periodical to light. All that we could discover was that the *Hospital Gazette*, after struggling through various incarnations and passing under several different names, had at last totally disappeared, and that therefore there was no method open to us of obtaining from any editor or publisher a copy of the number which contained Little's original paper.

Abruptly brought up, in this way, against a blank wall, the idea occurred to me of writing to the Library of the Surgeon-General's Office at the War Department in Washington. This I did, and by return of post received a complete type-written copy of Little's article. The prompt and generous attention given to my request by the United States War Office Library renders it peculiarly gratifying to me to be able, as a consequence of the information thus obtained, to claim for an American an honour which is justly his due.

There is no need to quote Little's article in its entirety; one paragraph alone will suffice.

After describing four cases of bleeding from the area in question, he goes on to say: "The seat of the ulcer seemed to be in or about the same situation on the septum in all the cases, about half an inch from the lower edge of the middle of the column. The septum at this point is supplied with branches of the anterior ethmoidal artery which anastomose freely with branches of the spheno-palatine artery. The lower portion of the septum is supplied by a branch of the superior coronary—the artery of the septum."

I am no supporter of the custom, hallowed by antiquity though it be, of attaching men's names to anatomical regions, but this memorial having already been instituted we may let it remain. The inscription, however, should be altered, for justice demands that the name attached to it should be that of *Little* and not that of Kiesselbach.

Dan McKenzie.

SOCIETIES' PROCEEDINGS.

ROYAL SOCIETY OF MEDICINE.—OTOLOGICAL SECTION.

October 17, 1913.

MR. RICHARD LAKE, *President, in the Chair.*

Abridged Report.

Injury to Ear.—W. M. Mollison.—Male, aged forty-three, was admitted to hospital on account of fixation of the left eye, loss of sight and corneal ulceration following an accident. On July 23, 1913, being then at sea, the patient received a severe blow on the left side of the head from some part of a donkey engine; he was so badly damaged that he was not expected to survive, and little or no treatment was adopted. He made an excellent recovery, and complained only of the loss of sight in the left eye and deafness in the left ear.

On admission it was found that the functions of the third, fourth, fifth, sixth, and seventh cranial nerves on the left side were lost, evidently from the blow, which, no doubt, fractured the skull in the frontal and

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temporal regions. The ear condition: The left auricle had been badly crushed. The results of examination of hearing were as follows:

	Right.	Left.
Whisper	2 ft.	—
Weber	←	—
Rinne	+	—
Schwabach normal.		
Upper tone limit	20,000	12,000

The lowest note heard on the left side was g^1. Rotation showed: Right, ten turns, nystagmus for fifty seconds; left, ten turns, nystagmus ten seconds.

On September 29 an operation was performed on the left ear to restore the meatus; this was successful, and gave the man a considerable amount of hearing. On October 4 the hearing was as follows:

	Right.	Left.
Whisper	10 ft.	1–4 ft.
Weber	—	→
Rinne	+	+
Schwabach as before.		
Upper tone limit	20,000	18,000
Lower tone limit	Normal	Normal
Rotation	Good reaction in both	

The membrane is difficult to see completely, but seems normal. Syringing with cold water on the right gave good reaction in about forty seconds; the left gave reaction much more quickly in about fifteen seconds. The rotatory movements are very prettily seen in the damaged eye. Does this throw any light on the pathology of the eye fixation or on the physiology of the caloric nystagmus?

Mr. C. E. West asked how it was that the patient was still able to move the left eye if, as the notes stated, the functions of the third, fourth, fifth, sixth and seventh cranial nerves were lost?

