

## THE UNRELIABILITY OF SULPHUR FOR THE DESTRUCTION OF LICE IN CLOTHING.

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The trials forming the basis of this note were undertaken at the request of Admiral Henderson, of the Metropolitan Asylums Board, with a view to testing the efficiency of a process of fumigation as applied in the London Borough casual wards. Since the experiments aimed at showing the results of the method as normally employed, and were in no way directed to prove that "sulphur vapour" will, under certain conditions, destroy lice, no efforts were made to produce an unusually high concentration of gas.

I wish to acknowledge my indebtedness to Captain J. T. Grant, R.A.M.C., for his assistance and collaboration in regard to the preliminary arrangement and conduct of these trials, and to Mr. J. B. Reid, superintendent of the St. Pancras Casual Ward, for his co-operation, and the care with which he conducted the exposures on the lines normally worked. In publishing these results my desire is to bring to the notice of the medical officers of health and sanitary officials throughout the country the unreliability of the use of sulphur for the purpose in question under the method employed.

### *Fumigation Chamber.*

The fumigation chamber in which the trials were conducted has a cubic capacity of 294 ft. (7 ft. long, 6 ft. wide, and 7 ft. high). The floor is concrete, the walls brick, and the ceiling wood covered with zinc. The chamber is entirely without ventilation, there being neither window nor chimney, so that there is no passage for the escape of the gas generated when the door is closed.

### *Method of Use.*

After the infested clothing has been hung in the chamber two pails are placed on the floor, one containing boiling water and the other, put close to it, a shovel full of live fire, on which 1 lb. of sulphur is placed. The door is then closed, and the clothes are left exposed to the vapour given off by the boiling water and sulphur until next morning—the usual period being about nine hours. In the trials as recorded below the normal procedure for the use of the chamber in practice was followed. In addition the temperature was taken with a registering thermometer placed in one or other corner of the chamber at the level of one or more of the pockets in which the lice and nits were exposed.

Lice and nits on small slips of army shirt flannel were placed in small pockets of khaki cloth made by folding a slip over and stitching the edges together, the idea being to afford the insects and their eggs as much protection as they could attain by crawling into the complex seams situated at the fork of trousers, or the junction of sleeves with the body of a tunic or coat. Each pocket contained 100 to 300 nits, and in all but the fifth trial 10 to 12 active lice as well. In each of the five trials five pockets were used, four being exposed in the chamber, the fifth being used as a control. Particular care was taken to ensure that nits of all ages, from those freshly laid to those about to hatch, were present. After exposure a careful examination was made in respect of the active lice. The nits were transferred to small card boxes placed in a bag suspended between shirt and skin, so as to give them as natural a condition as possible during incubation.

### *Details of Experiments.*

*First Trial.*—Pockets 1, 2, 3, 4 were exposed at the height of 2, 3, 4, and 5 feet from the floor respectively; temperature 92° F.; period nine hours. In all four pockets the lice and nits were killed. In pocket No. 5 (control) the lice were living and the nits hatched freely.

*Second Trial.*—Exposure at 2 ft. from the floor; temperature 92° F.; period nine hours. In none of the four pockets were the lice killed. Nits hatched freely; over 100 were counted in most cases before they were placed in the stock boxes as normal hatches. In the control pocket the lice were living and the nits hatched normally.

*Third Trial.*—Exposure at 3 ft. from the floor; temperature 90° F.; period nine hours. In none of the four pockets were the lice killed. Hatching was somewhat delayed in relation to the controls, but the young lice emerged in large numbers; it is

doubtful if the exposure to the vapour caused any mortality at all. In the control pocket also the lice were not killed; the nits hatched normally.

*Fourth Trial.*—Four pockets were exposed at 4 ft. from the floor; temperature 88° F.; period nine hours. (Pocket No. 3 was left open; there was no control pocket.) Some active lice survived in each pocket, but others were killed. The nits hatched very freely; a few of the recently laid eggs failed to hatch, presumably owing to the exposure, but the bulk hatched normally.

*Fifth Trial.*—Exposure at 3 ft. from the floor; temperature 95° F.; period nine hours. (In this trial all the pockets were left unstitched along one side and during the exposure they were held open by a small piece of wood.) In pockets 1, 2, 3, 4 there were no active lice present; the great majority of the nits were killed, but a few—two or three—hatched in each pocket. In the control pocket no active lice were present; nits hatched normally.

