; I was unable to detect any hiatus. Almost immediately the paralysis diminished and in a fortnight he was discharged with the face almost normal.

(II) *Facial Paralysis with Tuberculosis of the Mastoid; Operation; Recovery from the Paralysis; Persistence of the Mastoid Disease.*—A boy, aged 14, was first seen over five years ago on account of facial paralysis accompanying chronic suppuration of the left middle ear. I obtained admission for him into the West End Hospital for Nervous Diseases and operated on the mastoid. The facial paralysis gradually subsided but the discharge continued both from the meatus and the mastoid wound, which had not healed; the tuberculous nature was verified by the microscope and various methods of treatment were applied, including several further operations on the mastoid, a sojourn by the sea, a course of general light treatment and applications of pyoktanin and iodoform. The discharge gradually subsided and the mastoid opening is getting less. The boy has grown and has no trace of facial paralysis.

(III) *Complete Post-operative Facial Paralysis entirely cured by Galvanism.*—A middle-aged commercial man, with pain and slight discharge of a week's duration, was found to have a nipple-shaped bulging in the postero-superior quadrant. This was nipped off with Hartmann's miniature punch-forceps and a paracentesis was also made. The discharge continued to be copious, and after considerable delay I was allowed to perform the mastoid operation. There was very extensive caries and the facial nerve was, after the operation, found to be completely paralysed. The membrane rapidly healed and the hearing quickly recovered, but the facial nerve remained inactive and

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Dr MacGregor could only, with considerable difficulty, obtain a response to galvanism. However, he provided the patient with a battery and appropriate instructions. The nerve recovered entirely. The case illustrates the seriousness of the postero-superior nipple-shaped bulging and also the hopeful attitude which should be maintained in regard to facial paralysis if skilfully treated.

(IV) *Post-operative Facial Paralysis, persistent, but relieved by Massage.*—A hospital nurse, aged about 30, developed acute suppuration in the middle ear with discharge and great pain. The simple mastoid operation was performed. The mastoid was unusually acellular, the pain continued, and the facial nerve had been damaged. A more extensive and almost radical operation was carried out with complete relief to the symptoms but no improvement in the face. The case seemed destined for later nerve anastomosis, but after a few weeks the patient showed herself with very considerable improvement, resulting in complete recovery after treatment by massage.

(V) *Facial Paralysis of six months' duration relieved by Faradism.*—A soldier, aged about 30, had had complete facial paralysis for six months and was referred to me for report on his ear. I tested by galvanism, expecting to find the usual reaction of degeneration, but with the weak current could get little or no response. I then tried mild faradism and obtained vigorous action of all the facial muscles and complete disappearance of the paralysis. I scarcely think facial paralysis could be simulated, but suppose that, though the nerve had recovered, the centre had remained in abeyance.

(VI) *Ante-operative Facial Paralysis not relieved by subsequent Mastoid Operation.*—Patient, a female, now aged 47, had been seen by me on account of facial paralysis and chronic suppuration of the middle ear. An ordinary radical mastoid operation was performed and the discharge disappeared, but the facial paralysis persisted.

Twenty years later she came to me complaining of severe headache, chiefly over the left eye; she thought that the symptom might be connected with her old ear trouble. Her vision was hazy, and my examination led me to diagnose glaucoma, for which I referred her to my colleague, Mr Lindsay Rea, who confirmed my diagnosis and carried out the appropriate operative treatment with gratifying result. The facial paralysis remains unchanged.

Mr BANKS-DAVIS said he knew of the case of a boy—a relative—who after a cold motor ride developed facial paralysis next day. The boy's medical adviser took him, on the speaker's advice, to a neurologist who "was against electrical treatment of any kind," and after another neurologist had been consulted the idea of electrical treatment was abandoned for reasons with which he (the speaker) could not agree, and did not appreciate. This had occurred two years previously and the boy's face was obviously still drawn up on one side—a condition which he (Mr Banks-Davis)

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thought would never have arisen if the usual electrical treatment had been applied. Electrical treatment in any case kept up the tone of the paretic face muscles and kept the face straight.

Mr SYDNEY SCOTT said that the late Dr Lewis Jones, who had been spoken of as "the father of medical electricity," told him that in his opinion electrical treatment did no good to the facial nerve and could not hasten the recovery of facial paralysis.

