

On the other hand, decomposition causes signs which imitate those of strangulation, and cases have occurred in England in which great difficulty has been experienced in distinguishing between the two. In this case protrusion of the tongue (caused undoubtedly by decomposition) was relied on by the native doctor as a strong sign of homicidal strangulation.

It is noticeable that the persons who saw the body first describe it as being swollen "from the breast upwards," and decomposition seems from the evidence to have been more advanced in the upper than lower half of the body. This is quite in keeping with the researches of Casper and Kanzler, which go to prove that "putrefaction of the bodies of the drowned generally commences at the upper part and extends downwards."

On the whole, after carefully studying the medical evidence recorded in this case, we are decidedly of opinion that it affords no support whatever to the theory of homicide. At the same time, it is but right to add that it is weak on account of the decomposed state of the body and the imperfect and unsatisfactory manner in which the investigation was made and recorded.

Reviews.

Principles of Rational Therapeutics. By BHOLANOTH BOSE, M.D., Lond., M.R.C.S., Eng., H. M.'s Indian Medical Service.

This is a smaller and less pretentious work than that which we reviewed last month. It exhibits very much the same style as the larger work, and the same criticism applies to it. It has a good idea running through it, but this is worked out in such a manner that any merit which the idea possesses is lost in the way in which it is elaborated. The leading idea of the work is that, as the human body is arranged according to a definite system by which its component tissues are associated, through the agency of vessels and nerves, for purposes of nutrition and life, so medicines act according to the same plan. Some medicines modify the life or tone of the body by acting on one part of the human organization, and others on another; and a medicine which in large dose may affect one element of the arrangement may in a smaller exercise its effect on a more minute or distant element. In accordance with this principle the author divides life, *i.e.*, the organism and its functions, into (1), tissue life; (2), organic life; (3), sensori-motor life; and (4), intellectual life. To these four divisions he gives the absurd names of *cell life*, *tubulo-cell life*, *bitubulo cell life*, *tritubulo-cell life* and *pertubulo-cell life*. He employs the word "tone" as a synonym of health, though in its application he mixes up subjective and objective health, which are not always coincident. Medicines and their actions are represented as exalting (tonics), depressing (laxatives), or modifying (alteratives) the several systems or "species" of life, thus differentiated. There can be no doubt that there is something in all this, and that if worked out scientifically the idea might be made the basis of a rational classification of drug action. The human body is undoubtedly composed of ultimate tissue elements, but these present a very considerable diversity in chemical constitution, anatomical structure and physiological property. They also present similarities and differences in developmental and morphological alliances which the author has left out of sight, but which also condition their amenability to drug action. It is a radical error to represent all these ultimate tissues as being equally and similarly affected by one drug, because they agree in being ultimate tissues. Some drugs may possibly affect all tissues alike; but the probabilities are that particular drugs affect some tissues exclusively or mainly. Then it is quite true that the different varieties of tissues are associated by means of a general nutritive, vascular and nervous apparatus, but these associative organs are themselves composed of tissues and come under similar laws of drug action in virtue of being so. So that the

subject is not quite so plain and easy as the author represents it. The truth of the matter is that the way to study the action of drugs is not to approach the subject from a theoretical survey of life, but from a positive, practical study of the operation of medicines on the tissues and functions of the body and its parts. The real question is, not whether a particular medicine is a "cell tonic," a "tubulo-cell laxative" or "pertubulo-cell alterative"; but how it affects the composition and function of a particular tissue or of many tissues, whether it changes the nature and properties of the blood, produces contraction or dilatation of vessels, elevates or depresses temperature, stimulates or impedes tissue change and so on. This information must be attained by means of inductive research and not by speculative surmises. Dr. Bose claims by means of his principles to bring into harmony and subjection to one code of therapeutical laws all varieties of medical doctrine,—hygeists, hydropathists, homœopaths, &c. His apology for homœopathy is ingenious. The body is ultimately composed of infinitesimal parts. To influence these infinitesimally divided medicines are necessary, and as long as the substance retains its proper composition it does not matter how minutely it is divided. This argument puts us in mind of the paradox of the school-men about the race between Hercules and the tortoise. Give the tortoise the start and sub-divide the distances run without taking the element of time into account, and it is easy to prove that Hercules will not overtake the tortoise. Similarly divide the tissues and drugs into infinitesimals and neglect the element of appreciable influence, and it is easy to demonstrate the power of infinitesimals; but even from a theoretical point of view the argument is faulty; for it leaves out of sight the substantial bulk of the tissues as a whole, and the substantial bulk as a whole of articles such as food, which, though ultimately applied as infinitesimal to infinitesimal, must obviously, in the aggregate, hold some correspondence in gross bulk to the gross bulk of the tissues. All this is, however, mere sound, and the practical issue is, after all, whether any appreciable effect is exercised capable of being estimated by means of the senses, aided or unaided, and what that appreciable effect is.

If Dr. Bose intends to devote his well-earned leisure to the improvement of medical science, we would strongly recommend him to contract his aims and content himself with the investigation of some particular point of pathology or therapeutics and by means of inductive research.

Observations on the Efficacy of burning Sulphur Fires in Epidemics of Cholera. By Surgeon-Major J. E. TUSON, F.R.C.S., 16th Bengal Cavalry.

SURGEON-MAJOR TUSON details, in this pamphlet, four instances which came under his own observation in which the cessation of cholera followed the burning of sulphur fires in villages. Several other instances of benefit, apparently derived from this measure, communicated to the author by other observers, are also related. His directions for carrying out the process are as follows:—The fires should be placed, at distances of 40 or 50 yards, round the village—to windward of it, or where cholera is worst. They are composed of piles of wood, large enough to last several hours, and replenished so as to last for about 24 hours. They should be lighted at the same time and sulphur sprinkled on them simultaneously. About 2lbs of sulphur should suffice for each fire for 24 hours. Infected houses should at the same time be fumigated. The theory of the process is that the sulphurous acid destroys the germs of the disease. It is not, however, enough to show that cholera has declined or disappeared in certain localities where this process has been resorted to. The disease goes of itself without the adoption of any measures. To establish the efficacy of sulphur fires it is necessary to demonstrate that their employment is invariably or in the large majority of cases followed by disappearance—prompt disappearance or earlier disappearance than when sulphur fires are not burnt. Negative instances should also be adduced where disappearance has not followed the burning of sulphur in the manner directed. It is a defect in Surgeon-Major Tuson's pamphlet that these, though alluded to, are not quoted in the same detail as the positive cases.

Surgeon-Major J. Ewart, M.D., Bengal Medical Service, Surgeon Superintendent of the Presidency General Hospital, Calcutta, has been appointed a member of the India Office Medical Board, in place of Surgeon-Major S. B. Partridge, who is returning to India.—*Home News.*