### *Comments.*

No definite reason can be adduced for the success of the first trial in contrast to the failure of the subsequent ones. Previous experiments have shown that in cases where "sulphur vapour" is effective a few nits may hatch at a somewhat later date than the unexposed eggs of the control. The suggestion obtained from the evidence is that this may result because eggs at a certain age (stage of development) are relatively immune as compared with others. It is not feasible, however, to explain diverging results of such magnitude as the above in such a way. It is more reasonable to suppose that, owing to some variation in the heat of the live coal, the sulphur burned more rapidly in the first trial and so produced a higher concentration of gas, for it seems possible, if not probable, that quick combustion is more effective than slow combustion continued over a longer period.

The opening of the pockets in the fifth series of trials was carried out in deference to a criticism to the effect that the method of protecting the nits and lice by one thickness of khaki cloth was too severe a test. It is probable that the largely increased success attained in these trials was due, in part at any rate, to the fuller exposure. As, however, nits are frequently laid in the seams at the fork or armpit, in some of which they will get protection even if others gape as a result of the clothing being turned inside out, reliance upon any process which depends for its success upon the full exposure of all the nits is to be deprecated.

I suggest reliance upon heat wherever possible for the destruction of insect vermin, half an hour's exposure to a temperature of 55° C. being amply sufficient with either dry or moist heat, provided the clothing or other articles are suspended, and not bundled.

## Memoranda:

### MEDICAL, SURGICAL, OBSTETRICAL.

#### THE TREATMENT OF PNEUMONIA.

AFTER reading the two articles in the JOURNAL of October 19th, pp. 427-8, on the treatment of lobar pneumonia, I feel impelled to write this note.

Some six or eight years ago I read a letter in the JOURNAL in which the writer stated that, although he had treated a large number of cases of pneumonia, he had not had a single death for something like ten years. He gave a prescription of the medicine he employed, which I reproduce at the end of this letter.

My partner (Dr. Gerrard) and I adopted this method of treatment at the time, and, with one exception, have not had a fatal case. The man who died—for reasons which it is unnecessary to state—was not given this particular treatment. Over and over again we have been amazed at the results obtained. I cannot do better than give a brief outline of the last case I have had, which is typical of a large number.

On the forenoon of September 23rd I was called in to see a sailor, aged 20, home on leave, having just returned with a convoy from America. I was told he had had a rigor on the previous afternoon, a restless night, and had been slightly delirious.

I found him suffering from acute lobar pneumonia, as evidenced by frequent cough, slightly blood-stained sputum, and well marked crepitation over a pretty extensive area at the base of the left lung. Temperature 104°, pulse and respiration I do not remember. He began to take the medicine about 4 p.m.

that afternoon. He had a better night, and was more comfortable on the morning of September 24th, when the temperature was 101° F. The patient slept all the next night, and on September 25th the temperature was normal. No further rise of temperature occurred, and he became quite comfortable, and took food well.

A peculiar feature in the cases thus treated is that, although the affected lung undergoes the same changes as in an ordinary case of pneumonia, the cough disappears after a day or two, and there is very little expectoration.

I have long thought it my duty again to call the attention of the profession to this method of treatment, but I have hesitated, as I felt it was open to the charge of being empirical. This may be so, but are not many of our methods empirical? I have in my mind the treatment of syphilis by mercury as being somewhat analogous. Mercury was found valuable in the treatment of syphilis long before anything was known of the *Spirochaeta pallida*, and may it not be that one of these drugs or the combination of them acts upon the pneumococcus in much the same way? However that may be, my sole object in writing is to ask my brother practitioners to give this method of treatment a trial. I feel sure they will not be disappointed, and many valuable lives will be saved. The prescription is:

R. Creosoti	...	...	...	...	5 ss
Potass. iodidi	...	...	...	...	5 j
Sp. vini rect.	...	...	...	...	5 ij
Ext. glycyrrhizae liq.	...	...	...	...	5 iij
Aq.	...	...	...	ad	5 vj

Sig. One tablespoonful every three hours until the temperature becomes normal.

Note.—Dissolve the creosote in the spirit and add the water by degrees, shaking frequently.

Oldham.

E. W. MARTLAND.

**DEFLUVIUM CAPILLORUM AFTER INFLUENZA.**  
By this term is meant a thinning of the hair, which usually comes away in great abundance on combing.