Mr. G. J. Jenkins said that if Mr. Mollison's observations were correct, this patient showed nystagmus in an eye which could not be moved spontaneously. With paralysis of the external rectus it was possible to have nystagmus to the opposite side. He had now under care two cases of so-called congenital absence of the external rectus, and in both those cases one could produce an internal nystagmus in the affected eye, but not an external nystagmus. Bartels held that both recti must be intact for nystagmus to be possible; his experiments were done on animals with monocular vision. These observations seemed to prove that the lesion in Mr. Mollison's case could not have involved the nerve at the base of the skull, and that it probably was a cortical one. This was important, as Wilson had held that the nystagmus centre was situated in the cortex, whereas Bárány placed it lower.

Mr. Stuart-Low said that he understood that Mr. Mollison was at a loss to explain the great degree of deafness still remaining, seeing that the case had progressed so well, and that there was no visible obstruction. It was possible that a blood-clot had formed in the middle ear, a result of the severe and sudden injury sustained, and that the clot had organised. Another explanation suggested itself, namely that the deafness was functional or, indeed, even hysterical, and the lowering of the range of audition present in this case would support such an explanation.

Sero-purulent Lepto-meningitis with Rapid Recovery after Translabyrinthine Operation.—Sydney Scott.—The diagnosis was

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established by the presence of 3500 polymorphonuclear leucocytes per cubic millimetre in the cerebro-spinal fluid which was withdrawn by lumbar puncture. The meningitis arose in connection with labyrinth disease, secondary to chronic suppurative otitis media, for which the operation of labyrinthotomy (vestibulotomy) had been performed about forty-eight hours before the onset of meningeal symptoms. These symptoms began with severe headache, followed by retraction of the head, rigidity of the cervical extensor muscles, and pyrexia, the temperature rising to 102° F. About fifteen hours later an exploratory lumbar puncture yielded 10 c.c. of turbid cerebro-spinal fluid. The posterior cranial fossa was then drained through an opening made for the purpose into the internal auditory meatus. The cerebro-spinal fluid escaped for fourteen hours through the labyrinth, and another 10 c.c. of turbid fluid also under pressure were withdrawn by a second lumbar puncture. The untoward symptoms then rapidly disappeared. The complication had evidently been recognised in its early stages, when the symptoms were comparatively mild. It must also be observed that no organism could be identified in the films of the pus-cells and the cultures yielded no growth.

A male, aged twenty-eight, a laundry hand, came to hospital on September 12, 1913, complaining of headache, giddiness, tinnitus, deafness, and discharge from the left ear. He had had discharge from the ear for quite ten years. The previous week he began to experience giddiness and headache on turning towards his left. The deafness in the left ear had greatly increased and he experienced constant loud tinnitus; the frontal headache was decidedly worse each day. He had felt sick and had been sick once or twice.

When directed to walk along a straight line he deviated suddenly to the left when the eyes were closed. There was a tendency for the patient to incline the head slightly to one side, while the chin was slightly elevated and turned towards the opposite side. This attitude of the head was corrected when the eyes were opened, but slowly resumed when the eyes were kept shut. Fine nystagmus was observable when the eyeballs were deviated to the right. The left auditory meatus contained pus and a mass of granulations which filled the inner part of the canal.

Hearing tests: The low tone limit was raised on both sides, particularly on the left (suppurating) side. The high tones were heard well on both sides, though with appreciable loss on the left side, for air-borne tones. Weber's tests were definitely referred to the left side.

Rotation tests: *Head erect:* Rotation anti-clockwise produced well-marked horizontal nystagmus to the right, which masked the spontaneous rotatory nystagmus for about 30 seconds; rotation clockwise produced feeble horizontal nystagmus to the left lasting about 10 seconds.

The inferences drawn from the rotation tests were that the right labyrinth reacted normally, and that the three left semicircular canals were all defunct. The history and signs pointed to a recent invasion of the left labyrinth, although the hearing tests excluded complete disorganisation.

