nerves or muscles subjected to its influence. It is favorable to this view that in subjects profoundly ætherized or chloroformed, or under the influence of nicotine or morphia, faradization of the nervous convolutions of the hemispheres fails to produce its usual effects in inducing characteristic contractions of corresponding muscles of the trunk and limbs; and Lauterbach has "no doubt that all substances which destroy sensibility prevent these movements."*

The vagus and heart are not alone in displaying this peculiarity of the action of atropia. Thus the contractions in the muscular fibres of the intestines ordinarily produced by faradization of the splanchnic nerves are also prevented by previous injection of atropia;† so that whatever be the explanation of the fact, the effect produced by atropia is of a general and not merely a local kind.

Other curious effects of drugs on the heart, arising from their mutual antagonisms in the blood, or in the nervous system, furnish subjects for ingenious speculation, but we defer special reference to these until further light is thrown on their action.

The argument that arrest of the heart in diastole, by faradization, is not the result of an inhibitory action exerted through the vagi, and even *that the vagi are not the channel through which the heart is arrested at all*, finds also strong confirmation, if not actual demonstration, in the further fact, that *the heart is similarly arrested in diastole* by such drugs as aconite (1), veratria (2), jaborandi (3), calabar bean (4) and chloral hydrate (5) *after the vagi have been cut or otherwise paralyzed*, as by curare, etc.

In concluding this part of the subject, we need hardly remind the intelligent reader, that a system of inhibitory centres and nerves is purely hypothetical, is unknown to the keenest anatomist, and owes its place in physiological records solely to the exigency of the vaso-motor theory at present in vogue. Nor has this appendage of the vaso-motor theory been allowed to pass unchallenged. The existence of such a system was doubted by Dr. Anstie, and repudiated by other eminent men, such as Lister, Edes, Piotrowski and Handfield Jones; and Dr. Anstie states that there is not a single one of the strongest instances of apparent inhibitory action that has not been "challenged by experimenters of repute."*

(To be concluded in our next).

* Amer. Jour. of Med. Science, Oct. 1877, p. 384. † Ringer's Therapeutics, p. 461. (1) Dr. Ringer's Therapeutics, p. 396. (2) Ib., pp. 377-8. (3) Ib., 474. (4) Braith. Retros. (Dr. Fraser) Jan. '71, p. 276. (5) Dr. Ringer, Ib., p. 301.

ANTISEPTIC PRINCIPLES IN SURGERY.

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It has occurred to me to offer for publication the following account of a case which illustrates in a marked manner the glorious results of antiseptic principles, even when Lister's method cannot possibly be applied. It is all very nice and interesting to read of formidable operations being performed in a well-appointed hospital, where under carbolic spray, antiseptic gauze, and salicylic wadding provided by munificent revenues, the surgeon's anxieties are reduced to a minimum and the patient's chances raised to the maximum. But with the backwood's surgeon, too often poor in pocket, with long miles, rough roads, and deep mud holes between him and his poor, and worse, ignorant, patient and attendants, the case is very different. Still let such an one take courage. Antiseptic principles applied under circumstances and with appliances that would shock Lister to the utmost point of disgust, will produce marvelous results in the way of saving life and relieving suffering. The following case is given wholly and simply to show that the minute details of Lister's method, though admirable, and to be observed when possible, are not absolutely necessary to the most complete success.

On the 25th Sept. I was called to attend S. B., æt 35, reported to have been shot by a rifle ball in the upper part of the thigh. S. B. is a "hard case," living 9 miles from my residence, which again is 65 miles from the nearest railway station. I found his house characterized in an especial manner by squalor, filth, poverty, and uncleanness. Built on a sandy soil it was totally destitute of anything like a drain, and was surrounded by the accumulated abominations of about 10 years. The patient was lying on a mattress of marsh hay, the slightest movement of which raised a dust which scientists would justly call "septic." While walking in the woods a Snider rifle had exploded behind and within 8 feet of him. The ball had entered a little

* (Neuralgia p. 193-4).