them, made by public actuaries of note then present, who were scarcely cognisant of the facts, or acquainted with the labours of the Army Medical Department, and with the exact mode adopted by it in framing these returns. I was requested, at that meeting, to bring my educational statistics before the Association at some future meeting, but I have not yet had the opportunity of doing so. I am sorry to say they shew a sad want of education, or even knowledge of reading and writing, amongst recruits.

What do the returns of the Army Medical Department shew to be the result with regard to the inspection of men by civil surgeons, as compared to those inspected by military medical officers? Now, in 1860, 27,853 recruits were examined at the head-quarters of the various recruiting districts; of these, 7,128, or 256 per 1000, were found unfit for the military service. On secondary inspection, 178 per 1000 of those inspected by civil surgeons were rejected, and 90 per 1000 of those previously inspected by military medical officers—just double the number of rejections to those who had been examined by army surgeons.

In 1861, only a small number of men were required for the army, and only 12,161 were inspected at the head-quarters of the recruiting districts; of this number, 4600 were found unfit; and the same ratio of rejections, on secondary inspection, as in the previous year; viz., 90 per 1000 of those examined by the army surgeon, and 178 per 1000 of those inspected by the civil surgeon.

In 1862, again, the number inspected at the head-quarters of recruiting districts was small, amounting only to 7684; of these 3081, or 401 per 1000, were found unfit for military service. The ratio of rejections on secondary inspection was 155 for army surgeons, 259 per 1000 for civilians.

In 1863, 11,487 recruits were inspected at head-quarters of recruiting districts; of these, 441 per 1000 were rejected as unfit for service. The ratio in secondary inspection was in the proportion of 151 per 1000 for the army surgeon, 331 per 100 for the civilian. The returns for this year (1863) of the inspections made at head-quarters of recruits and depôts, as distinguished from the final inspection at the head-quarters of the recruiting districts, are still more discreditable to the civil practitioner, for I find they were 38 per 1000 for the army surgeon, and 265 per 1000 for the civil surgeon.

The return for 1864 I am not able to furnish, as I could not lay my hand on the *Blue Book* for that year.

The last return issued, that for 1865, shews that the total number of recruits inspected, including those at head-quarters of recruiting districts, at regimental head-quarters, depôt battalions, and by civil practitioners, was 24,891. Out of these 9289 were rejected as unfit for service. The ratio of rejections at the secondary inspection was for those inspected by the army surgeon 38 per 1000, by the civil practitioner 149 per 1000, and the editor of the *Army Medical Report* very justly states "that these rejections necessarily involve a considerable expense, which might be saved by a little more strictness on the part of the civil medical practitioner, or perhaps a more practical knowledge of the requirements of military service." For clearness I have tabulated these results. (*Vide* Table No. VI.)

TABLE VI.—*Rejections on Secondary and Final Inspections.*

	Ratio p. 1000 of those prev. inspected by army surgeons.	Ratio p. 1000 of those prev. inspected by civil surgeons.
1860	90	178
1861	90	178
1862	155	259
1863	151	331
1865	38	149

The facts brought before your notice are unquestionably sufficient to prove the justice of the remark just quoted, and are sufficient to show that civil surgeons are bound to exercise more caution in their inspection of recruits, and to study the regulations laid down for their guidance with more attention. It is the carelessness on the part of medical men in this respect that has a tendency to make the experienced army and staff surgeon treat the opinion of the civil surgeon in military medical matters often with a sort of contempt and indifference which otherwise might be undeserved and unwarranted. When in charge of troops, as I have been for years together, including every branch of the service, I have frequently had occasion to reject men previously passed as fit that one would have thought no medical man holding a diploma could possibly have considered physically qualified for the service, the causes of unfitness being so palpable and transparent. For the credit of our profession, and to obtain the influence it ought to be able to exercise in every department of the public service, in any way connected with sanitary matters, the sooner such a state of things is remedied the better. In justice, however, to the civil practitioner, I am bound to add, that this want of practical knowledge in the recruiting branch of the service,

