

# THE LINGUAL APPLICATION OF IODINE AS A PROPHYLACTIC IN CEREBRO-SPINAL MENINGITIS AND INFLUENZA.

BY

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THE treatment of cerebro-spinal meningitis by the application of iodine to the tongue led me to try it also in this manner as a prophylactic for the same disease, and for influenza during the epidemic in the Mbarara and Kigezi districts, Uganda, in 1918-19.

In both diseases the site of infection appears to be the respiratory passages, possibly most frequently the pharyngeal tonsils, and my assumption was that the iodine would to some extent cause disinfection of the mouth, throat, and tonsils, and thus prevent or reduce the intensity of the disease. Moreover, the iodine increases the flow of saliva which in itself is prohibitive to the growth of the organisms, and a four-fold action is thus brought into force:

1. The local disinfectant action on application near the site of infection.
2. The action of the increased flow of saliva.
3. The action of the iodine after absorption.
4. The excretion of the iodine in the saliva and respiratory passages again acting as a disinfectant.

Ordinary tincture of iodine (B. P.) was mixed with an equal part of native honey, and, in the case of cerebro-spinal meningitis, instructions were given that two or three drops of this mixture should be placed on the tongue of contacts two or three times daily. A large number of cases of cerebro-spinal meningitis among natives was being reported monthly throughout the district, and all that can be said as to results is that no contacts who used it developed the disease, and the number of deaths reported fell in a few months from an average of 100 to an average of 40 a month. Strict isolation of contacts, however, was in force before the use of the iodine, and it was unusual for contacts to become infected after segregation. It is therefore doubtful whether the iodine had any effect, but the natives themselves had great confidence in its efficacy.

In influenza the results appeared to be more definite. No attempts could be made to distribute an experimental medicinal prophylactic among the natives generally; distribution was therefore confined to ten Europeans, about 100 Asiatic clerks and shopkeepers, and a few native chiefs, clerks, and servants of Europeans. The iodine was used in the same manner, but with the recommendation that applications should be made at least every three hours, or more frequently if convenient. This was in November, 1918, when the first suspicious case of influenza occurred near Mbarara. Towards the end of December the disease became prevalent throughout the district, and nearly every person, except some of those to whom the iodine had been distributed, suffered from the disease in a more or less severe form. Among the Europeans, who all used the iodine more or less regularly, no case occurred, although many were in daily contact with persons suffering from the disease. With regard to the Asiatics and natives to whom the iodine had been distributed, it was impossible to ascertain in most cases with what regularity the prophylactic had been used, but a large number escaped infection altogether, and others had the disease in a mild form with no complications. None of the natives using it died; the death rate among those who did not was high. Among the Asiatic population also there were no deaths, as compared with a mortality rate of 6.53 per cent. throughout the Protectorate.

Many instances occurred which appeared to prove the efficacy of the prophylactic and the value of frequent applications. In one family the father, who was in daily contact with influenza cases in all stages, used the iodine regularly and escaped altogether, while the remainder of the family, who had used it less regularly, had mild attacks. In another case, one child appreciated the taste of the mixture so much that he managed to obtain frequent applications and escaped infection, while all the rest of the family had slight attacks.

I have refrained from publishing these notes until now as I considered the results far from convincing. During

the past year, however, I have had the opportunity of seeing several records of the use of iodine taken internally both in the treatment of and as a prophylactic for influenza. Possibly the iodine after lingual application instead of acting as a local disinfectant had its chief action through absorption, but personally I am convinced that its use saved several lives. Moreover, during the past year I have had the opportunity of using it with contacts of isolated cases of influenza, and all have escaped the disease. Possibly painting the tonsils and the back of the throat with iodine would be of greater value, but I consider this would be a too elaborate and unpleasant procedure to be adopted as a general prophylactic with regularity, whereas the placing of a few drops on the tongue is a very simple matter and may prove as efficacious if done with sufficient frequency.

I wish to thank Major C. A. Wiggins, Principal Medical Officer, Uganda Protectorate, for permission to publish this paper.