Mr G. J. JENKINS (President) said that at King's College Hospital electrical treatment was carried out not to promote recovery but to maintain the nutrition of the muscles, the view there being that it did no good to the nerve.

Sir JAMES DUNDAS-GRANT (in reply) said that in peripheral paralysis, such as those under discussion, the tendency was for wasting of muscles to occur, and there was less imminence of contraction. Too active electrical stimulation of muscles in ordinary hemiplegia was very likely to bring on contractures. In this the nuclei, by which nourishment was maintained, were not destroyed, but in the peripheral cases the muscles were cut off from their nucleus, hence the attempt should be made to keep up their nourishment without causing damage. Judicious galvanism was certainly beneficial, and short brushings with the anodal pole were, according to Dr MacGregor, more efficacious than longer applications with the kathode. As with the employment of digital massage and Swedish exercises, there must be discretion.

Granuloma on Tympanic Membrane with persistent Ear Discharge—H. BANKS-DAVIS, M.B., F.R.C.P.—I am exhibiting this man—a prospective Civil Service candidate—whose candidature on the Permanent Civil Service establishment has been queried on account of a persistent aural discharge since he was serving with the Forces in Mesopotamia in 1917.

There is a red patch of granulations on the lateral surface of the membrane, appearing at first sight to be a perforation, but it is, however, not a perforation, as the entire membrane moves backwards and forwards with a Siegle's speculum, and inflation of the middle ear is not accompanied by any perforation sound. The hearing is normal, and I am interested as to the nature of the condition, as I have never seen anything like it before.

Mr G. J. JENKINS (President) said there were granulations on the membrane, but he could not find a perforation; he regarded the condition as superficial. An examination by culture should be made. He (Mr Jenkins) advised a trial of 0·5 per cent. solution of copper sulphate if ordinary remedies failed.

Mr SYDNEY SCOTT said it was curious that the condition had persisted for so long a time. It did not seem to be tuberculous; there was no destruction of drum membrane, or deafness. He (the speaker) suggested that the bacteriology should be investigated and that diagnosis should be postponed until further observation had been made.

Mr SYME said that the condition appeared to him to be lupus.

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Austrian Otological Society

Otomycosis—DAN MCKENZIE, M.D.—Patient, a foreigner, aged 35, had irritation and discharge from the left ear of some months' duration.

The external meatus was slightly swollen, and on the floor close to the membrane, which was reddened, a small mass like wet tissue-paper was visible. Close inspection revealed a whitish mould.

Report by Dr F. H. Teale:—*Culture from the mould from ear.*—The mould belongs to the Mucor group, and has the characters of *Mucor mucedo.* The black efflorescence is due to the sporangia.

Grown on glucose agar: *Mucor corymbifer* (with pear-shaped sporangia) has been described as causing inflammatory lesions in the external auditory canal, but *Mucor mucedo* seems to be uncommon.

Mr G. J. JENKINS (President) said that as the appearance in a test-tube varied with the culturing, he did not see why it should not vary in the ear. The organism would only fructify, as the mushroom did, within a small range of temperature. The present mycelium was one of the rarer types. These organisms caused a good deal of trouble; sometimes much ulceration.

AUSTRIAN OTOLOGICAL SOCIETY,

22ND FEBRUARY 1926.

Monatschrift für Ohrenheilkunde, April 1926.

(*Abstract of Proceedings by Alex. R. Tweedie, F.R.C.S.*)

Malignant Neoplasm of the Inner Ear: Facial Paralysis due to a Neoplasm: Carcinoma of the Auricle—H. NEUMANN.—These cases were shown mainly with a view to drawing attention to their treatment by the new method of X-rays preceded by intravenous injection of sugar. The details of treatment are not given, nor the effects produced—Neumann proposed to bring the cases before the Society later, so as to demonstrate the results of this treatment.

Hysterical Symptoms after the Radical Mastoid Operation—H. NEUMANN.—A man on whom the radical mastoid operation had been performed in 1917 had been kept continuously under treatment owing to the complaint of vertigo.

The following phenomenon could be now demonstrated: If the patient were directed to look to the left a fine horizontal nystagmus in both eyes occurred, which lasted a few seconds; the left eyeball then turned straight forwards, so that the two eyes converged. Associated with this position, the pupils became contracted and the patient giddy. Similar conditions obtained if the eyes were directed to the right, or, even if he looked directly forwards and pressure were

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applied anywhere on the head or body, a spasm of convergence occurred.