is not confined to him. I have known surgeons and assistant-surgeons in the army who had little or no experience in this duty, sent to important stations, and have known them pass men totally unfit for the service, and afterwards rejected by medical boards. In consequence of this, and in their anxiety to escape responsibility, they have declined to pass men often fit, but as in their judgment there might be a little doubt, they have naturally decided to give themselves the benefit of the doubt, in order to avoid an official letter of explanation from the head of the department, and save further trouble; consequently eligible men were lost to the service. The establishment of the Military Medical School and Hospital at Netley will doubtless have the effect of furnishing superior army surgeons; but regimental practice and the charge of a depôt battalion furnish the best opportunities for gaining the practical experience that is essential.

A word as to the regulations themselves. They are very clear and precise; indeed, those just issued (May 1868, which I hold in my hand) by the War Office, referring to the army and militia reserve, are too particular and exact for any except a very small proportion of men out of any average, or even crack regiment, to pass the ordeal; let me for a moment refer to the "New Regulations for Militia Reserve, issued May 1868, by the War Office." [These were quoted by the author, who continued.]

It is well for the young surgeon to know that a sharp commanding officer and a zealous adjutant can scrutinise a recruit with such shrewdness and discrimination, as to detect causes of disqualification that medical men have even overlooked. To see a medical man inexperienced in the duty of inspecting recruits perform this duty before a sharp recruiting sergeant accustomed to enlist men, is really a humiliating, if not ridiculous, exhibition.

Before concluding, let me ask why, if the volunteers are to be considered as part of our army of reserve, should they be exempt from medical inspection? Many good reasons no doubt could be assigned for dispensing with it, and perhaps it would not be submitted to, but I do not feel certain that it is prudent to consider and count men as soldiers merely because they are entitled to wear a uniform, and attend parades and reviews when they feel disposed, when perhaps on medical inspection they would be found unfit for any length of service, and deficient in the physical qualifications that soldiers in all countries are required to possess.

As an old sanitary reformer, I rejoice to see the Association appropriating a section to the consideration of public medicine. On observing this in the programme, I penned these remarks, and determined to place them at its disposal. The facts now prominently brought before the profession (which is not in the habit of consulting the statistics of the Army Medical Department) come fairly within the scope of public medicine, and merit consideration. It is gratifying to all labouring in the cause of public hygiene to find it rapidly gaining a position in the state with such an able representative as yourself at its head. I feel confident it is destined hereafter to hold a higher position in this country than it does at present.

UNILATERAL HYPERÆMIA IN HEMIPLEGIA.

By T. HENRY GREEN, M.D.LOND., M.R.C.P.,
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It is now well known that, in hemiplegia, cases are occasionally met with in which the temperature of the paralysed limbs is higher than that of those which are not paralysed. M. Gubler was one of the first to draw attention to this in 1856. (See paper in *Gaz. Heb. de Med.*, 1856.) He says that this elevation of temperature is accompanied by hyperæmia, which may declare itself by the occurrence of catarrh, excessive flow of saliva, increased action of the skin, or hypersecretion of the axillary glands, on the paralysed side. In one case, he found that the saliva of the affected side was alkaline, whilst that of the opposite side was acid. Dr. Brown-Séquard in 1863 observed, in a case of hemiplegia, dilatation of the vessels, elevation of temperature, increased action of the skin, and hemicrania, all limited to the paralysed side. M. Chevallier during the past year published some most careful thermometrical observations on five or six cases of hemiplegia. (See *De la Paralysie des Nerfs Vaso-Moteurs dans l'Hémiplégie*, par Paul Emile Chevallier.) In one of these, there was a difference of 2.30° cent. between the two sides. In another case, the return of power was accompanied by a corresponding return of the temperature to the normal standard, the parts falling in temperature in the same order in which they regained their power; that is to say, the temperature of the two lower extremities became equal first, then that of the two sides of the

trunk, then the two upper extremities, and, lastly, the two sides of the face.

