A lowering of the energy expenditure under quinine thus occurred in only a very small proportion of cases, and even in these the effects did not last for quite three hours. To economize materially the energy expenditure would thus involve the repetition of the full pharmacopoeial doses (0.6 gram quinine hydrochloride for the adult) at intervals of about three hours. Even this heroic treatment might well fail to maintain the effect, and the other symptoms from such doses would certainly be undesirable; it is thus not practicable to attain any considerable saving of energy through quinine in a prolonged febrile illness. I have not laid any stress upon the extent of temperature reduction, for it is not so important in itself, and it is well recognized that quinine is not as good an antipyretic in non-malarial as in malarial fevers.

We have already a large mass of evidence to disprove the location of its action in the tissues. It has, according to Feri,[16] no effect, preventive or curative, upon the fever caused by tetrahydro-beta-naphthylamine, which acts centrally. Senta[17] found that while it is capable of reducing the oxygen used by muscular tissue *in vitro*, the concentration required to effect this (1 in 5,000 or higher) is much higher than that attained by a therapeutic dose. Lastly, and most important of all, Barbour and Wing[18] have shown that direct application of quinine to the heat centres causes a certain amount of antipyresis.

Conclusions.

1. Quinine does not differ in its mode of action from other antipyretic drugs.
2. It has no action on the protein metabolism in health.
3. It does not reduce the gaseous exchange and heat production except in a small proportion of fever cases, and even in these the action lasts for less than three hours with the maximum pharmacopoeial doses.
4. It is not possible in non-malarial fevers to attain a saving of energy and tissue destruction through quinine.

This work was rendered possible only through the kind help of many in the laboratories and clinics. I must content myself here with expressing my deep obligation to them all.

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TUBERCULOMA OF THE PITUITARY BODY.

BY

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THE following case is remarkable, not only because the condition is uncommon, but because, in spite of the mass surrounding the chiasma, the sight of the right eye was unaffected.

A youth, aged 16, was referred to me by Dr. Goffe of Kingston. I saw him on March 11th, 1924. He complained that during the last month he had had pain in the head, chiefly over the left brow, sufficiently severe to prevent sleep, and of loss of sight of the left eye, which had come on gradually.

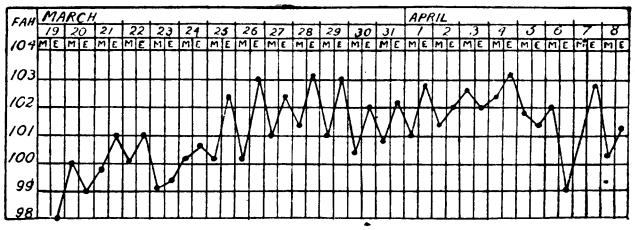
Vision: Right eye, 6/6, fields full; left eye, no perception of light. The right pupil reacted to light and accommodation. The left pupil reacted to accommodation with consensual reaction to light only. The fundi and media and all ocular movements were normal. The left upper lid was a little fuller than the right, with a slight tendency to droop, and there was a suggestion of proptosis in this eye, but not more than might be due to facial asymmetry.

He was admitted to the Hampstead General Hospital for further investigation. The Wassermann reaction was negative and the skiagram showed a normal sella turcica.

On March 27th Mr. Whale examined his nose, and found that a left-sided deviation of the septum precluded examination of deeper parts. The temperature, normal on admission, rose this day to 103°. A swab from the nose gave staphylococci, pneumobacilli, and a few streptococci. Leucocyte count 12,000 per c.mm.

On March 29th Mr. Whale removed the left middle turbinal and punctured the sphenoidal sinus. No pus escaped. The left antrum was also washed out, with negative result. Fluid obtained by lumbar puncture was blood-stained; the cell count was 103 per c.mm., mostly leucocytes. Cultures were sterile. No tubercle bacilli were found.

On April 2nd lumbar puncture was again performed. The fluid contained more cells, mostly small lymphocytes, than could be accounted for by the blood present. On April 4th the patient passed 102 oz. of urine. Temperature still 103°.



During his stay in hospital he had not complained of much headache. Nothing abnormal was found on physical examination. The nervous system was normal. Drs. Sutherland, Scott Pinchin, and Parkes Weber and Mr. Waugh examined him, but could find no physical signs except the loss of vision of the left eye. On April 6th the pain in the head was worse, so that morphine had to be given. He complained of singing in the ears. The left eye was slightly more prominent. He passed 230 oz. of urine.

On April 8th there was deviation of the head and eyes to the right. Extensor plantar reflex on left. The patient was irritable and would not always answer questions.

On April 10th he was only roused with difficulty. Mr. Waugh explored the left frontal lobe but found nothing. The patient died shortly afterwards.

The *post-mortem* examination was made by Dr. Perkins: the only abnormality found was within the cranium. There was a mass surrounding the pituitary body, the optic chiasma, and adjoining portions of both nerves and tracts, which extended right into the left orbit through the optic foramen accompanying the optic nerve. The mass on section proved to be tuberculous. The brain substance was not involved nor were tubercles found elsewhere.

I have to thank Dr. Levi, the house-surgeon, for his assistance with these notes.

The optic nerve appeared to be especially compressed in the foramen. The only localizing symptoms were the loss of sight and the extreme polyuria.

THE TEMPERATURE AND SATURATION OF EXHALED AIR IN RELATION TO CATARRHAL INFECTIONS.

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Introduction.

OBSERVATIONS of various physiologists go to show that, whatever be the temperature of the atmosphere, the expired air issues at a temperature of about 35° C.—that is, closely approximating to body temperature—and almost saturated with moisture at this temperature, the wet bulb temperature of the expired air being in fact about 35° C.[1]

The following research was carried out in order to see how closely these figures hold good over wide variations of atmospheric temperature. The matter is one of importance because, as pointed out by Leonard Hill,[2] the breathing of cool outside air entails a greater blood flow through the respiratory membrane, and a greater evaporation of fluid from it. The greater passage of blood and lymph through the membrane and secretion from it keeps up the health of the membrane and its defence against catarrhal infections. On this depends in part the beneficial effect of open-air treatment, open-air exercise, and sleeping in rooms with open windows or on verandas. Comparing a day and night