The exhibitor recalled four similar cases which he had seen with Politzer; Neumann regarded the condition as an hysterical manifestation.

Labyrinthitis due to Shock—G. BONDY.—A labourer, aged 54, who had been employed on a lathe as a coppersmith since 1898, but whose work had been for the past seven years in an almost noiseless environment, had noticed, for some years, a gradual depreciation in his hearing.

On the 5th February, his son had to be suddenly taken to the Lunatic Asylum, where his wife was told he could scarcely survive the night. The news resulted in a great shock to the father (the labourer), who complained of severe stabbing pain in the heart and appalling pain in the head; everything went round, and he noticed a sudden decrease of hearing in the left ear. After a sleepless night, severe giddy attacks occurred with headaches, and the same condition of deafness persisted.

Examination, on the 20th February, revealed both tympanic membranes normal; Weber to the right (better ear); Rinné; negative, right; positive, left; bone conduction shortened. Tuning-fork placed on the left mastoid process was referred to the right side. Air conduction for all tones equally shortened; whisper right, 3 metres; whisper left, 2 metres; nystagmus of the second degree to the right with typical by-pointing, and falling reaction in accordance with variation of position of the head.

Application of hot water to the left ear reversed the nystagmus; otherwise his general condition was normal, except that blood-pressure was 150 and the aorta dilated.

Nystagmus induced by Caloric Reaction and Alteration of Position—E. RUTTIN.—A student, aged 17, contracted scarlet fever in 1925. Before this, and during and after the fever, the ears were always normal. On the 1st November 1925 he had a sudden attack of giddiness with vomiting; deafness and tinnitus on the right side. The giddiness lasted four days, during which it was necessary for the patient to remain in bed.

He continued to suffer from tinnitus and deafness in the right ear, but the giddiness had ceased.

On 3rd February 1926 examination revealed the tympanic membranes normal. Hearing tests; right, conversation 1 to 1½ metres; left, whisper normal. Weber to the left; Rinné positive on both sides. Schwabach right, shortened.

No spontaneous nystagmus or by-pointing: Responses to rotation about normal.

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Caloric reaction, right; after irrigation for three minutes with water at 18° C. slight nystagmus to the left appeared, which was not increased by continuing the irrigation. Associated with this there was very slight vertigo and practically no disturbance of the pointing reaction. The patient, however, felt so uncomfortable that he lay down on his right side; at once, severe giddiness and a marked rotatory nystagmus to the right occurred and lasted about a minute.

After the nystagmus and giddiness had passed away every possible alteration of position failed to induce this phenomenon again. Caloric reaction, left; after irrigating the left ear with water at 18° C. for ten minutes, a fine nystagmus to the right was induced which with further irrigation was not increased. Associated with this there was very slight vertigo, but no disturbance of by-pointing.

This test was also associated with considerable discomfort, but every possible alteration of position did not again induce nystagmus or giddiness.

The oculist reported the eyes as normal.

The exhibitor discussed the phenomenon but could not suggest any explanation.

Vertical Nystagmus in connection with Carcinoma of the Right Temporo-sphenoidal Lobe—E. URBANTSCHITSCH.—Woman, aged 59, in November 1925, first complained of darting pains in the hands, feet, neck, and chest, with severe headache. General illness and vomiting followed two weeks later, with loss of sight and memory. On examination, on 18th December 1925, there was found neck stiffness; there was no ataxia, but markedly increased patellar reflexes and spontaneous horizontal nystagmus. On lumbar puncture, the cerebro-spinal fluid showed a pressure of 380 in the sitting position; Nonné, negative; Apalt, positive; Pandy, positive.

Vomiting continued, neck stiffness increased, Kernig was positive, and spontaneous nystagmus to the right was present.

On 2nd January 1926 cochlear apparatus was about normal. Spontaneous nystagmus on deviation of the eyes to either side and vertical nystagmus were present, also spontaneous by-pointing inwards.

On 19th January, very active spontaneous nystagmus, chiefly downwards with normal response to caloric reaction on either side.

On 31st January, death. Post-mortem revealed a carcinomatous tumour, the size of a bean, in the right temporo-sphenoidal lobe, also dilatation of the ventricles and cerebral œdema.

Other neoplastic deposits were found in the liver and left mamma, the latter being probably the primary lesion.