## Memoranda:

### MEDICAL, SURGICAL, OBSTETRICAL.

#### BILATERAL HYPOGLOSSAL PALSY DUE TO GUNSHOT WOUNDS.

A SIMULTANEOUS wounding of both hypoglossal nerves unaccompanied by any other serious injury, must be an uncommon event. I have short notes of two such cases and, though the records are imperfect and may show obvious defects from the neurological point of view, yet they may possess some interest.

##### CASE I.

Lance-Corporal S., wounded September 15th, 1916. A small fragment of shell has passed transversely across the infra-mandibular region. The wounds of entry and exit are both small, and correspond in position on the two sides. They are situated immediately below the mandible at the junction of the middle and posterior thirds of the horizontal ramus. Both hypoglossal nerves are paralysed. The patient cannot thrust his tongue forward, but can deviate it slightly from side to side, though not sufficiently to touch his cheek. He can dorsiflex the tongue, though not to a full degree, and can retract it fully towards the pharynx. The movements appear to be performed by the pharyngeal and extrinsic muscles, the tongue itself being almost inert except for the power of dorsiflexion. There is no loss of tactile sensation or of taste for salt in either half of the tongue. His pronunciation of the letters of the alphabet is given below.

##### CASE II.

Private G. N., wounded by rifle bullet, October 16th, 1916. The bullet has passed transversely below the lower jaw. The entry and exit wounds are small and symmetrically placed on the two sides immediately below the mandible, a quarter of an inch in front of the angle. The movements of the tongue are similar to those in Case I.

#### Pronunciation of the Letters of the Alphabet.

	CASE I.	CASE II.		CASE I.	CASE II.
A .....	āh	āh	N .....	en	en
B .....	bē	bē	O .....	o	o
C .....	cē	cē	P .....	pē	pē
D .....	vē (?)	dē (?)	Q .....	hōō	kew
E .....	ē	ē	R .....	ār	ār
F .....	eff	eff	S .....	ess	ess
G .....	vē (?)	dē (?)	T .....	fē	tē
H .....	hitch	aitch	U .....	oo	yew
I .....	i	i	V .....	vē	vē
J .....	wri	dē-a (?)	W .....	bubbleoo	doubleyew
K .....	fī	kē	X .....	ex	ex
L .....	ell	ell	Y .....	wī	wī
M .....	em	em	Z .....	reb	zeb (?)

Regarding the vowels, neither of the patients could pronounce A, as in day, or a long E, while in Case I U could not be pronounced as yew. In Case II the only consonants which were quite impossible were G and J, while in Case I D, K, Q, T, W, and Z also offered complete stumbling-blocks. In Case II the pronunciation of D was doubtful, there being a very small sound of the consonant, which was overshadowed by the forcible expiratory sound which accompanied it, and careful attention was required to appreciate the "D." Speaking generally, there were but few articular sounds which were quite impossible, though there was a general lack of distinctness in the enunciation, while excessive expiratory efforts were brought into use in the endeavour to give precision to the individual syllables and words.

Southsea.

HAROLD BURROWS, F.R.C.S.

cope with, and affords excellent instruction for the students. It is my experience that it is an infrequent event for the "mental" cases to be of so severe a character as to require to be sent to a mental hospital.—I am, etc.,

R. H. STEEN,

Out-patient Physician in Psychological Medicine,  
King's College Hospital.

Dartford, May 23rd.

## Universities and Colleges.

### UNIVERSITY OF CAMBRIDGE.

At a congregation, held on May 20th, it was agreed, on the recommendation of the General Board of Studies, to appoint a University Lecturer in Physics as applied to Medical Radiology, in connexion with the Special Board for Medicine, for a period of five years, with a stipend of £100 a year.

The following medical degrees were conferred:

M.B., B.Ch.—C. C. Okell.  
B.Ch.—Man Wong; R. Hilton.

