Remarks

ON

DR. BEALE'S CLINICAL LECTURE ON "THE RENEWAL OF LIFE".*

BY

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WHEN a professor at King's College deems certain opinions of sufficient influence for him to give a clinical lecture on the subject, warning his pupils against them, I think he may fairly claim a considerate reply.

The professor tells his class that *The Renewal of Life* gives an unfair representation of the doctrine of counterirritation, when it states that "the idea of counterirritant practice is to substitute one *disease* which is less dangerous and painful, or whose disorganising tendencies are but temporary, for another *disease* which may be dangerous or painful, or which tends to disorganise the body." His italics point his objection to this use of the word *disease*, which he says is not applicable to purgation and excessive diuresis. He has hit upon this as the fallacy which affects my argument.

Now, it is a well-known and an honest rule with controversial writers (among whom I suppose I must be classed in the introductory lecture above quoted), when stating the doctrines which they impugn, to take the wording from the best upholders of such doctrine. This rule I was careful to observe in the instance before us; my description of counterirritation is that given by Dr. Pereira, who calls it "the production of an artificial or secondary *disease* in order to relieve another or primary one." Again, he says, "one *disease*, whether artificially or spontaneously generated, will often, but not invariably, supersede another." (Pereira's *Materia Medica*, vol. i, part i, chap. 9.) I am not quoting Dr. Pereira as an authority in lieu of argument, but as an authoritative historian. Dr. Pereira saw clearly enough, as did also Dr. Parry and Dr. Pring, whose opinions he is elucidating, that every state of body which is not health is disease. It is quite indifferent to the pathologist, when investigating peculiar states in question, whether they are produced by a physician's drug, or a felon's poison, or an epidemic malaria, climatic influences, or organic changes in the patient's body. No progress in pathology can be made till this is clearly understood. And, what is of more importance, we should be very bad practitioners if we did not act upon it. In how large a proportion of our patients can that for which we prescribe be described by the nomenclature of the Registrar-General or any other nosologist? In half?

In one of Miss Young's delicate sketches of character, a strong-minded and strong-limbed young lady is described as having "no sympathy with unclassified diseases." She could pity a case of apo-

plexy or measles; but being "out of health" or "ill" found no favour in her sight. I fear the learned professor has a tendency towards the same condition of mind; for he further objects to my saying that drugs "make a sound man *ill*." Has he never heard of people being "ill of the doctor"?

He further says that it is dangerous to try and draw a line between healthy and diseased states. Yet he himself draws one; "ascertain," he says, "with accuracy what is going on, and contrast it with what physiology teaches us *ought* to go on." The latter is health; the former, if it differs, is disease; as I have taught, only in fewer words. This test will certainly include the operation of purgatives and diuretics as diseased actions.

Dr. Beale's next objection is a most serious one, and I am anxious to draw special attention to it, because it touches the real point my little volume was designed to raise. The clinical lectures there reprinted are put together with a view of illustrating, by bedside teaching, my proposition that all disease is best treated as a deficiency of life, as a degeneration from complete vital functions, and that all our most trusted remedial agents are beneficial, directly or indirectly, by restoring life. I grant that the proposition is a novel one, and that Dr. Beale is right, as a teacher, to look at it with suspicion. He is right, too, from the position he occupies, not to flood the question with quotations from authorities; but to handle it manfully and boldly himself. He upholds the converse proposition; viz., that disease may "consist of an excess of action"; that a diseased tissue may "exhibit greater evidence of vital activity than the same bulk of healthy tissue"; and, of course, he goes on to infer that the aim and intention of a physician should often be "to weaken life," though he does not go quite so far as Van Swieten's statement that this is all our art can do. He gives, as his instances, cancer and purulent or fibrinous pneumonia; so that I had better take them, as they doubtless tell more for his propositions than any others which could be given.

The fact that diseased parts are often increased in solid bulk is of serious import, and suggests two questions, both of very practical bearing:—

1. Does augmented bulk imply augmented general life in the individual?

2. Does it imply augmented local life in the part affected?

To the first question, a sufficient answer may be found in any of the medical or surgical wards of a hospital. It is not the burly, full-pulsed, red blooded man of large appetite and great muscular power that is most likely to exhibit a specimen of solid morbid matter, but the starved anæmic, quivering at a breeze or a blow.

In what corpse do you find the greatest weight of fibrine thrown out in the peritoneum in the shortest possible time? In one dead of puerperal fever—that is, in the weakest sex at the period of its greatest weakness.

In whom is rheumatic fever most likely to cause pericarditis, with its great masses of morbid matter? In the young overgrown person, especially if a female, more especially if an overworked, underfed maid-of-all-work, and still more especially if vital power is lowered (as M. Edwards has shown it to be) by cold.

