

REPUTED REMEDIES FOR SNAKE-BITE.

From time to time announcements are made with more or less confidence that an antidote for snake-bite has at last been discovered, but the efficacy of one and all fails to be established. The Anglo-Indian papers state that Dr. D. D. Cunningham of Calcutta has just published the results of an elaborate series of experiments which he has been conducting with the view of testing the claims of various reputed antidotes, but these results have proved disappointing, for the remedies have all been found to be utterly inefficacious, and a true antidote has yet to be discovered. It is said that Dr. Cunningham has demonstrated that a non-venomous snake, such as the dhamin, may be immune to the poison, thus raising a serious obstacle to the theory of auto-inoculation. It will be remembered that, acting on the hypothesis originally started by Surgeon-Major Waddell—viz., that venomous snakes are autotoxic—Professor Fraser of Edinburgh has been conducting a series of experiments to find an antidote by inoculation with prepared venom. The possibilities of securing protection by means of the serum of immunised animals have lately engaged the attention and been the subject of experimental observations in France by Calmette, and in Edinburgh by Professor Fraser.

Correspondence.

"Audi alteram partem."

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,—This subject, as Dr. Shettle says in the last issue of THE LANCET, is of deep interest and of great importance. I believe if we could understand it rightly it would give us the solution to many physiological problems. With your permission I would attempt to give a simpler explanation of the phenomena observed. That strong arterial contraction, and engorgement of the large veins and right side of the heart are present in death from electric shock cannot, I believe, be contested. The contraction of the arteries is unquestionably due to a physical cause, but I do not think with Dr. Shettle that this cause acts primarily on the contents of the vessels (blood being a conductor), but rather upon the badly conducting or insulating nerves and arterial centres. Faraday taught us long ago that the seat of the phenomena was not in the conductors, but in the insulating medium surrounding them. The electrical energy does not travel by the wire but by the insulating sheath or dielectric surrounding it; the function of the wire is to dissipate the energy crowding into it from the dielectric, which else would take up a state of strain and cease to transmit any more. The blood, fluids, and opaque tissues of the human body act as the conductors, or wires, and the transparent tissues as the dielectrics, and these transmit all the energy. This I have tried to explain elsewhere.¹ The kinetic electricity in traversing such tissues becomes static, resulting in a strain of the medium; the shearing stress of the current has altered the condition of the molecules; there is no displacement of the molecules as a whole, as has been pointed out by Professor Lodge;² but of their constituent atoms, and the stress, if strong enough, may result in electrolytic disruption. There is tension along the lines on which electricity is travelling and pressure at right angles to this. This is just the force that would narrow the calibre of the artery; this atomic displacement is most probably propagated along the nerve in the same manner as in the causation of muscular contraction. It is a spring-back force, and under normal conditions would stimulate at make and break of the current, but under the conditions we are considering the molecular structure has been so altered by death that there is no spring-back possible, the arteries remaining permanently contracted.

I am, Sirs, yours faithfully,

Cromer, Sept. 17th, 1895.

HENRY MCCLURE.

MALIGNANT JAUNDICE IN CHILDREN.

To the Editors of THE LANCET.

SIRS,—My attention has just been called to an article by Dr. F. J. Smith on Cirrhosis of the Liver in THE LANCET of Aug. 31st, the text of which is the questioning of a case diagnosed by me as "malignant jaundice" and published in THE LANCET of Jan. 5th this year. Dr. Smith is of opinion that my case was one of "hypertrophic cirrhosis," a disease which he says is "exceedingly rare, usually occurring in quite young subjects and presenting typically a large liver and intense jaundice, with nervous symptoms prominent—in fact, just the picture Dr. Donkin draws of his case." Dr. Smith gives as his reasons for being prepared to admit the existence of such a disease as hypertrophic cirrhosis, first, the authority of Charcot and others, and, secondly, a post-mortem examination of the liver and spleen of a case reported to him from a distance. It may be fairly assumed, I think, that Dr. Smith has no further reasons either for his belief in hypertrophic cirrhosis or for his disbelief in the original diagnosis of my case. The existence of hypertrophic cirrhosis of the liver, with the changes usually described by pathologists, and marked clinically by enlarged liver and jaundice, with nervous symptoms prominent, need not be argued here. But, whatever its nature and definition may be, it is not an acute disease; it occurs mainly in adults and cannot be diagnosed during life except by a demonstration of enlargement of the liver. My case *was acute*, occurring in a child two years old; death took place in a little over three weeks from the onset of any illness and two weeks after the jaundice set in. The liver was *not enlarged* at all as far as clinical examination showed, for it was felt but one finger's breadth below the costal margin, as livers of healthy children two years old may be felt as often as not, and the upper limit of liver dulness was noted as "perhaps a little lowered." I do not desire to contend for the correctness of my diagnosis, for it was but based (a necropsy being disallowed) on analogical inference from two quite similar cases observed clinically by myself and examined post mortem by my colleague Dr. Hebb, who quite concurred in my view that these cases were examples of "malignant jaundice" or "acute yellow atrophy." I have reported them in some little detail in my book on "Diseases of Childhood." But I think I may contend that a careful study of my case, as reported in THE LANCET of Jan. 5th, in no way suggests the diagnosis of "hypertrophic cirrhosis," either as commented on by Dr. Smith or as usually described in the text-books.

I am, Sirs, yours faithfully,

London, Sept. 17th, 1895.

H. B. DONKIN.

"THE VOLUNTEER MEDICAL SERVICE."

To the Editors of THE LANCET.

SIRS,—I am obliged to Surgeon-Captain Sleman for his correction of my description of the new badge to be worn by regimental stretcher bearers while efficient, and which I have been instrumental in obtaining for the Volunteer force. The official answer to my application to the War Office on the subject reached me as I was on the eve of starting for the Continent, and having read it hurriedly I trusted to my memory when I addressed my letter to you from the South of France. The ground of the badge is to be white, containing the monogram "S.B." in blue and red enclosed within a red circle one inch and a half in diameter, which "will be worked in wool on cloth of the same material as the tunic." Hence my mistake. The original order for Volunteers to wear the armband on the left forearm is not revoked, and I presume it will be employed when the bearers act as the stretcher section to their battalion, this new badge being simply a recognition of proficiency to be used in the ranks and identifying such men as are available for ambulance work when required.

I am, Sirs, yours obediently,

W. BAINES, V.D., M.D.,

Surgeon-Lieutenant-Colonel, 1st Middlesex Vol., R.E.

Headquarters, College-street, Fulham-road, S.W.,
Sept. 16th, 1895.

"DEATH FROM VEGETABLE POISONING."

To the Editors of THE LANCET.

SIRS,—The paragraph under the above heading from your Manchester correspondent in THE LANCET of Sept. 14th is,

¹ Transactions of the American Electro-Therapeutic Association, 1893.

² Modern Views of Electricity.