It is a daily occurrence at present to see cases of defluvium capillorum in the out-patient clinic. The cases are nearly all young women who give a history of influenza two to three months previously. Very often they bring an alarming bunch of hair in their pocket so that the physician may be duly impressed with the seriousness of the complaint. The hairs themselves appear to be healthy, except that the hair bulbs are more or less atrophied, owing no doubt to defective nutrition of the hair follicles. The scalp in most cases appears to be quite healthy.

On careful inquiry into the cases it is impossible to obtain any general symptom common amongst the cases, nor does the attack of influenza itself appear to have been specially severe. Though the women are very anxious concerning their loss of hair I am certain that they are not all of the nervous temperament, and when they are reassured as to the prognosis the nervousness in great part disappears.

Defluvium is well known in other infections, but I am unable to find any reference to influenza as a specified cause of the complaint. The time of occurrence I would definitely put down as two to three months after the influenza—at least this is the time they seek advice. There has not been the same prevalence of the complaint amongst men, but this may be due to the more easy way in which the adult male looks at extra loss of hair. The prognosis in these cases of defluvium is good and the treatment is more constitutional than local.

General tonics may be administered, and locally either a stimulating lotion or a sulphur ointment if there is any seborrhoea—but this is not a common accompaniment—may be used. Constitutional treatment is the more important.

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Medical Officer, Manchester and Salford  
Skin Hospital.

#### THE USE OF SALICIN IN INFLUENZA.

I SHOULD like to add my testimony to Mr. E. B. Turner's advocacy of salicin in influenza. I have used it now for thirty years and am a firm believer in it. I commenced to treat influenza with salicylates, but came to the conclusion that the heart's action was liable to

be unduly depressed thereby; possibly also the sodium salicylate of that period was not so pure. Since then I have given salicin, after commencing with a dose of aspirin to lessen pain and help the skin to act (although not quite so heroically as Mr. E. B. Turner). The cases of pneumonia which I have seen appear to be of a most virulent type, frequently accompanied by the expectoration of almost pure blood and sometimes by diarrhoea. I believe a streptococcus has been isolated. In the recent summer epidemic, which was of a much milder type, I was much puzzled by six cases that developed a general rash at first typical of scarlet fever, accompanied by sore throat, febrile temperature, and vomiting. Three of these were sent from the Royal National Orthopaedic Hospital to an isolation hospital and kept under observation for some weeks. The rashes were eventually accompanied by more irritation than is usual in scarlet fever and subsequently developed a coarser nature. Later, I had little doubt that they were caused by salicin, which may have contained some impurity, and this was the opinion of the medical superintendent of the isolation hospital.

REGINALD POLLARD, M.B., D.P.H.,  
M.O. in charge Lady Evelyn Mason's Hospital for  
Officers, and of medical cases Royal National  
Orthopaedic Hospital.

#### EXOPHTHALMIC GOITRE IN A GIRL.

In February, 1918, a girl then aged 11 years became ill with sore throat and articular pains, from which she recovered; her mother states that since this illness she has noticed the child's neck becoming larger and that the eyes were becoming very prominent. The patient was admitted to hospital on August 3rd (her twelfth birthday was July 4th). She then presented the usual signs of a well-marked case of Graves's disease; there was pronounced exophthalmos with a well-marked von Graefe's sign, considerable enlargement of the thyroid gland, and a thrill which could be felt all over the gland. There was tachycardia (pulse 128), the usual flush of the skin, the sensation of heat, and other typical signs. The patient during the past two months has been kept at rest in bed and has had x-ray treatment once a week. The exophthalmos is less, the pulse-rate is on the average 96, and she is much quieter. An interesting point is that the blood count showed 33 per cent. of lymphocytes.

Dr. Hector Mackenzie, in *Allbutt's System of Medicine*, says: "I have not observed a case under 12 years of age," but adds that Buschan in his series mentions fifteen cases under 10 years old.

I am indebted to Sir Clifford Allbutt for permission to publish this case.