### UNIVERSITY OF SHEFFIELD.

At a meeting of the Council of Sheffield University, on May 13th, Dr. F. E. Wynne (M.O.H. Sheffield) was appointed Professor of Public Health in succession to Dr. Harold Scurfield. The appointment is in accordance with the policy of the University of associating the public health work of the city with instruction given at the University. Mrs. May Mellanby, M.Sc., was appointed demonstrator of dental histology in the department of physiology, and Drs. Ferguson, Wilson, Eric Stacey, E. Barnes, and R. St.L. Brockman demonstrators in the department of anatomy.

The Council adopted a resolution expressing its regret at the death of Emeritus Professor R. J. Pye-Smith and placed on record its appreciation of his long and distinguished services to the University as a member of the council and as professor of surgery.

The Council's thanks were accorded to the Sheffield Panel Committee for its gift of war bonds and war stock of the nominal value of £1,000 for the purpose of equipping a research field laboratory in connexion with the medical faculty of the University.

### UNIVERSITY OF EDINBURGH.

A MEETING of the University Court was held on May 16th.

Mr. Francis Gordon Bell, M.D., Ch.B., F.R.C.S.Eng., was appointed assistant examiner in systematic surgery in succession to Mr. R. C. Alexander, resigned.

Among the resignations intimated was that of Dr. John Beard as lecturer in comparative embryology and vertebrate morphology.

Mr. L. V. R. Becker was reappointed for a further period of six months from April as clinical tutor to the surgical out-patient department of the Edinburgh Royal Infirmary.

Recognition was granted to Dr. John D. Comrie as an extra-mural lecturer in the practice of physics.

### ROYAL COLLEGE OF SURGEONS OF ENGLAND.

#### Primary Fellowship Examination.

THE following candidates have been approved at the first professional examination for the diploma of Fellow:

L. H. Appleby, D. C. G. Ballingall, F. G. Beatty, A. Blackstock, C. E. Bond, G. A. Brookes, H. A. Brookes, G. G. Bruce, J. T. Burrell, G. M. Cameron, C. H. Carlton, S. M. Cohen, J. R. M. Collie, R. S. Corbett, R. C. Davenport, C. O. Davies, S. N. Deboo, M. R. Flynn, G. N. Golden, L. B. Goldschmidt, W. D. Hart, G. T. Henderson, C. A. Horder, L. G. Housden, M. V. Hurley, S. P. Jacobson, J. Jemson, A. R. Jones, N. A. Jory, N. E. Laurence, M. A. Lautre, K. W. Leon, A. R. Lister, C. A. Lupton, Gladys H. Marchant, J. Maxwell, Ruth E. Millar, W. Miller, L. Morris, T. D. Overend, J. A. Pantton, C. M. Pearce, N. A. M. Petersen, J. E. Purves, B. T. Rose, J. P. Ross, Violet I. Russell, J. R. Smith, M. J. Smyth, W. O. Stevenson, Hilda N. Stoessiger, G. C. Swanson, D. B. Walker, A. D. Wall, E. C. Warner, F. W. Watkyn-Thomas, H. B. White, S. H. Woods.

### ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

#### Fellowship Examination.

AT a meeting of the College, held on May 18th, the following seventeen successful candidates out of fifty-six entered, who passed the requisite examinations between January 10th and 15th, were admitted Fellows:

J. P. Blockley, J. W. Burns, A. C. Clark, W. A. Cochrane, T. Colley, C. C. H. Cuff, C. W. Graham, J. M. Hyde, V. J. F. Lack, T. Lindsay, Helen M. McMillan, W. Mercer, Mabel L. Ramsay, G. C. Scantlebury, S. Scoular, G. H. Stevenson, S. G. Whitfield.

The Bathgate Memorial prize, consisting of bronze medal and set of books, has, after a competitive examination in materia medica, been awarded to Mr. J. M. McLintock, and the Ivison Macadam Memorial prize in chemistry, consisting of bronze medal and set of books, to Mr. J. Harkness.