The following case, partly observed in University College Hospital, where the patient was for some time under the care of Dr. Hare, who has kindly allowed me to publish it, also exhibits in a marked degree a hyperæmic condition of the affected side in hemiplegia.

A man, aged 33, who had for some months suffered from occasional pains in the right side of the chest extending down the right arm, suddenly became paralysed in the right side whilst sitting at dinner, and was unable to speak. He did not fall from his chair; and, though he was rather confused for a moment, there was no marked loss of consciousness. From this attack he recovered almost completely in two days. Five days after this, he had another attack precisely similar to the first, but rather more severe; in this, also, consciousness was but slightly affected. The patient now for the first time came under observation. He presented the ordinary signs of hemiplegia from slight lesion in the left optic thalamus and corpus striatum. In addition to this, the right side of the face was flushed, and covered with large drops of perspiration; the left was of a natural moisture; and a distinct line of demarcation existed between the two, running down the centre of the forehead, nose, and chin. There was the same difference between the two sides of the chest and abdomen; but here the sweating was not so profuse, and the flushing was limited to slight redness at the upper part of the chest on the right side. The right arm was also distinctly moister than the left; but between the legs the difference was very slight, and only just sufficient to be appreciable. On wiping the perspiration from the right half of the forehead, it reappeared in less than two minutes. The temperature in the right axilla was 100°F .; that in the left, 98.5°F . A physical examination of the chest yielded pretty conclusive evidence of an aneurism of the ascending and adjacent part of the transverse arch of the aorta. The pupils were equal. The right radial pulse was scarcely perceptible. The amount of moisture of the right side varied considerably; but it was always decidedly in excess of that of the left, and was increased by the least exertion on the part of the patient, or by drinking warm fluids. When the sweating was profuse, the temperature in the right axilla was invariably higher than that in the left; the excess being usually as much as 1°F ., and often as much as 1.75°F . The less the amount of perspiration, the more nearly did the temperature of the right side approximate to that of the left. The unilateral sweating and flushing always bore a direct ratio to one another; they occurred first immediately after the first attack of hemiplegia.

The patient quickly regained the power in his limbs, and the faculty of speech was more gradually and somewhat less completely restored. The sweating became less and less frequent and profuse; and, in one month from the date of his second attack, the difference between the moisture of the two sides was not to be appreciated, and the temperature of the right axilla was identical with that of the left. The man now appeared so well that he would, had he been allowed, have resumed some light occupation. He continued in this state for about two months, when he suddenly lost consciousness completely; the breathing became stertorous, and death ensued in the course of a few hours.

Autopsy.—The vessels on the surface of the brain were distended with fluid blood. The convolutions were somewhat flattened. There was a large quantity of clear serosity in the lateral ventricles. The other parts of the brain were healthy. No thrombus was found; but, from the circumstances of the case, a careful examination was impossible. There was a large aneurism of the aortic arch, not in contact with the posterior thoracic parietes. The left ventricle was hypertrophied.

We may, I think, conclude that the three attacks of hemiplegia in the above case were due to embola obstructing the circulation in the left corpus striatum and optic thalamus; and that these probably originated in the aortic aneurism. Their suddenness, the rapid and complete recovery from the first, and to a less extent from the second, the fatal issue of the last, and the absence of any morbid appearances in the brain, with the exception of well-marked plethora, together favour this view. The elevation of temperature, the flushing and sweating, clearly indicated some change in the vascular system of the paralysed side. The sweating, indeed, was peculiarly well marked—much more so than appears to have been the case in most of the recorded observations.