September 13: Radical mastoid operation and double vestibulotomy. The mastoid was non-cellular. Pus granulations and cholesteatomatous *débris* were contained in the antrum and tympanum. The larger ossicles and tympanic membrane had disappeared, and there was a large fistulous opening into the external semicircular canal. The stapes could not be recognised by inspection, but resistance in the region of the oval window was felt with the fine exploring probe. There was no pus in the semi-

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circular canal, the contents of which were deeply blood-stained. The vestibule was then opened both above and below the facial nerve and the cochlea removed. As the base of the modiolus was chipped off about a cubic centimetre of cerebro-spinal fluid escaped. A skin-graft prepared by the acetone and iodine method was introduced after the meatal flap had been reflected, and the cavity was packed. The next day the patient felt more comfortable. There was no flow of cerebro-spinal fluid.

September 15: During the afternoon the headache returned and the patient complained of stiffness in the muscles of the back of the neck. The temperature now began to rise, eventually reaching 102° F.

September 16: This morning the patient now held the head strongly retracted. It could not be flexed forwards. The pain was chiefly in the occipital region. Lumbar puncture drew off a turbid fluid under considerable pressure. This fluid was reported to contain 3500 polymorphonuclear leucocytes per c.mm. No organism could be found in the films at the time, nor in culture media. It was possible to obtain a clear view of the inner labyrinthine wall through the external meatus, so the patient was given a few whiffs of chloroform and a small gouge was introduced into the external meatus. Two taps with the hammer sufficed to penetrate the internal auditory meatus, and immediately a considerable quantity of turbid cerebro-spinal fluid was released. This continued to flow for about fourteen hours. During the evening a second lumbar puncture was made; the fluid still appeared turbid and escaped under pressure.

September 17: During the night the headache and rigidity of the neck steadily diminished and the temperature gradually fell from 102° to 98° F.

September 18: The meningeal symptoms completely disappeared, and from this time onwards the progress towards recovery has not been interrupted. At the present time the cavity presents the usual appearances after a radical mastoid operation, healing partly by primary skin-graft and partly by granulation.

A similar case to the foregoing was described jointly by Mr. C. E. West and myself in 1908.[1] The rationale of the procedure had been recognised from a study of a series of cases which I observed during 1907–1908,[2] and the operation in the present case was the same as that which we have also described elsewhere under the title "Translabyrinthine Drainage of the Basal Meninges."

The PRESIDENT said the only point which occurred to him was as to whether the application of the graft had anything to do with the inefficiency of the drainage.

Mr. C. E. WEST said in regard to skin-grafting when there was any fistulous opening in the labyrinth, that, though he skin-grafted all routine mastoid cases, he had given up skin-grafting in such cases as had had vertigo, even those in which he failed to find a fistula at the time of operating. On two occasions he had had fatalities which he had directly ascribed to the skin-grafting. In one case the graft was put over a dark spot on the canal, as he believed penetration had not occurred, and the patient had labyrinthitis, meningitis, and died. In the other case he grafted only the posterior part of the cavity, and yet the patient died.

Mr. MARRIAGE had grafted a number of pure bony cases where there had been a fistula. The other class of cases he did not graft, but left them open for free drainage.

[1] See *Proceedings*, ii (Otol. Sect.).
[2] See *Proceedings*, 1908, i (July), (Otol. Sect.).