### CONJOINT BOARD IN SCOTLAND.

THE following candidates, having passed the requisite examinations, have been admitted Diplomates in Public Health:

R. B. Watson, R. B. Stewart, C. C. Brown, J. S. Elliot, J. B. Primmer, D. A. Cadman, A. I. Meek, J. Singh, J. C. Simpson, N. S. R. Lorraine, C. Milne, G. G. S. Johnston, D. T. M. Large, G. P. Taylor, Jane E. Hay.

## Obituary.

GEORGE BLUNDELL LONGSTAFF, M.A., M.D., F.R.C.P. The death took place on May 7th, at his residence, Highlands, Putney Heath, of Dr. George Blundell Longstaff, in his 72nd year. Dr. Longstaff was the son of Dr. G. D. Longstaff of Wandsworth, and he was educated at Rugby, at New College, Oxford, where he graduated M.A. and M.B. in 1876, and at St. Thomas's Hospital, where he was a Mead medallist. He further obtained the diplomas of M.R.C.P., M.R.C.S., and the D.P.H. in 1877. He became a Fellow of the Royal College of Physicians in 1888, and took the degree of M.D. in 1891. Dr. Longstaff, so far as we are aware, never engaged in the practice of medicine, but he found his medical knowledge of value, at the time, for instance, of the Jamaica earthquake, for, happening then to be in Jamaica, he did a great deal of medical work among the people of the island. Dr. Longstaff devoted his life to philanthropic, municipal, and scientific work. He was for many years a member of the London County Council, and acted as chairman of the Building Act Committee. He served on many committees of the Charity Organization Society, had been a Poor Law guardian, was a Justice of the Peace, and a member of the Wandsworth District Board of Works. His father had been the first chairman of the Wandsworth Library Commissioners, and he himself joined the Board and succeeded his father as chairman. An ardent entomologist, he was a great collector, and the Hope Collection in the Oxford University Museum has been more than doubled by contributions he presented to it. He was the author of *Butterfly Hunting in Many Lands*, which was published in 1912.

A member of many learned societies, he had been vice-president of the Royal Statistical Society and of the Entomological Society, and was an authority on the analysis of animal and vegetable oils. Dr. Longstaff had served as one of the old Volunteers, and when the special constables were enrolled in 1914, at the outbreak of war, was one of the first to join; he became the first Chief Inspector of the Wandsworth Section, and attended keenly to his duties until ill health compelled him to resign in 1917. He was twice married, his second wife being a Fellow of the Geological Society, who was awarded the Murchison Geological Fund in 1898, and who has made many contributions to the publications of the Geological, Linnean, and other learned societies. Dr. Longstaff's philanthropic, educational, political, and scientific activities made him one of the best-known and most highly esteemed public men in South London, where his loss will be greatly felt.

WE regret to announce the death, at Stewarton, Ayrshire, on May 8th, of Dr. THOMAS WATT, who was one of the best known medical practitioners in Paisley, where he had practised for over thirty-five years. Dr. Watt was educated at Glasgow University, where he first graduated M.A., and later qualified in medicine by graduating M.B., C.M., in 1886. He was senior visiting physician to the Royal Alexandra Infirmary, Paisley, and medical officer to the Post Office. He took a particular interest in the campaign against tuberculosis and in the establishment of sanatoriums for the borough and county. He had paid much attention to the question of a wholesome milk supply, and had travelled in Germany, Denmark, and Holland with a view to extending his knowledge on this subject. Dr. Watt, who had been in poor health for some time, was 59 years of age; he is survived by his widow, a daughter, and two sons, one of whom is carrying on his father's practice at Paisley.