Upon consideration of these cases, we can, I think, have no hesitation in ascribing the unilateral hyperæmic phenomena to a dilatation of the blood-vessels. We know, at all events, that the vaso-motor nerves play an important part in regulating the circulation; and Brown-Séquard, Bernard, and others have conclusively shown that, in doing so, they also modify the temperature. It must be remembered that these nerves are not made up of sympathetic fibres only, but that they contain also large contributions from the cerebro-spinal system; and it is in this fact that we must look for an explanation of the vascular dilatation that

sometimes exists in hemiplegia. The influence of the cerebro-spinal centres upon the circulation is very evident from the dilatation of the vessels and elevation of temperature which result from division or injury of one-half of the spinal cord, in the parts below and on the same side as the seat of injury; and from the production of the opposite effect by its irritation. The majority of the fibres of the cord are continued upwards into the cerebrum, many of them ending in the optic thalami and corpora striata. If those which join the sympathetic, to constitute the vaso-motor nerves, also originate in the cerebrum—and I think the evidence of the cases now under consideration justifies the conclusion that they do—we should expect that lesions in some parts of this centre, interfering either with the origination or transmission of nervous force, would be followed by a similar change in the calibre of the blood-vessels. In the case which has been related above, the exact correspondence of the hyperæmia with the distribution of the cerebro-spinal nerves on the right side was peculiarly characteristic, and naturally leads one to associate the cause of the one with the lesion that interfered with the function of the other. The absence of any increase of the secretions is also important, as showing that hyperæmia does not necessarily affect nutrition, although the nutritive activity of an organ is more easily augmented when its supply of blood is from any cause increased, as is exemplified by some of the cases recorded by MM. Gubler and Chevallier.

Why does this unilateral hyperæmia occur in some cases of hemiplegia, and not in others which in every other respect appear to be precisely similar? This question our present knowledge does not enable us to answer, and it is one well worthy of further physiological and clinical research.

CASES OF UTERINE HÆMORRHAGE.

By W. DRAPER, M.R.C.S., ETC.,

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THE following somewhat interesting cases of hæmorrhage occurred to me, among many others, during my term of office as resident obstetric officer to the Middlesex Hospital in 1866.

In obstinate cases of *post partum* hæmorrhage, in which the ordinary means fail to produce contraction of the uterus and to arrest flooding, I strongly advocate the employment of intrauterine injections. I have injected both strong infusion of matico and iced water in many cases with the greatest success, and in no single instance have I seen the treatment productive of harm.

CASE I. *Accidental Hæmorrhage at eighth month, treated by Intra-uterine Injection.*—This case was first seen by me at the hospital, when the patient informed me that she was eight months gone in pregnancy, and that during the last few days she had had considerable hæmorrhage, which still continued. A vaginal examination discovered the cervix uteri about two-thirds obliterated, soft, and yielding. The tip of the index finger passed freely into the external os; but the internal os was not dilatable. I ordered the patient home to bed, and to take a draught containing sulphuric acid and laudanum every three hours, with cold to the vulva, and a firm abdominal bandage. In the evening of the same day, I was called to the patient, as she was having great loss. The external os uteri now admitted the finger freely. On passing my hand into the vagina, I was enabled to reach the internal os, which with difficulty admitted the finger-end, but which appeared dilatable. I could feel the fetal head presenting, but nothing like placenta. As the hæmorrhage was very free, I passed an elastic catheter into the uterus (carefully avoiding the membranes), and injected about two ounces of a strong infusion of matico; and then plugged the vagina. The patient being much exhausted, beef-tea and brandy were given freely.

The following morning, when I removed the plug, as some slight hæmorrhage occurred, I again injected the uterus with infusion of matico, and replugged. The os was rather more dilated. When the plug was again removed, there was no more hæmorrhage. Labour set in naturally some days later, when the case came to a favourable termination; child living.

CASE II. *Post Partum Hæmorrhage: Contraction of the Uterus produced by Intrauterine Injection of Iced Water.*—A student called me to this case some time after the expulsion of the placenta. I found the patient much exhausted, and flooding violently. Having restored her somewhat with brandy, etc., I removed some large coagula from the uterus, gave ergot, applied pressure, etc.; in fact, employed all the ordinary means to arrest the flooding, without avail. I then passed a large male gum-elastic catheter (having a syringe attached) into the cavity of the uterus, and injected several ounces of iced water. The uterus con-