* See BRITISH MEDICAL JOURNAL, February 21st, 1863.

In whose heart do the consequences of this pericarditis most rapidly induce enlargement? Not in the well-fed and well-clothed; but at the same weakly time, in the same weakly sex, and under the same debilitating circumstances as the original lesion occurred.

Cancers and other tumours are found of quickest growth and most frequently in the least lively bodies, in the least lively parts, in the idle uterus, in the unused breast, in the cellular tissue, in scars, in parts half killed by wounds, injuries, or previous disease.

Take now the second question, and let us concede the possibility, that, while the general vitality of the individual is lessened, some part might exhibit an extra amount. But morbid processes are not evidences of it; they rather resemble developments of a lower form of life; their products, though abundant, are less vital than the normal growth whose place they take; their existence is temporary, and "they are not capable of becoming permanent constituents of the body, or of lasting as long as the individual." (Virchow's *Cellular Pathology*, p. 456.) Examine a patient with thickened heart during life, and the pulse does not strike your finger vigorously, the apex of the organ does not beat sharply against the ribs; indeed, the thicker it becomes, the less powerful is both pulse and beat, and the less actively does the blood course through the vessels. Examine it after death, and you will seldom fail to find a pale tissue with microscopical evidences of commencing fatty degeneration. Still more evident is the same degenerative tendency in cancer. The tissue of malignant tumours, directly it ceases to grow rapidly, begins to decay, to shrink, and be converted into fat. It is difficult to imagine local strength or local excess of life producing such a weakening crop.

In cancer, truly, there is a continuous reproduction of new foci of growth, a new progeny of prolific cells, which certainly does look like an extension of local life over a larger space, if not of the production of fresh local life. But when we should reflect that the highest and most vital function of nutritive growth is the retention of the form of the body or its separate parts; that in morbid augmentations of size this is lost; the regulating and forming power is absent, and the more so the more morbid and the larger the augmentation is.

The formlessness of cancers and of so-called hypertrophic tissues refers them to a lower grade of organic life than normal growth.

Size proves nothing; surely the professor would not maintain that there is more vitality in a jelly-fish than in a sprat, in a mushroom than in a flea.

This is not a mere question of verbal criticism or Sorbonnic controversy; it is a matter of life and death to our patients. If we treat cases of pneumonic consolidation by weakening life, by bleeding *coup sur coup*, by antimony, by starvation, we are doing our best to kill them; if we supply life by food, warmth, moisture, etc., we are doing our best to save them. If Dr. Beale tries to "weaken the life of a cancer" in the same way, it will grow all the quicker; if he will give the patient tonics, food, oil, and other restoratives, it is much more likely to become dormant.

Dr. Beale says that "few will agree" with me. He should not have used the future tense; for I fully

expect that soon not only all the class he was addressing, but the professor himself, will cordially agree with the theses he has made me responsible for. They must daily become more and more the guide to medical practice, and I should be glad to see them in the hands of teachers more influential than myself. In the meantime, I do not think he ought to have objected that they are "not supported by observations"; for I have done my best by illustrations from the patients at the time under the eyes of my pupils, and have appended twenty-seven lectures thus illustrated to the Introductory on which he comments.

Short Clinical Lectures

ON

THE FIRST PRINCIPLES OF MEDICINE.

Delivered at King's College Hospital.

BY

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II.

ON THE VITAL CHANGES OCCURRING IN THE MUCUS-CORPUSCLE.

IN my last lecture, I was compelled to speak of living cells, changes occurring during life, vital phenomena, etc. It is right, therefore, that I should endeavour to explain what I mean by a living cell. I ought to tell you what goes on in a living cell, and how this living cell gives rise to other living cells. As long as our views upon these fundamental questions remain unsettled, we shall be unable to give an intelligible account of the simplest changes occurring in the very simplest structures in health or disease.

The words *life*, *vitality*, *vital* power, are used so vaguely and so carelessly in speaking of a patient's state, that it is my duty to attempt, at least, to describe to you what meaning I attach to them. Moreover, these terms have been used in very different senses. They have been applied to the organism as a whole, as well as to the separate elementary parts or cells of which the tissues are composed. Our life may be destroyed, but many of our tissues may exhibit vital actions for some time afterwards. Many of our tissues live longer than we ourselves live. In this lecture I restrict myself to the consideration of the *vital* changes which take place in individual "cells."

I have shown that a cell always consists of *living matter*, and matter that *has lived* (of germinal matter and formed matter), and that no structure exists *which is composed entirely of living matter*.

It is true that, in the present state of knowledge, we cannot explain how some of the simplest phy-