LIEUT.-COLONEL THOMAS RANKIN MACDONALD, Bengal Medical Service (retired), died at Inverness on May 8th. He was born on May 17th, 1853, educated at Edinburgh, where he graduated M.B. and C.M. in 1876, having pre-

viously taken the L.R.C.S.Edin. in 1875, and at Vienna, and entered the I.M.S. as surgeon on March 31st, 1880, becoming lieutenant-colonel after twenty years' service, and retiring on June 20th, 1900. While on furlough prior to retirement he took the F.R.C.S.Edin. in 1899, and after retiring was for a time in partnership with his uncle, the late Dr. MacLeod of Hawick, after which he settled in Inverness. He served in the Egyptian war of 1882, was at the battle of Tel-el-Kebir, and received the medal with a clasp and the Khedive's bronze star. He was also one of the I.M.S. officers deputed to Egypt for special cholera duty in 1883. The rest of his service was mostly passed in civil employ in Burma and Bengal.

## Medical News.

H.R.H. THE DUKE OF YORK will open King George's Sanatorium for Sailors, a branch of the Seamen's Hospital Society, Greenwich, at Bramshott, Hants, on July 12th.

MADAME CURIE has been presented by the President with a gram of radium subscribed for by women of the United States. She has received the honorary degree of LL.D. from the University of Pennsylvania and that of M.D. from the Women's Medical College, Philadelphia.

DR. RUSSELL J. REYNOLDS has been appointed radiologist to Charing Cross Hospital, in succession to the late Dr. W. Ironside Bruce.

THE annual dinner of the Harveian Society will be held on Wednesday, June 22nd, at 7.30 p.m., at the Café Royal, Regent Street, W.

THE medical conference arranged by the Industrial Welfare Society will be opened at 51, Palace Street, London, S.W., on June 2nd, at 10.30 a.m., when Dr. R. M. Wilson will introduce the subject of "Medical service in industry." In the afternoon the subject of "Health problems in industry" will be discussed by Professor E. L. Collis, Dr. T. M. Legge, and Dr. Halford Ross.

A MEETING convened by Dr. Marie Stopes will be held at Queen's Hall on May 31st, at 8.30 p.m., to discuss "Constructive birth control." The speakers will include Dr. Jane Lorimer Hawthorne and Dr. C. Killick Millard.

DR. W. J. HOWARTH, C.B.E., medical officer of health for the City of London, has been elected President of the Society of Medical Officers of Health for the session 1921-22; he will take office in October next. The honorary fellowship of the society has been conferred on Dr. Alfred Hill, formerly medical officer of health for the city of Birmingham, "for long and distinguished services to preventive medicine and public health administration." Dr. Hill, who has just entered his 96th year, was president of the society in 1886 and 1887. The annual provincial meeting of the Society will be held on Saturday, June 11th. Members will assemble at the house of the Society at 10.30 a.m., and proceed by motor coach to Hatfield House, which will be visited by invitation of Lord Salisbury. Afterwards the party will be entertained at luncheon at Welwyn Garden City by the president of the Society, Dr. F. E. Fremantle, M.P. The Welwyn housing and town-planning schemes will be inspected, and Mrs. Fremantle has invited members to tea at Bedwell Park. Members who intend to be present are asked to give early notice to the Executive Secretary, 1, Upper Montague Street, Russell Square, W.C.1, stating if they will be accompanied by ladies; 10s. 6d. should be forwarded for each motor coach ticket.

AT the Marylebone Police Court, on May 9th, Hugh Morton, of Park Lane (formerly of 15, Cavendish Place), appeared to answer three summons under the Venereal Diseases Act, and one summons under the Medical Act, issued against him at the instance of the Medical Defence Union, Limited. The facts upon which the prosecution relied were admitted by the defendant, and the magistrate, after hearing counsel and without calling witnesses, imposed a penalty of £30 in respect of each offence under the Venereal Diseases Act, and £20 in respect of the offence under the Medical Act, with five guineas cost on each summons; and sentenced the defendant to two months' imprisonment in default of payment of the fines and costs within seven days.

THE Inland Revenue authorities received in the financial year ending March 31st, 1920, the sum of £1,332,661 in payment of patent medicine labels in Great Britain alone, an increase of £266,967 over the amount received under the same head in the previous financial year. The duty on

the labels varied from 3d. to £2, according to the price of the medicine. The number of licences issued to makers or vendors of patent medicines in Great Britain during the financial year 1919-20 was 41,671, yielding a net revenue of £10,421; the corresponding figures in the previous year were 39,675 and £9,920.

