evacuated as far as possible; the cavity was then hyper-distended with a saturated solution of boric acid and again evacuated, the process being repeated until the fluid came away free from pus. I was much impressed by one of his cases (pelvic abscess following on confinement) which was cured in about ten days. I have had many successful cases since in treating deep-seated abscess in this manner, and the method I have described for treating infected knee-joints is only another application of it.

Many other cases of septic knee-joint have been treated at this hospital and cured with more or less stiff joints, and one of my colleagues informs me that he has had very satisfactory results from the same methods.

Lately I washed out the joint with a saturated solution of magnesium sulphate. The patient when operated on (October 19th) had a temperature of 104° F.; this had declined to normal on November 11th; there was one rise to 101° eight days later; the infection was streptococcal. The patient has now a slightly movable joint, which it is hoped will improve under chlorine ions.

I am aware that there are surgeons who claim that a stiff knee is not so useful as an artificial limb—a statement easily made but lacking in proof. The point could only be settled if some one with a useful stiff knee had subsequently to undergo amputation of the thigh owing to an accident.

INTRAVENOUS INJECTIONS OF ANTIMONY IN THE TREATMENT OF MALARIA.

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IN the BRITISH MEDICAL JOURNAL for January 6th, 1917, Rogers described in a preliminary note the disappearance of crescents from the blood following intravenous injections of tartar emetic.

Ross¹ suggested that this work should be followed up at once by careful and long-continued researches by enumerative methods for the purpose of establishing the point with certainty. He indicated that such methods are the only ones which will finally settle the question, because the parasites vary naturally to such a degree from day to day that it is always difficult to distinguish between accidental and therapeutic improvements.

A case of heavy crescent infection being available at the Albert Dock Hospital, London School of Tropical Medicine, the opportunity was taken of giving antimony injections, a careful daily estimation of the crescents being made afterwards. The vitality of the parasites was also tested to determine whether they would flagellate or not after the administration of the drug.

These tests were begun on January 17th, the patient being kept in bed during the course. The accompanying table shows the results at a glance. The method of counting was as follows: Five hundred leucocytes were counted in well spread out films daily, the films always being taken at the same hour—11 a.m.; the crescents noted during these counts were carefully recorded. As the total number of leucocytes per cubic millimetre was low (between 4,500 and 6,000 during the counts), the time expended on getting the 500 in the films was considerable, practically the whole of a large slide having to be gone over. The method is not one of the greatest accuracy, it is true, but it sufficed for the purpose in this instance, as the parasites were so numerous.

A study of the table shows that the antimony had not the slightest effect on the crescents, their number fluctuating up and down quite irrespective of the injections. Six intravenous injections in all were given, beginning with 1 grain and increasing to 2½ grains, the last three consisting of the maximum dose. That the parasites were not dead was proved by the fact that they were alive and active in fresh blood, and proceeded to flagellation in a normal manner. In addition to the crescents a scanty ring infection was also present; again the drug appeared to have no effect upon these.

Date.	Treatment.	Crescents.	Rings.	Leucocytes Counted.	Date.	Treatment.	Crescents.	Rings.	Leucocytes Counted.
1917 Jan 17		162	+	500	1917 Feb. 5	A.T. gr.ijss	49	++	500
" 18	A.T. gr.ij	69	++	500	" 6		42	—	500
" 19		151	—	500	" 7		48	—	500
" 20		28	+	500	" 8		64	—	500
" 21		57	—	500	" 9	Quinine gr.x twice daily; liq. arseni- calis m2 t.i.d.	20	+	500
" 22	A.T. gr.ijss	34	+	500	" 10		18	—	500
" 23		55	+	500	" 11				
" 24		69	++	500	" 12	Ditto	8	—	500
" 25	A.T. gr.ij	37	—	500	" 13	Ditto	56	—	500
" 26		50	+	500	" 14	Quinine gr.x twice daily; liq. arseni- calis m3 t.i.d.	7	—	500
" 27		47	—	500	" 15		15	—	500
" 28		30	+	500	" 16		3	—	500
" 29	A.T. gr.ijss	134	+	500	" 17	Ditto	4	—	500
" 30		172	+	500	" 18	Ditto	3	—	500
" 31		60	—	500	" 19	Ditto	36	—	500
Feb. 1	A.T. gr.ijss	52	—	500	" 20	Quinine gr.x twice daily; liq. arseni- calis m4 t.i.d.	10	—	500
" 2		42	—	500	" 21		7	—	500
" 3		73	—	500	" 22		2	—	500
" 4		26	—	500					

A.T. = Antimonium tartaratum. First dose, January 18th, 3 p.m.; crescent count on that day from film taken 11 a.m., future counts also taken at same hour.

Leucocytes per cubic millimetre scanty, varying from 4,500 to 6,000 during the above counts.

After it was seen that no good was accruing to the patient from the antimony he was put upon quinine and increasing doses of arsenic, and the beneficial results of these are also brought out in the table.

One case does not prove a point, but, granting this, it is difficult to suppose that such injections would sterilize other cases after their complete failure in that here described.

Another point against the drug is Colonel Jackson's case of kala-azar, also mentioned in Ross's letter, which had a relapse of benign tertian malaria after long intravenous antimony treatment.²

It will be interesting to await the experiences of others who may try the drug.

REFERENCES.

¹ BRITISH MEDICAL JOURNAL, January 27th, 1917. ² Indian Med. Gazette, December, 1916.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

AN APPARATUS FOR HOT-BATH TREATMENT IN WOUNDS OF THE LIMBS WHILE THE PATIENT IS IN BED.

SINCE hot-bath treatment is nowadays such a popular method of cleaning and combating sepsis in open gunshot wounds, it may be useful to describe a simple apparatus for giving this treatment to a patient in bed, without inconvenience. We employ two what might be termed bags made of indiarubber mackintosh sheeting, one inner and one outer. The inner one takes the form of a cylinder and is slid on up the arm or leg to cover the wound. It is made in such a way that it can be approximated to the skin above and below by means of plain indiarubber bandages; these bandages are only lightly applied. There is a tube of entrance and another of exit.

If we now run in water, with the exit tube closed by a clip, it will be found that, after filling the space between the skin and cylinder, the water will slowly drip out from under the loosely-applied bandages. To catch and collect this dripping water the outer bag is used. It takes the