Original Communications.

REMARKS ON BEEF-FIBRE JUICE.

By J. JARDINE MURRAY, Esq., F.R.C.S.E., Surgeon to the Brighton and Hove Dispensary, and Assistant-Surgeon to the Sussex and Brighton Infirmary for Diseases of the Eye.

At the last meeting of the Obstetrical Society of London, Dr. Druitt exhibited a concentrated extract of beef, and claimed the merit of introducing it as a remedy for intense nervous exhaustion.* He believed that the beef-juice differed from beef-tea, and from all other extracts of beef hitherto sold: it was simply the expressed juice of meat-fibre, without superadded moisture, and was prepared by subjecting beef to a high temperature. It contained no fat, no fibrine, no albumen, no gelatine. The only difficulty was to preserve it.

But Dr. Druitt has been forestalled in the recognition of the value of this material, and in introducing it to the notice of the profession. In an article published in the *Monthly Journal of Medicine* for January 1855, Professor Christison strongly recommended this same preparation; and he went a step further than Dr. Druitt, in showing how it may be preserved. I quote his description of the mode of preparing and preserving the meat-juice, as I believe it will require little consideration to convince medical men that the process is perfect, and that the essence of beef thus procured materially differs from all similar preparations, and surpasses them in excellence.

"Cylindrical cases of tinned iron are filled each with six pounds and a half of beef; and the lid is soldered on, but with a hole about half an inch in diameter in the middle of it. Two trays of such cases are shoved into iron retorts, analogous in form to retorts for gas-making, but double-cased, so that steam may be introduced into the interstice around. They are thus subjected to a heat of 220° under steam pressure for about three hours, by which the beef is partially cooked, and, being thus also made to contract strongly on itself, squeezes out a portion of its juice, amounting to a few ounces from each tin. The tins are then drawn; the juice is poured out; and the meat, with certain additions, is subjected to the preservative process. The juice, after being cooled and entirely freed of fat, is put into small four-ounce tin cases. Each of these has a small aperture at one end, which is secured with solder after the juice is poured in. The tins are then subjected, on trays, to a temperature of 220° in a muriate of lime bath. On being removed, the solderer rapidly touches with his iron the solder on the top, which giving way allows steam to rush out forcibly and carry with it the air in the upper part of the interior. By the time he has thus swiftly passed over sixteen or twenty tins, the first is ready for being re-soldered by a similar dexterous application of his iron, which then in succession as quickly secures the whole open and steaming apertures. The process of heating in the bath, tapping, and re-soldering is then repeated a second time, to make sure of the thorough expulsion of every particle of air."†

Having been strongly convinced of the great value of the essence of beef so prepared, I have used it extensively in all cases of prostration, from whatever cause; and I cannot doubt that, in several instances which have come under my observation, it has been the means of saving life. Three years ago, when attending a case

with Dr. Walshe, I submitted this adjuvant remedy to his notice, and it has since met with his warm approval. The patient was extremely weak and emaciated, but took almost no other nourishment during many days, and subsequently did well. I have administered the nutrient material *per rectum*, at intervals of three hours, to a child who afterwards made a very unlooked for recovery from the most aggravated form of scarlatina, with sloughing throat, profuse acrid discharge from the nostrils, suppuration of the glands of the neck, and low muttering delirium. And, in an instance in which all food was obstinately refused, I caused the concentrated beef-juice to be sent from the druggist in bottles, to be taken as medicine at stated intervals.

Of course it is not to be expected that any article of diet which may be ordered to be taken once or several times a day will long be relished; but certainly this essence makes better, cheaper, and more palatable beef-tea than any which can be prepared by boiling. Indeed, a gentleman lately under my care became so fond of it that, in leaving Brighton with the intention of travelling to Italy, he added to his luggage a box of cannisters containing beef-juice.

By slow evaporation of sixteen fluidounces of the liquid, I obtained scarcely one ounce weight of solid extract. This is intensely sapid, and not disagreeable; but I very much doubt its being equal in value to the fluid from which it was obtained.

Transactions of Branches.

BATH AND BRISTOL BRANCH.

LARYNGITIS: DEATH UNDER CHLOROFORM, ADMINISTERED PRIOR TO AND DURING TRACHEOTOMY.

By J. G. DAVEY, M.R.C.P.Lond.

[Read at Bath, April 25th, 1861.]

THE patient was a little boy, aged 7 years, the son of a clergyman living at Thornbury. I saw him, for the first time, with Mr. Salmon, surgeon, of that place, last Monday fortnight, about 3 A.M. At this time the symptoms of laryngitis were urgent; but he was said to be better than he had been. The respiration was much oppressed, and of that peculiar crowing character which belongs to the disease; the voice was husky and croaking, and very faint, reduced frequently to a mere whisper. There was occasional cough. On looking into the throat, the fauces and tonsils were seen of a bright scarlet colour. The pulse was hurried, about 120; the countenance anxious; and the vital powers seemed oppressed. Hot baths, counterirritation, calomel, with emetics, were the means of treatment adopted by Mr. Salmon. I advised the inhalation of hot-water vapour, the solution of nitrate of silver as a topical application, and an additional emetic of ipecacuanha wine. Wine and water, milk, beef-tea, and such like, were directed to be given in small quantities, and according to circumstances.

I met Mr. Salmon again, with Mr. Long and Mr. Gill, about 10 P.M. of the same day (Monday). It was our unanimous opinion that the little boy was not only much worse, but in the most extreme danger; and that tracheotomy offered but a slight chance of relief. After some unavoidable delay, the operation was performed. Mr. Salmon was not very well, and he therefore asked me to operate for him: this I did. In addition to the assistance of Mr. Salmon, I had that of Mr. Long and Mr. Gill. The two last named gentlemen managed the administration of the chloroform. I need not add, that the chloroform was used in the most careful manner—i. e., diluted, as far as practicable, with the atmospheric

* See report in *Lancet* and *BRITISH MEDICAL JOURNAL*, May 11th, 1861.

† This beef-juice is manufactured by Messrs. Gillon and Co., of Leith.