ON THE PATHOLOGY AND TREATMENT OF HEAT APOPLEXY.

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The article on this subject, by Assistant Surgeon Candy, M.D., 109th regiment, published in the *Indian Medical Gazette* for July, recommends a plan of treatment which it was to be hoped had been given up as worse than useless by those who had had experience of this disease. Blood-letting tartar-emetic, and other lowering remedies have been attended with such disastrous results, that I may say hundreds of medical men condemn their use. I attended the first course of lectures on military medicine, delivered by Dr. Maclean at Fort Pitt, Chatham, in the summer of 1861, and I well remember the earnestness with which he implored us *never* to bleed in sunstroke.

While I was at Barrackpore, I treated several patients on the plan mentioned to me by my friend, Dr. W. K. Waller (and *first* recommended by him to the profession); and his own papers in the *Indian Medical Gazette*, together with several others, showing the success attending the exhibition of quinine in large doses in this disease, either by mouth, or hypodermically, surely ought to induce every medical man to give it a trial, and not *go back* to the old plans, which have been proved to be fatal in the end.

Dr. Candy's proposed treatment seems to me to be the more deplorable, because he places among several *pre-disposing causes* (which are probably true) what I think can be proved to be the *actual pathological condition* in heat apoplexy, viz., exhaustion, with depression of the nervous system.

The subject of increased heat of body has been latterly attracting much attention at home. In the *Lancet* for 3rd February, 1872, there is a special article on "heat" under the head of "Therapeutic Traditions." I beg strongly to recommend it to the notice of all medical men who have not seen it. I should like to make a good many extracts, but, as they would occupy too much space, I confine myself to a few. After stating that the old idea was, that the special sign of the sthenic character of disease was the excessive development of heat, the writer proceeds:—"An entirely new order of conceptions has been necessitated by modern discoveries, dating mainly from the more accurate researches on the relations of tissue-waste to the production of heat, and from the improved knowledge respecting the heat-regulating functions of the nervous system." ....."For the old idea, that sensible heat of skin with redness of the face in itself implies strength of constitution, no authority remains; the obvious fact being that surface redness means *vasomotor paralysis*, and that high temperature in partially protected regions like the axilla means simple tissue waste, as already described. The only thing which might remain unchanged is the belief that extreme *pallor*, and especially extreme coldness of the surface, under circumstances of general pyrexia, are signs of really severe depression. No doubt that is so, but the reason for so considering it is, that this pallor and coldness of skin, under circumstances where there is necessarily the minimum of contractile resistance in the small arteries, implies that the heart has too little force to pump the blood to the surface in any considerable quantities. But this is only a phenomenon of extreme cases." It is observed in those rapidly fatal cases of sunstroke, occasionally, where death by syncope kills in a few minutes.

The writer concludes his article thus:—"Broadly speaking, the indications from excessive heat of body ought now to be interpreted in exactly the opposite sense to that in which they were formerly read. Whereas they used to be supposed to show that the case was a sthenic one, we now consider them almost absolute proof that the reserve forces of the body are exceedingly low, and are being constantly and rapidly reduced. Only let us think of that fact, and then remember the fashion in which multitudes of practitioners still talk of 'hot skin,' 'bounding pulse,' and so forth, as evidences of strength; and we must admit that the advanced pathology of the day is not merely somewhat ahead, but is altogether out of sight. of a large part of the less observant and less reflecting sections of the profession."

Dr. Candy writes of the "enormously increased temperature of the body, *dependent* upon the accumulation of carbon in the system;" but I think we have evidence to prove that the accumulation of carbon depends on the non-oxygenation of the blood consequent on the congested state of the lungs, one of the direct effects of nervous exhaustion, which exhaustion also causes the high temperature.

No one, I think, will doubt that Dr. Candy gives the true *exciting causes*, particularly "the suffocating atmosphere," which, I believe, is the principal cause of the great depression of the nervous system.

But with regard to Dr. Candy's indications for treatment; he recommends "free venesection to 20 ounces or more, to relieve the congested condition of the heart and lungs." But if this congestion depends on nervous exhaustion, as I think the writings of Dr. Brown-Séquard and others prove, what good is really done by bleeding? In some cases the abstraction of blood has, for a time, removed the *mechanical engorgement* of lungs and brain; but look at the enormous mortality following this treatment! The exhausted nervous system is further weakened. If, however, a nervine tonic is given, the congestion is removed by the *invigoration* of the nervous system.

He next recommends "to get the skin to act freely by the use of tartar-emetic," &c. In the *Lancet* for 17th February, 1812, another special article on "cooling" remedies appears under the same heading. In it occurs the following:—"But that diaphoresis, even in its most copious form, will necessarily relieve a severe fever-heat, is shown to be transparently false by the phenomena of rheumatic fever, and of relapsing fever." Even if copious sweating was induced, while the *cause* of the burning skin—viz. the nervous exhaustion—was not ameliorated, no real benefit would ensue.

In the article just quoted from, and in another on