ON THE COMPARATIVE RESULTS OF THE INSPECTION OF RECRUITS BY MILITARY AND CIVIL SURGEONS; AND ON THE REGULATIONS LAID DOWN FOR THE GUIDANCE OF MEDICAL MEN.*

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I HAVE selected this subject to bring before Section E, as it is a legitimate one for discussion, and forms no unimportant branch of Public Medicine. It is also a subject of public interest as well, and deserves more attention on the part of the medical profession than it has yet received. Now that so great a number of our brethren are connected with the army, navy, militia, yeomanry, and volunteers, it is not an inappropriate time to call attention to a few facts and results, which I trust may have some practical effect, and serve to stimulate the civil practitioner to pay more attention to the Regulations laid down by the Army Medical Department for the inspection of recruits, and induce the teachers in our medical schools to pay more attention to military hygiene. My own experience in military duties, and in the inspection of recruits, has been gained since 1853, and it has been somewhat extensive and varied, as shewn by Table No. I; and I trust gives me some right to address the Section on the subject.

It will be seen from the table that I have inspected 12,656 recruits, up to Dec. 31st, 1867, and I have kept a regular register of every man inspected. I may be pardoned for adding, that militia surgeons are placed in a somewhat peculiar and anomalous position. In critical times, like those of the Crimean War and Indian Mutiny, they are liable to be called out for permanent duty. They are compelled to relinquish private practice, or sacrifice a great portion of it, as most militia surgeons did during the Russian War, 1853-54-55. They have to perform their military medical duties, just as it suits the convenience of the public service, attending to the recruiting one-half of the year, performing staff duty all the year, having medical charge of their respective regiments (may be one thousand strong) for forty-two to fifty-six days annually. They have all the militia volunteers for the army or the army reserve to re-inspect; their militia hospitals have to be arranged and fitted up afresh each year, and hospital furniture obtained from, and returned to, the Barrack Department, after almost endless correspondence to obtain what is absolutely necessary, down to the purchase or possession of the most trifling articles; to quote a striking case in point, of a dust-shovel and mustard-pot being sent all the way from the Tower of London to Leeds. Numerous returns are required at the end of each training, and, except during this period, the surgeon is not in receipt of permanent pay, and then it is not equal to that of a surgeon in the line, and he has no prospect or title, like the latter, to any pension or retiring allowance, except under very exceptional circumstances, which scarcely, if ever, arise. Formerly this was not the case, and militia surgeons, after lengthened service, had half-pay or some pension allowed.

As a militia surgeon ranking amongst the seniors of the class, I feel justified in stating, what I believe is the feeling of the profession generally, that such responsible, varied, and uncertain service, as we are called upon to render, does not meet with that support of the state or that scale of remuneration to which it is entitled, and which other branches of the public service, both military and civil, receive. During the Crimean War, our duties were most harassing, and change of quarters frequent. Some regiments were sent abroad; most of them had to perform garrison duty; volunteering into the army was constant; thus doubling the work. No less than five commissions were obtained without payment, in less than eighteen months, out of my own regiment, by young officers taking their seventy or eighty volunteers each into the line, thus receiving the benefit of the labours and judgment of the medical officer.

I merely name these points to prove how the militia surgeon's experience has been acquired, and how, with ordinary attention to his duty, his judgment with reference to the selection of recruits for the service ought to be correct, if not indisputable.

The immediate object of this paper is, however, to draw the attention of the Section, and the civil practitioner in particular, to the sort of stigma that is cast upon his judgment and knowledge by the fact, that so large a proportion of the recruits inspected by him and passed as fit are, on secondary inspection by army and staff surgeons, rejected as unfit for the service.

The prevalent causes of the rejection of recruits are tabulated for your information (*vide* Table No. V appended), compiled from the Statistical

Returns of the Army Medical Department, 1865, so ably edited by Deputy Inspector-General Dr. Balfour, of the War-Office. The other Table II (appended), on the causes of rejection, is made out from my own register, and was prepared for a paper read before the Social Science Association at its York meeting. The leading facts and deductions brought out by these statistics are sufficient to elucidate the precise nature of the duty under discussion, and I shall not further dwell on the causes of rejection.

TABLE V.—*Causes of Rejection of Recruits during 1865. (Total number inspected, 24,891.)*

	Number rejected.	Ratio p. 1000.
Syphilis	328.....	13.18
Other zymotic diseases	52.....	2.09
Scrofula	237.....	9.52
Phthisis.....	124.....	4.98
Brain, spinal cord, and nerves	15.....	.60
Other constitutional diseases	172.....	6.91
Eyes and eyelids	1072.....	43.07
Diseases of nose and mouth	37.....	1.49
Diseases of ears	44.....	1.77
Deafness	34.....	1.37
Impediment of speech	48.....	1.93
Disease of heart	465.....	18.68
Arteries (aneurism)	14.....	.58
Veins (varix)	876.....	35.19
Lungs (except phthisis)	86.....	3.45
Malformation (chest and spine).....	678.....	27.24
Loss or decay of many teeth	402.....	16.15
Hernia	315.....	12.66
Tendency to hernia (laxity of abdominal rings)	222.....	8.91
Hæmorrhoids	82.....	3.29
Urinary organs (not syphilis).....	10.....	.40
Varicocele.....	583.....	23.42
Hydrocele.....	18.....	.72
Other diseases of genital organs (not venereal)	70.....	2.81
Muscular tenuity	586.....	23.54
Debility.....	164.....	6.59
Defects of upper extremities (contractions, fractures, etc.)	192.....	7.71
Ditto of lower ditto ditto	808.....	32.46
Diseases of joints.....	107.....	4.30
Other affections of bones and muscles	89.....	3.58
Ulcers, wounds, and cicatrices	249.....	10.00
Affections of cutaneous system	116.....	4.66
Weakness of intellect.....	53.....	2.13
Malformation of ears	2.....	.08
Malformation of nose and mouth	3.....	.12
Malformation of chest and spine	225.....	9.04
Malformation of urinary and genital organs	33.....	1.32
Marks of punishment: letters D. or B.C.	78.....	3.13
Unsound health	600.....	24.10

TABLE II.—*Causes of Rejection out of 5186 Recruits inspected for Line and Embodied Militia.*

	Number rejected.	Ratio p. 1000.
1. Malformation of trunk and limbs.....	341.....	65.76
2. Age, ulcer-marks, varicocele, syphilis, and other causes	261.....	50.32
3. Muscular tenuity.....	178.....	34.32
4. Pulmonic and cardiac disease	136.....	26.22
5. Varicose veins.....	133.....	25.65
6. Unsound or delicate constitution, cupping-marks, etc.	126.....	24.29
7. Skin-disease	97.....	18.70
8. Hernia	89.....	17.16
9. Scrofula, disease of bones, glands, etc.	85.....	16.39
10. Defective or loss of teeth	72.....	13.90
11. Defective sight	65.....	12.53
Total	1583.....	305.24

I keep, also (as I dare say most of my militia brethren do), a statistical table of the state of education of every recruit I inspect, as shown in Table IV. When the British Association for the Advancement of Science met at Leeds, there was a warm discussion before the Statistical Section on the defective state of the medical returns of the army, and of the health and educational statistics. I had occasion to vindicate the accuracy of these returns, and to reply to some severe criticism upon

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Oxford, August 1868.

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.

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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 Paralyse 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