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Mr. O'Malley said that cases of this type raised two points of great importance: (1) What symptoms and signs of labyrinthine disease, associated with chronic otorrhœa, justified vestibulotomy? (2) What were the risks of vestibulotomy under these conditions? His actual experience of labyrinthine sepsis was limited to eight cases of various degrees of severity, and he had been guided in their treatment by the teaching of Neumann and Bárány. Neumann divided labyrinthine cases into two types: (1) Suppurative and destructive or irreparable; (2) inflammatory or reparable. If the hearing was good, even when tests showed no response from the vestibular apparatus, he regarded the case as probably inflammatory and reparable and preferred to wait and watch. Bárány opened the labyrinth after doing the radical mastoid operation, in cases showing a large spontaneous nystagmus, with no caloric response, and with pronounced or absolute deafness, but he did not do so in cases of circumscribed labyrinthitis with good or even moderately good hearing, unless the vertigo or vomiting were severe, as fistulæ would heal. The risks of vestibulotomy were summed up in one word—meningitis. In the experience of the Vienna school the risk of meningitis following vestibulotomy as a result of the operation alone was not more than 1 or 2 per cent. The question of skin-grafting in a case of this kind required serious consideration. Personally, he was not in favour of it. The more efficient the skin-graft the more effectively would it lock up any sepsis which might be unavoidably introduced when operating in the presence of active middle-ear suppuration. The preservation of hearing was not a factor here, so that rapid healing, with a minimum of scar-tissue, was unimportant when compared with the need to maintain free drainage from a septic focus in such a danger zone.

Dr. Dan McKenzie said a case he lately had had illustrated the progress of events in this case, with one exception—namely, that in Mr. Scott's case the patient recovered. In the case on which he (Dr. McKenzie) had operated there were evidences of disease in the labyrinth. Prior to operation there were no signs of meningeal trouble, and yet within forty-eight hours after the operation on the labyrinth the woman developed acute meningitis, which, in spite of prompt and very free drainage, proved fatal. The question which forced itself upon his mind was, was he justified in having opened the labyrinth? And that question also applied to Mr. Scott in this case. What were the indications upon which the surgeon should base his operative interference in labyrinth disease? He thought that in suppuration of the ear, unless the labyrinth was obviously destroyed as a whole, both hearing and vestibular reactions being abolished, one should be content with the simple radical mastoid operation. Cases had been shown again and again in which fistulæ had healed and the labyrinth irritation had passed off after the simple operation. In the light of his own case, and of the present one, he would be very cautious as to opening a labyrinth. He would not, in future, open a labyrinth unless the tests showed an absence both of audition and of the vestibular reactions in the affected ear; or, secondly, unless the antecedent presence of meningitis rendered drainage through the internal auditory meatus and labyrinth an imperative necessity, regardless of the condition of the internal ear itself.

Trichophyton Granuloma affecting the Auricle and other Parts of the Body.—Hunter Tod.—Patient, a male, aged twenty-one, in 1906 suffered from tinea of abdominal region. Cured by treatment. It then affected the left ear, and a large mushroom-like growth of the auricle

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and mastoid region gradually formed. Applications of X rays caused disappearance of the growth within six months, leaving only the stump of the auricle. A year ago there was some middle-ear suppuration, which has recurred off and on. The present condition of the auricle has been stationary for over a year. There is still active disease of the left axilla and thoracic region, which is improving under carbolic acid injections and X rays.

Mr. Tod added that the case was unique, being the only one of its kind recorded in this country. Dr. Sequeira, under whose care the patient was, had already published a full description of it, with photographs.[1] There was no evidence that the middle-ear suppuration which now existed was due to the same infection, but rather to an ordinary suppurative lesion. A sister of the patient had been similarly affected previous to her brother. The infection was supposed to have come over from Denmark, where trichophyton infection was said to be fairly common.

Malignant Disease of the Ear; ? Epithelioma becoming Sarcoma.—**G. J. Jenkins** and **G. F. Stebbing**.—Male, aged forty-eight. He had ear-ache at fourteen years of age; so far as he knows he has never had any discharge from either ear until just recently. Some time last summer (1912) he noticed a small swelling on the left side of the neck just below the angle of the jaw. At a hospital an operation was performed for the "removal of glands of the neck" in September, 1912. He first noticed a discharge from the left ear in November, 1912, and about the same time he noticed further swelling in the neck and felt the polypus protruding from the meatus. Left facial paralysis was first noticed about the end of January. Later he had difficulty in swallowing, and regurgitation of fluids took place through the nose. Patient is emaciated. The whole of the left pinna is pushed outwards and there is some brawny swelling and œdema over the mastoid process. Protruding from the meatus and distending the canal is a polypus about the size of a walnut, which bleeds slightly. There is foul discharge from the ear. Below the ear there is a subcutaneous mass spreading backwards as far as the posterior border of the sternomastoid. This mass, involving not only glands, extends almost to the middle line in the region of the larynx, where a sharp border can be felt. Enlarged glands can be felt in the neck as low as the clavicle. Paresis of the left external rectus, recent. The tongue is protruded to the left. Nothing abnormal noted in the nasopharynx. Paralysis of the left half of the palate and adductor paralysis of the cords. Defective movement and wasting of the left trapezius. Marked deafness in the left ear. Weber —to the left. Rinne negative in left ear.