C. WYNDHAM GITTENS,  
Cambridge.  
M.R.C.S. Eng., L.R.C.P. Lond.

## Rebiews.

#### WOUNDS OF THE SPINAL CORD.

In the comparatively new field of war neurology few subjects are more important and give greater scope for research and observation than injuries of the spinal cord and cauda equina, which ROUSSY and LHERMITTE<sup>1</sup> describe in a recent volume of the *Collection Horizon*, introduced by a preface from the pen of Professor PIERRE MARIE. Complete and incomplete division of the spinal cord is first dealt with, and it is interesting to compare these sections with the observations of Drs. Henry Head and G. Riddoch on the automatic bladder, mass-reflex, and other phenomena in cases of division of the spinal cord, which were contemporaneous and independent (vide *BRITISH MEDICAL JOURNAL*, 1918, i, 457). In the section on incomplete division of the cord, which is commoner than complete division, Roussy and Lhermitte give an account of the various forms of Brown-Séquard's well known syndrome, the imperfect being more often seen than the typical condition. There is a good account of the naked eye and microscopical changes in the spinal cord, with satisfactory illustrations. The subject of spinal shock has

<sup>1</sup> *Les blessures de la moelle et de la queue de cheval*. Par G. Roussy et J. Lhermitte. Préface du Professor Pierre-Marie. *Collection Horizon*. Paris: Masson et Cie. 1918. (Cr. 8vo, pp. viii + 202; 8 plates and 12 figures. Fr. 4.)

## Medical News.

MR. JOHN COUPER, F.R.C.S., consulting surgeon, London Hospital, left estate of the value of £178,894, of which £178,135 is net personality.

SIR MALCOLM MORRIS, K.C.V.O., will open the winter session of the Tuberculosis Society with an introductory address on past and future of the fight against tuberculosis, on Monday, October 28th, at 8 p.m., at the house of the Royal Society of Medicine, 1, Wimpole Street, London, W. The meeting is open to all practitioners of medicine.

At the first meeting of the Central Midwives Board for Ireland, held at the office of the Local Government Board for Ireland, the following members were present: Sir W. J. Smyly, Sir J. W. Byers, Dr. E. Coey Bigger, Professor H. Corby, Dr. H. T. Warnock, Mrs. M. Blunden, Miss Annie Michie, Miss J. H. Kelly, Miss Genevieve O'Carroll. On the proposition of Sir W. J. Smyly, seconded by Professor Corby, and supported by Sir J. W. Byers, Dr. E. Coey Bigger was unanimously elected chairman. On the proposition of Dr. Warnock, seconded by Sir W. J. Smyly, Sir A. J. Horne was unanimously elected deputy chairman. Mr. J. E. Devlin was requested to undertake the duties of secretary. The Board appointed a Finance Committee and also a committee to draw up the rules and regulations to be submitted to the Board at its meeting on October 31st.

SIR JOHN TWEEDY, LL.D., F.R.C.S., has been re-elected president of the Medical Defence Union; Dr. Gunton Alderton, honorary treasurer; and Mr. A. G. Bateman and Mr. W. E. Hempson, general secretary and solicitor respectively. Surgeon-Commander C. T. Baxter, R.N., and Surgeon-Lieutenant-Commander H. B. Hill, R.N., have been made vice-presidents as representatives of the Medical Service R.N. The sister service has been well represented for some years. At the annual general meeting on September 19th the annual report was presented and adopted, and the usual statutory resolutions passed unanimously. The President reported that the work of the Union had greatly increased owing to the war; its services have been sought and greatly appreciated by members on active service who required advice and assistance in matters relating to military appointments and civil practice.

## Universities and Colleges.

### UNIVERSITY OF OXFORD.

At a congregation held on October 17th the degree of Doctor of Medicine was conferred, in absence, on Treffy O. Thompson.

### UNIVERSITY OF CAMBRIDGE.

At a congregation held on October 18th the following medical degrees were conferred:

M.D.—J. A. Venning, C. L. Gimblett.  
M.B., B.Ch.—I. de B. Daly.  
M.B.—C. W. Bowle, H. G. Rice  
B.Ch.—S. Riddiough, A. H. Pearce.

\*Admitted by proxy.

### UNIVERSITY OF LONDON.

King's College Hospital Medical School.—The University Entrance Scholarship in Anatomy and Physiology (value £50) has been awarded to Miss A. M. Freeman.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.  
DR. R. MCKENZIE JOHNSTON has been re-elected president of the College for the ensuing year.

The following gentlemen, having passed the requisite examinations, have been admitted Fellows:

T. H. W. Alexander, J. M. Beyers, E. S. Brentnall, F. D. Cairns, H. L. H. Lim, T. R. G. Melrose, G. Robertson, C. M. Rolston, B. T. Rose, T. H. Sanderson-Wells, J. Z. Truter, W. R. E. Unthank, B. P. Varma.

