

an hour ago, as the pain, though lessened, had not ceased. The bowels had been costive for several days, and were not now relieved. No more vomiting. Pulse 72. He feels feverish and complains a little of headache. The leech bites bleed freely. He was ordered to foment the body so as to encourage the bleeding, and to take a seidlitz powder.

May 22nd. He had relief from the bowels yesterday, with decided relief to the pain; but there is still a good deal of fulness of the abdomen, and a feeling of distension causing him to fear a return of pain. I ordered another dose of castor oil and laudanum, and a pill containing a grain of aqueous extract of aloes, every four hours; and the fomentation to be continued.

May 24th. Since last report there have been plentiful evacuations from the bowels, consisting of large quantities of lumpy fecal matter. There is now scarcely any abdominal pain and much less distension. He has not been again sick, but feels exhausted and unwilling to be disturbed. He was ordered to continue the pill twice in the day.

The result of this treatment was that the bowels continued to dislodge their contents; the uneasiness and tension of the abdomen ceased, appetite returned, and the patient speedily recovered.

[To be continued.]

THE HOT-AIR BATH.

By B. W. RICHARDSON, M.A., M.D.*

WE must be unanimous, I think, in feeling that the subject brought before us to night is one not only of professional, but of national interest. We must, too, be unanimous in accepting that the subject admits only of true scientific discussion in a society such as ours, where physiological and practical medical labours so happily and unitedly blend; and lastly, we must agree in the expression that no one could have brought up the question with more acumen and ability than Dr. Thudichum; for, though we have to diverge from him when he trims his subject to too fine a point, and insists with excess of feeling on his own arguments, nevertheless we are bound to admire his shrewd talent and the eloquence and brilliancy with which, like a Prince Rupert in medical campaigning, he takes his positions and deploys his energetic artillery.

The subject which has been brought before us to night, stripped of all the verbiage with which it is surrounded to make it a mere commercial speculation, embraces nothing more nor less than the question, What influence has heated air on the animal body, when applied through the medium of the respiratory and cuticular tracts? and how far does this influence extend, physiologically, therapeutically, and socially? In such remarks as I have to make, I shall consider the subject under these divisions.

Physiologically, I do not think Dr. Thudichum has done justice to previous inquirers. Long before the Turkish bath engaged attention, I had, for one, followed Fordyce and some of the older inquirers as to the effect of heat on animal life, and had even discussed these points in the Medical Society; and since these baths have been established, I have repursued certain of these labours, and added to them, following up the inquiry in my own experimental way, as a purely experimental pursuit. Thus I have placed various animals in differing temperatures, and at various determinate degrees have sought to learn with precision how long life can be sus-

tained at different degrees of heat, and what differences exist in the products of excretion during the living period.

Without troubling the Society with details, I may state that the effects of an increased temperature on the body, say above the standard of 60° Fahr., are due to the simple fact that what is commonly called the process of oxygenation, but which would be better called the process of calorification, is abnormally increased. For example, if an animal be placed in a closed chamber of such dimensions that the animal will die in two hours at a temperature of 60°, it will be found that another animal of the same kind, placed in another chamber of the same size, will die in a quarter of an hour at a temperature of 120°; and so on in a steadily acting law, which perfect experiment would speedily reduce to absolute formulæ. When, again, we turn to the cause of the death under the circumstances named, we find that it is the same in both cases; we find, *i. e.*, that the cause is a consumption, by the animal, of the oxygen contained in the jar; and that the products of the consumption are the same, in the way of water and carbonic acid. There are, however, limitations to this rule; there are degrees of heat at which, on sudden exposure, death takes place as by an electrical shock, and where no time is given for chemical products; but, within such limits as those which should be supplied in a common hot-air bath, the rule holds good. Again, I find that the exposure of an animal to a high temperature produces other effects characteristic of a rapid oxidation. It makes the vascular parts unduly red; it increases the external or surface heat; it relaxes muscular fibre to such an extent, if it is pushed far enough, that contraction fails utterly; it renders the circulation quicker, with a steadily diminishing power; and it renders venous and arterial blood the same in colour. Again, owing to this rapidity of the chemical life, heat modifies materially the action of many poisons which produce their effects solely by the power they possess, at ordinary temperatures, of stopping the oxidation or calorific process: thus, the effects of the volatile narcotics, Dr. Snow once pointed out to the Society, are moderated by degrees of temperature; and thus such poisons as can only be eliminated from the body either by metamorphosis or rapid direct elimination, are rendered severally poisonous, or less poisonous, in the same doses, at different points of the thermometer.