THE summer meeting of the Section of Laryngology of the Royal Society of Medicine will be held on June 2nd, 3rd, and 4th. On the afternoon of Thursday, June 2nd, and on the morning of Friday, June 3rd, a number of papers will be read and cases shown; while on the afternoon of June 3rd a number of special demonstrations will be given, followed by the ordinary meeting of the Section. A dinner will take place in the evening at the Trocadero Restaurant. On the morning of Saturday, June 4th, the laryngological staffs of University College Hospital, the Central London Ear and Throat Hospital, and other hospitals will perform special operations.

THE British Congress of Gynaecology and Obstetrics will hold a meeting at the Queen's Hotel, Birmingham, on Friday and Saturday next, June 3rd and 4th.

THE Belgian Minister of Sciences and Arts, in response to the request of the Faculty of Medicine, has resolved to create a chair of psychiatry at the University of Ghent.

DR. KENNETH E. ECKENSTEIN, pathologist to the French Hospital, London, who served during the war as a medical officer in the French army, has received the honour of Chevalier of the Legion of Honour.

DR. CHARLES ABADIE of Paris was entertained at a banquet on May 12th in celebration of his medical jubilee.

THREE post-graduate courses, conducted by the pediatric, obstetrical and gynaecological, and oto-rhino-laryngological clinics respectively, will be held in the University of Naples, commencing on May 30th and continuing for two to three months. The courses will be of a practical character, and the numbers will be limited.

DR. HUBERT WORK, president of the American Medical Association, has been appointed by President Harding First Assistant Postmaster-General.

DR. CANUYT, a former clinical assistant of Professor Moure, has been appointed to take charge of the department of oto-rhino-laryngology in the faculty of medicine at Strasbourg.

AN exhibition of radiographs will be held by the Röntgen Society in the Royal Photographic Society's rooms, 35, Russell Square, W.C., during the month of June. The exhibition will be open daily (Sundays excepted) from 10 a.m. to 5 p.m., and all who are interested are invited to attend.

A POST-GRADUATE course in medicine, particularly on the application of laboratory methods to diagnosis, will be held during July next at the Hôtel-Dieu, Paris, under the direction of Professor Maurice Villaret, with the co-operation of a large staff. The course will begin on Monday, July 4th, and will include thirty-two lectures and demonstrations, taking place thrice daily. The fee is 150 francs, and a certificate will be given at the end of the course. Particulars may be had from the secretary of the Faculty of Medicine, University of Paris. In connexion with this course a tour of study has been arranged, from July 9th to 17th, to the spas of the Pyrenees, the detailed programme of which can be obtained from Dr. Dausset, at the medical clinic of the Hôtel-Dieu.

THE report of the Home Service Ambulance Committee for the first quarter of the year shows that the institution of an ambulance service in the country has been justified by the work that the vehicles have accomplished. It is now two years since the inauguration of the scheme as part of the peace work of the Order of St. John and British Red Cross Society, and the successive reports prove that as the existence of the ambulances has become known, steady progress has been made in their use for the transport of the sick. The number of cases carried during the March quarter was 11,393, being 3,629 in excess of the total for the previous quarter. The Committee is recalling the old ambulances used during the war as they become unfit for service and replacing them by new ambulances of a lighter type; this change, it is hoped, will have several advantages, including a reduction in the cost of maintenance.

ACCORDING to the New York *Medical Record*, the prohibition director for Illinois has announced that each of the 2,000 druggists of Chicago may withdraw 200 gallons of whisky and 200 gallons of wine every three months. The commissioner of internal revenue has announced that this quantity could be increased if the druggists could show that they really needed more liquor to supply the demand. At this rate Chicago will use 3,200,000 gallons of wine and whisky a year for her 3,000,000 inhabitants.