### CONJOINT BOARD IN SCOTLAND.

The following candidates have been approved at the examinations indicated:

THIRD EXAMINATION.—J. Stevenson, J. R. McCubbing, Agnes M. Hill, T. Poole, V. K. Paramanayogam, H. A. Newton, D. A. Dias, J. S. A. Rogers, W. G. Carew. Pathology: H. R. Fisher. Materia Medica: Alexandra M. Limont, P. F. Fairley.

FINAL EXAMINATION.—T. T. Read, J. W. Gaston, Rebecca Goodman, G. T. G. Boyce, D. A. Walpole, Anup Singh Narula, Apar Galustian, S. H. Meiring, J. B. Bourke, A. S. Hughes, F. D. Yourell. Medicine: W. Gibb, V. A. Rankin, Krishna Abaji Deodhar. Surgery: V. A. Rankin. Midwifery: T. Hardie, W. Gibb. Medical Jurisprudence: A. F. Caddell, M. H. Carleton, J. M. A. McVey, A. F. Brighmen, J. Stevenson, T. Poole.

## Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the *BRITISH MEDICAL JOURNAL*, are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the *JOURNAL* be addressed to the Editor at the Office of the *JOURNAL*.

The postal address of the *BRITISH MEDICAL ASSOCIATION* and *BRITISH MEDICAL JOURNAL* is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the *BRITISH MEDICAL JOURNAL*, *Attitology*, Westrand, London; telephone, 2631, Gerrard.

2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.

3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the *British Medical Association* is 16, South Frederick Street, Dublin.

The address of the Central Medical War Committee for England and Wales is 429, Strand, London, W.C.2; that of the Reference Committee of the Royal Colleges in London is the Examination Hall, 8, Queen Square, Bloomsbury, W.C.1; and that of the Scottish Medical Service Emergency Committee is Royal College of Physicians, Edinburgh.

### LETTERS, NOTES, ETC.

AN additional medical referee under the Workmen's Compensation Act, 1906, for County Court Circuit No. 7, to be attached more particularly to the Birkenhead and Runcorn County Courts, is to be appointed; the referee must reside in or in close proximity to Birkenhead. Applications to the Private Secretary, Home Office, before November 7th.

### THE MEDICAL SERVICE, R.N.

A MEDICAL OFFICER, R.N., writes to express his dissent from the opinion expressed last week to the effect that the changes in titles and uniform sanctioned by the Board of Admiralty will give satisfaction and tend to popularize the service. He does not think that the desired type of medical officer will be attracted by the change in the uniform, or by the compound titles, which he agrees are clumsy. The army, he says, long ago found out the stupidity of double titles.

### BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND.

At the meeting of the Executive Committee of the Fund on October 21st it was decided to send to Belgium £400 a month until the end of the year. Last August Mr. Ernest P. Bicknell, American Red Cross Commissioner for Belgium, announced the intention of that body to contribute £200 monthly and asked to be kept informed of the progress of the fund. A statement of the activities of the fund and its existing position having been forwarded, a letter was received from the American Red Cross confirming the subsidy of £200 a month to the fund until the end of the year, and alluding to the possibility of its continuance for a longer period. The Committee, in acknowledging this munificent gift, expressed the confident anticipation that the British medical and pharmacist professions would continue to contribute their share to the fund. Sir Rickman Godlee, who was in the chair, said that it was understood that the local Belgian committees would continue to act in the regained territory, although the need there would doubtless not be so urgent as in the parts of Belgium still occupied. An audited cash statement for the period December 1st, 1917, to August 31st, 1918, presented by the honorary treasurer (Dr. H. A. Des Vœux, 14, Buckingham Gate, S.W.1) showed that £3,924 had been expended in relief, and £161 in administration. The second appeal at the New Year brought in about £963; the circular letter to the medical profession produced a further £1,715; and a special article in the medical press £1,455; a total of about £4,134—a sum exceeding the auditors' statement, inasmuch as £286 had been subscribed since September 1st.

### THE BELL FUND.

DR. S. A. KINNIER WILSON asks us to acknowledge a donation to the Dr. J. H. Bell Fund of £1 ls. from Dr. H. J. Norman. Subscriptions should be sent to Dr. Wilson at 14, Harley Street, London, W.1.

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