In regard to the cases to which heat may be applied in the treatment of disease, I believe that in this direction we may, by a discriminating policy, turn our knowledge to a grand account; but we must not be led away by the statements of enthusiasts, who, believing the remedy to be one for all diseases, would push it to any extent. Judging the remedy by its extreme physiological effects, we may pronounce, almost *a priori*, where it will be useful: that it should be useful in cases where there is in the tissues or in the blood a poisonous substance, which being soluble admits of elimination in water, or being volatile admits of elimination as gas, or being oxydisable admits of destruction by metamorphosis. Under these positions we may accept and group many forms of disease. Some zymotic diseases might be brought under treatment; as, for example, scarlet fever, which is always less fatal, and, as I believe, less prevalent in summer; and typhus, which, as Dr. Gooden observes very shrewdly, is unknown in tropical heat.

Here, again, may be classed various of the diathetic disorders, in which the prevailing cause of mischief is a product generated in the body itself, which product is eliminable by a copious sweating process; and here, also, we might include the symptoms produced by many direct poisons, such as opium and strychnia.

Practically, in my own hands, I have seen benefit follow the use of heated air. I have known, for

* This paper consists of some remarks made by Dr. Richardson at the last meeting of the Medical Society of London, when the subject of the Turkish or Heated Air-Bath was brought forward by Dr. Thudichum. We give Dr. Richardson's observations in full; as, while they are not absolutely in opposition to the use of the bath, they contain some wholesome cautions. EDITOR.

example, a hot-air bath improvised in cases of scarlatina, and I believe that in all the cases where sweating was produced good was done; but this is by no means a new remedy in this country.

Since Turkish baths have been erected, I have sent to them cases of every kind that were likely, in my opinion, to be relieved by diaphoresis: and, in the main, the results have been good. I think I saw one case of eczema, I may say cured by the bath; symptoms of neuralgia and gout are obviously often relieved by it; and there have been one or two cases of dyspepsia in which, I think, at least temporary benefit has occurred. But, as a set off against these benefits, there have been examples where either no good or some injury has followed.

A gentleman with an irregular pulse, who took a bath on his own account, came to me afterwards agitated and in much pain; his head being the seat of the pain, and the pain itself being attended with throbbing and a sensation of fulness. I heard the same symptoms complained of by a healthy man, who took the bath as an experiment. These cases are certainly not very alarming; but they show, at least, that the heated air is not to be used indiscriminately, as a mere bath-man or director of an establishment shall direct.

I think, too, that great care should be taken in every case not to carry the heat too high. I know the body will bear intense heat for a brief time; but, as a general practice, I should opine that 130° Fahr. should be the extreme limit, and that 130° would answer all practical purposes.

From the use of the heated air bath as a therapeutical agent to its use as a social enjoyment or luxury, is a wide step, and a step which I, for one, hold back from taking. It seems to be the misfortune of this remedy, that its administration is for a time attended by a sensation of great pleasure and satisfaction. This is not a peculiar feature of the heated air bath. In the palmy days of blood-letting, when every one was periodically bled, the argument in favour of the practice was, that it produced for a time a lightness and agreeable feeling. I absolutely knew a man, who for years had been cupped once a month regularly, for no other reason than that the operation was followed by sensations of lightness and ease. Persons who are recovering from a long and depressing illness, or who take purgatives, experience the same agreeable feeling. In the respiration of nitrous oxide gas, and even in a certain stage of opium-narcotism, the same mental liberty is experienced. But what is the meaning of this sensation? Is it one of power? I believe not. I believe it is simply a transitional decline, either from a state of artificial exaltation to the natural life, or of decline from the natural life to a condition below it—conditions of unconsciousness and temporary or absolute oblivion; even in the passage to death itself, there is a transitional stage of pleasure, if physical local pain be not present to interfere. I take it, then, that this luxurious state, as extorted by the heated air bath, is one of depression; a state, perchance, valuable in disease, and in health harmless as a mere experiment, but ruinous when driven into an intemperate and constant habit.