There was severe pain in last few weeks of life. Patient died on April 1, 1913.

Post-mortem showed that the mass in the neck had caught up the hypoglossal, external laryngeal and spinal portion of spinal accessory. The recurrent laryngeal, vagus and sympathetic escaped. The walls of the external auditory meatus were involved, anteriorly and posteriorly. The facial nerve passed through the tumour. The middle ear was filled with tumour which is just showing in the middle fossa in that region. It also seemed to extend forwards along the Eustachian tube. The floor of the middle ear has been destroyed by the growth.

[1] *Brit. Journ. Derm.*, 1906, xviii; see also *Proceedings*, 1912, v, pp. 33 and 84.

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Mr. Jenkins added that, microscopically, it was a mesoblastic tumour, a sarcoma. At first it was regarded as epithelioma, but its fungating feature was against that view. Specimens were exhibited for examination by members, and he would be glad of their opinions.

Mr. Marriage saw the case last December, and took a piece for microscopical examination. The report of that examination was that it was carcinoma. The same view was expressed about the glands which were removed in September. He had not seen the specimens himself, but had looked up the note of the pathologist.

Dr. Gray thought there was nothing inconsistent in both views being correct. Carcinoma transplanted into mice occasionally aroused a sarcomatous reaction in the tissues; and he had known a clinical case in which epithelioma of the lip formed a secondary epitheliomatous deposit in the leg, which subsequently became sarcomatous. In view of our comparative ignorance, and remembering the knowledge which had lately been acquired, it was conceivable that a growth which was at first carcinomatous should, some months later, become a sarcoma. The connective tissue elements sometimes reacted in such a way that the epithelial cells were overpowered, and in that process the connective tissue cells acquired a malignancy of their own. He had not heard of the process being reversed—namely, sarcoma causing carcinoma. He had heard of cases in which the same pathologist reported a case to be carcinoma at one examination and sarcoma at another.

Mr. Jenkins, in reply, said he thought the specimen which he had exhibited could not be epithelioma, though there was room for discussion as to whether it was endothelioma or sarcoma. The two expert opinions he had had were both in favour of the tumour being mesoblastic.

PROCEEDINGS OF THE ROYAL SOCIETY OF MEDICINE—LARYNGOLOGICAL SECTION.

June 6, 1913.

Mr. Herbert Tilley, *President, in the Chair.*

Scars of Operation on the Frontal Sinus obliterated by Time.—Herbert Tilley.—Female, aged sixty, was operated on thirteen years ago for chronic empyema of both frontal sinuses. The usual incision through each eyebrow was made—a vertical incision in the lower half of the mid-frontal region—and these were joined by transverse incisions across the root of the nose, which joined the lower end of median with the inner end of the latter incisions. It was thus possible to turn upwards and outwards on each side a triangular flap which fully exposed the anterior wall of each frontal sinus. The nasal cavities are free from suppuration and the internal surface of one sphenoidal sinus is easily seen.

Adult Male with (?) Early Malignant Disease of Lower Pharynx and Upper End of Gullet.—Herbert Tilley.—Male, aged fifty-three, complained of difficulty in swallowing solids and loss of flesh, but no pain

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