SUPPLEMENT TO OBSERVATIONS ON ELIMINATION IN FEVERS.

By C. HANDFIELD JONES, M.B., F.R.S., Physician to St. Mary's Hospital.

I DENY that an equal reaction takes place in all parts of the tube when filled with liquor sodæ chlorinatæ, added to a drachm of urine. The urine, as it descends and mixes with the lower fluid, undergoes decomposition rapidly; and very much more gas is generated in the upper than in the lower parts of the tube. If the urine is rich in urea, it would be better to operate on only half a drachm.

I was led to try the method I have employed, because I found so much inconvenience from the mercury being driven violently out and scattered about, in consequence of the energetic action which ensued very quickly after pouring in the decomposing liquid. As the mercury was to be replaced by the salt solution, I tried at first pouring the latter in immediately after the liquor sodæ chlorinatæ, and this answered pretty well; but I afterwards thought that the filling up the tube with liquor sodæ chlorinatæ alone would be more desirable. I used about eight times the volume of urine (Dr. Davy states five or six times to be sufficient), but diluted it with nearly an equal amount of water.

The amount of urea indicated in this way was generally so much above the highest figure mentioned in Dr. Davy's paper (5.472 grains per ounce), that I was less inclined to suspect there was any material loss. I never supposed, however, that the result was more than an approximation to the truth; I should not have laid stress on any small differences as affording evidence of increase or diminution in the daily urea amount. It is to be considered also that the daily amount of urine is not so fixed and constant as to make it certain that, even with the most accurate analysis, we can refer small variations in the urea or other constituents to causes whose operation we wish to ascertain. Large deviations from the normal mean, we may be pretty sure, are not accidental; the smaller may easily lead us astray.

I still maintain that a series of experiments performed in the same way yield results capable of being compared with each other, though they may be quite unfit to be compared with others.

I have made five careful comparative experiments since reading Dr. Thudichum's strictures, the results of which I will now state.

- (1) Urine of light colour, specific gravity 1018; adult male. One drachm, with diluted liquor sodæ chlorinatæ, yielded 1.29 cubic inch of nitrogen; one drachm, with 1.6 cubic inch of mercury, yielded 1.52 cubic inch of nitrogen; one drachm, with undiluted liquor sodæ chlorinatæ, yielded 2.1 cubic inches.
- (2) Urine of child, specific gravity 1018. One drachm, with 1.7 cubic inch of mercury, gave 1.64 cubic inch of nitrogen; one drachm, with liquor sodæ chlorinatæ alone, gave 1.60 cubic inch of nitrogen.
- (3) Urine of deep reddish colour, specific gravity 1025; female; liver obstructed. One drachm, with 1.7 cubic inch of mercury, gave 1.8 cubic inch of nitrogen; one drachm, with liquor sodæ chlorinatæ alone, gave 1.9 cubic inch of nitrogen.
- (4) Urine of lightish colour, specific gravity 1017; adult female. One drachm, with 1.7 cubic inch of mercury, gave 1.59 cubic inch of nitrogen; one drachm, with liquor sodæ chlorinatæ alone, gave 1.61 cubic inch of nitrogen.
- (5) Urine of full colour; specific gravity 1022.5; adult male; One drachm, with 1.89 cubic inch of mercury, gave 1.65 cubic inch of nitrogen; one drachm, with liquor sodæ chlorinatæ alone, gave 2.3 cubic inches of nitrogen.

These results certainly show that when undiluted liquor sodæ chlorinatæ alone is employed, the amount of nitrogen disengaged is above or very nearly equal to that which is obtained, when mercury and liquor sodæ chlorinatæ are used in Dr. Davy's original way. (The amount of mercury used in the third experiment was rather too small.) The first experiment shows that with diluted liquor sodæ chlorinatæ, a less amount of gas is evolved than in the other cases; a like result was obtained in some other trials.

I ought to have written minims when estimating the degree of acidity of urine instead of drops. With this correction, I contend that the figures I have given furnish information of some value. They show, *e.g.*, that the remarkable deposition

of uric acid in case I was not owing to hyperacidity of the urine. It would be very easy to express the acidity in the cases I published in terms of weight by evaporating sixty minims of the solution to dryness and weighing the residue. No boiling is necessary with the soda solution I have used to obtain a neutral condition.

Why my determinations of uric acid are "of no use" is not said. It may be so, but I can scarcely accept a simple oracular condemnation.

I will only say further that I made no claim in my paper to any originality, or great accuracy of chemical observation. I thought, and I still think, that the representations I gave of the condition of urine in these cases of fever were in the main correct, and were sufficient to illustrate the point I had in view, viz., that urinary elimination in fever is not in defect, but rather in excess.

I greatly regret the *animus* displayed by Dr. Thudichum. I almost think, on calmer reflection, he will feel that several of his expressions were neither seemly nor courteous.

London, September 29th, 1857.

Association Intelligence.

MEETING OF COMMITTEE OF COUNCIL.

A MEETING of the Committee of Council will be holden at the Queen's Hotel, in Birmingham, on Monday, the 12th October, at half-past three o'clock.

PHILIP H. WILLIAMS, M.D., *General Secretary*.

Worcester, September 28th, 1857.

[On the same day, the first annual meeting of the National Association for the Promotion of Social Science, will be holden in Birmingham. An address will be delivered by Lord Brougham.]

BRANCH MEETINGS TO BE HELD.

NAME OF BRANCH.	PLACE OF MEETING.	DATE.
BIRMINGHAM AND MIDLAND COUNTIES.		Thursday, Oct. 8th.
[Ordinary Meeting.]		

LIST OF MEMBERS: NOTICE.

IN accordance with Law 24, a list of members of the BRITISH MEDICAL ASSOCIATION will shortly be published. Gentlemen whose designations or addresses are incorrectly given in the last list, or on the wrappers of their Journals, will oblige by at once forwarding the necessary corrections to the Editor of the JOURNAL, 37, Great Queen Street, Lincoln's Inn Fields, London, W.C.

ADMISSION OF MEMBERS, AND PAYMENT OF SUBSCRIPTIONS.

THE General Secretary of the British Medical Association begs to call the attention of members to the Laws regarding the ADMISSION OF MEMBERS, and the PAYMENT of their SUBSCRIPTIONS.

"*Admission of Members.* Any qualified medical practitioner, not disqualified by any bye-law, who shall be recommended as eligible by any *three* members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch."

"*Subscriptions.* The subscription to the Association shall be One Guinea annually; and each member, on paying his subscription, shall be entitled to receive the publications of the Association for the current year. The subscription shall date from the 1st January in each year, and shall be considered as due unless notice of withdrawal be given in writing to the Secretary on or before the 25th of December previous."

Either of the following modes of payment may be adopted:—

1. Payment by Post-Office Order to the Treasurer (Sir C. Hastings, M.D., Worcester), or to the undersigned.

2. Payment to the Secretary of the Branch to which the member belongs.

3. Members residing in the Metropolis and vicinity can make their payments through the publisher of the BRITISH MEDICAL JOURNAL, Mr. Thomas John Honeyman, 37, Great Queen Street, Lincoln's Inn Fields, W. C.

PHILIP H. WILLIAMS, *General Secretary*.

Worcester, October 1857.