I deny that this bath can ever take the place of exercise, or in any way supplant exercise. I urge that in all cases the time required for the bath in healthy men were better spent in digging, walking, rowing, the cricket field, the skittle-ground, or the rifle drill; and I regret to see even an attempt to introduce this luxury as a substitute for these occupations. I look back into history, and I am more fully preserved in this belief. *Turkish* and *Roman* are words of evil omen. I recall the histories of Turkey and Rome. I recall that in the periods of the rise of these nations a ruler lived in a cottage and tilled the ground, or a caliph clothed himself in an undressed skin, and washed not once a week. I recall that when these nations reached their glory they were more civilised, but yet not luxurious; and, lastly, I recall

that when these great nations collapsed, and were beaten by inferior tribes, luxurious tastes had crept in and destroyed them, whereof this bath was the most prominent and enticing of all.

I predict that it will be the same here under the same principles. I predict that, whenever Englishmen give up the active occupations I have named, and in slippers pantaloons luxuriate daily in a bath to rid themselves of the products of exertion, then this country will have passed the zenith; then there will be no great hero to bid every man do his duty, no man to do the duty, and no England for which the duty should be done.

Transactions of Branches.

BATH AND BRISTOL BRANCH.

COMMENTARY ON A RARE CASE OF DISEASED LIVER.

By S. MARTYN, M.D., M.R.C.P.

(Read at Bath, Nov. 29, 1860.)

I HAVE ventured to occupy your attention for a short time this evening with a single case of diseased liver, chiefly for the following two reasons. Firstly—This kind of disease, although the instance before us is by no means the only case on record, has never yet been thoroughly investigated. Secondly—However rare the entire combination of pathological conditions, with their accompanying symptoms, may have been, still, in some form or stage, the disease may at any moment come before us. That it does sometimes appear under fragmentary and difficult forms, and when, if detected, it would be open to treatment, appears to me quite certain. The condensed record of this case is as follows.

J. P., aged 38, a bankrupt court messenger, was admitted into Thomas Ward, Bristol General Hospital, under my care, on November 7th, 1859. He is a small, nervo-choleric man, who once enjoyed very robust health. For some years his habits of life have been as irregular as possible. He has lived habitually with loose women, and been an incorrigible brandy-drinker. He had syphilis, as is ascertained from his father-in-law and an intimate friend, but it is six or more years ago. Three years since he was an in-patient of the Bath United Hospital, with "rheumatism." He had swelled joints and chest symptoms; and was in six weeks discharged, but has never been well since, always suffering from pain in the chest or sore throat. The opinion of his friends is that this attack arose from the "bad disorder" lying about him. For three months past he has observed swelling about the bowels, especially after meals, and this became steadily worse till seven weeks ago. He then consulted Dr. Herapath, who made out liver-disease, prescribed accordingly, and ultimately tapped him, evacuating nine quarts of fluid. At present his general state is one of discomfort from distention, but without pain. The skin is rather dry; over the chest it is mottled and brown. Decubitus is horizontal. His face is very thin, but healthy in colour; his lips are bright red, and the conjunctivæ very pearly and white. His voice is good; breathing tranquil; he has no cough. The sounds of the lungs and heart are normal. Pulse 100, regular. Tongue white, and bowels confined. The abdomen is very tense, presenting everywhere the transmitted wave from the slightest tap. The surface veins are enlarged. His legs have swollen this week. The urine is not scanty nor albuminous, but loaded with lithates. The stools are natural in colour. He was ordered good diet with porter; bark; nitric ether; colocyth pills.

Nov. 17th. Having increased so as to measure at the umbilicus 3 feet 6 inches, and complaining much, he