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Societies' Proceedings

THE OTO-RHINOLOGICAL SOCIETY OF PARIS.

11TH FEBRUARY 1926.

(Abstracted by Michael Vlasto, F.R.C.S.)

A Case cured of Migraine—DISBURY.—The patient, a woman, aged 30, had suffered from migrainous headaches since childhood. She had also sustained a number of head injuries. The latter factor had contributed towards the aggravation of her symptoms and a marked anxiety phobia was present.

All the cutaneous nerve areas of the face and scalp were found to be hyperæsthetic. Treatment consisted in stretching the nerves by digital massage of the face and scalp. After a few applications of this treatment the symptoms disappeared.

Nasopharyngeal Polypus operated upon by the Methods of Doyen and Denker and Electro-coagulation—G. LAURENS.—The exhibitor showed a lad, aged 16, with a nasopharyngeal polypus associated with profuse epistaxis. Removal of the polypus "per vias naturales" was first carried out. The post-operative results were as usual. At the time of the operation, however, an extension of the growth was observed, and in the course of a few days it became as extensive as the original swelling.

The second operation was performed by Denker's method and the removal was complete. A fortnight later, a fresh, small neoplastic outgrowth was observed. On this occasion, the growth was treated by electro-coagulation (two applications at 8 days' interval). Under the influence of the diathermy, the pseudo-recurrence disappeared almost entirely. At that time it was as small as a haricot bean and was tending to disappear completely.

G. LAURENS laid stress on the efficacious and prompt improvement which resulted from the electro-coagulation treatment.

G. WORMS drew attention to the important evidence adduced by radiography in these cases. He instanced a case where the X-ray showed an extension of the growth into the sphenoidal sinus, thus influencing the operator in selecting the paranasal instead of the buccal route of approach.

The After-effects on Respiration from Removal of Adenoids—DU PASQUIER.—The results are based on the examination of 155 children who had been operated upon for adenoid hypertrophy. He found that in 62 per cent. of cases immediate relief was obtained from respiratory obstruction. This result was chiefly observed in cases where the child's constitution was robust and where the respiratory obstruction was slight and of recent date. On the other hand, in cases where the children were puny, the chest undeveloped and the obstruction of old standing, it was not sufficient to rely on Nature to

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restore nasal breathing. In such cases one must assist Nature with respiratory exercises.

Of the 38 per cent. of failures, 4 per cent. are due to the persistence of nasal obstruction, 14 per cent. to glossoptosis and 20 per cent. to a defect in the mechanism of readaptation to nasal breathing. It is these latter cases which respond so well to breathing exercises.

DISBURY said he had experimented with compressed air douche treatment, which he found a very useful addition to the usual breathing exercises.

G. WORMS did not consider that the removal of adenoids always solved the problem of respiratory obstruction in children. He recommended rubber tubes in the nasal fossæ. He found this method perfectly harmless and a useful adjunct to breathing exercises.

Compressed Air Tube in the Nasal Fossæ in Cases of Epistaxis—G. WORMS and G. F. GAUTIER.—The apparatus consists of an outer envelope of thin rubber. Through the lumen of the envelope passes a rigid tube which allows the air to circulate freely to and from the nasal fossa. The outer envelope and the tube are connected together at their extremities, and leave a free space which can be inflated at will by means of a pneumatic bulb. Nasal breathing can be carried on, and at the same time the outer envelope is in firm and extensive contact with the nasal mucosa.

This apparatus can be used advantageously after a submucous resection or after the division of adhesions.

G. LAURENS raised the objection that the apparatus was painful; at the same time, he admitted that it was efficacious and easy to insert.

ABSTRACTS

SURGICAL DIATHERMY

(*Abstracted by H. V. Forster, F.R.C.S., from the Acta Oto-Laryngologica*, vol. vii., Fasc. iv.)

1. *Surgical Diathermy in the Region of the Head and Neck*, by Franz Nagelschmidt, Berlin.

The author describes how a deeper coagulation effect may be obtained with less volume of current by the suitable placing of the indifferent electrode; if placed at a distance, the current follows the line of least resistance and any directing effect is lost. Weaker currents cause weaker depth effects than strong ones, and obviate drying up of the tissue and charring.

After surgical diathermy, the zone of hyperæmia and lymph pressure tends to exudation and not to absorption. During the healing process

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