An Essay on Venereal Diseases in the British and Indian Armies - their prevalence and prevention

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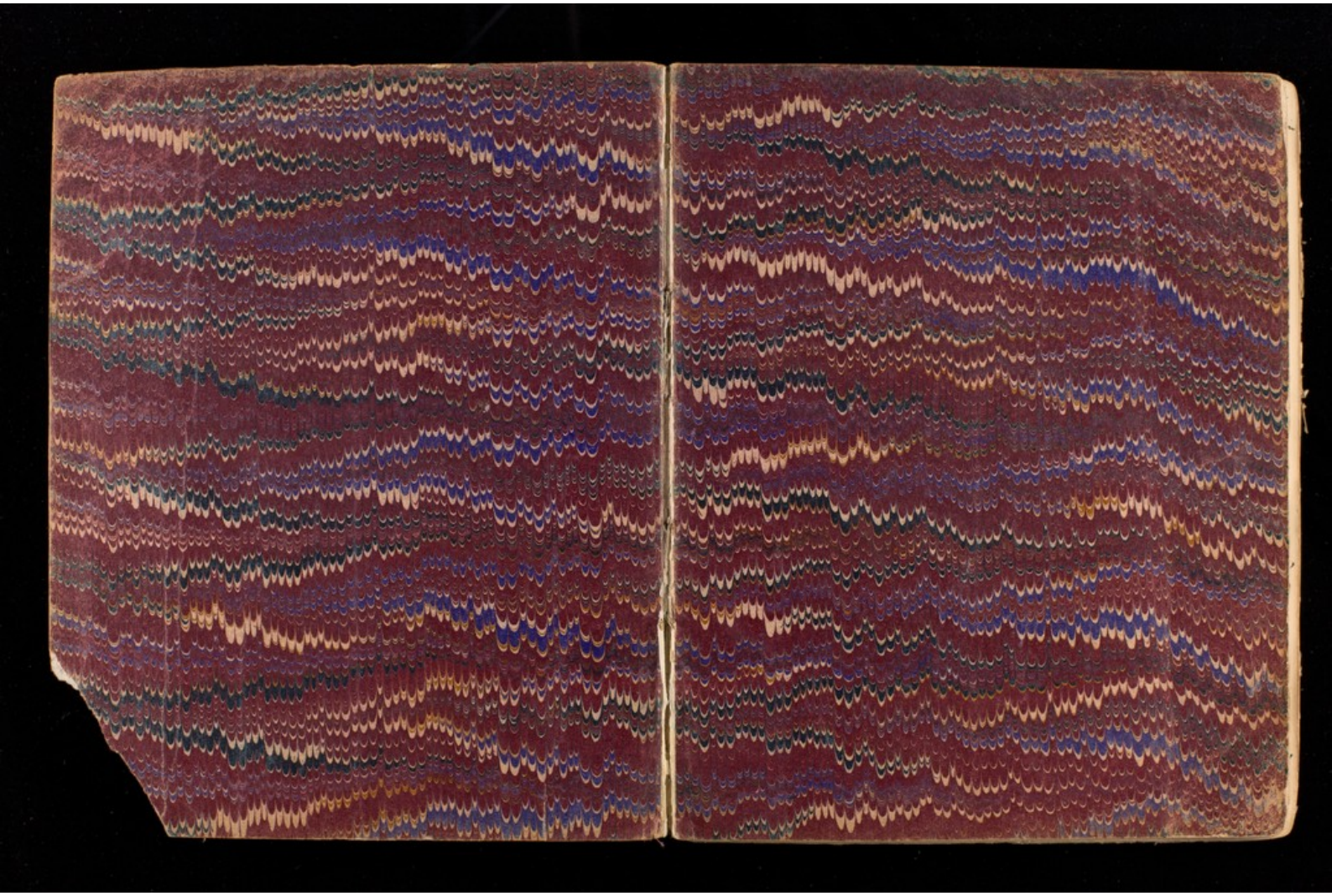


An Essay on

"Venereal Diseases in the British and Indian Armies — their Prevalence and Prevention."

"Quis quid peccat, in eo punitur."

VENEREAL DISEASES IN THE BRITISH AND INDIAN ARMIES — their Prevalence and Prevention.

Introduction.— In 1791, Robert Jackson, an eminent British Army Surgeon wrote the following words:— "The preservation of the health of the soldier is indispensable to the preservation of the conquests which fortune or courage achieves. If genius conquer, prudence preserves. The health of the army ought, therefore, to be a primary consideration of the State." Since Jackson's time the general health of the soldier has greatly improved, and this improvement has been chiefly due to the attention paid by the authorities to the hygienic condition of his

surroundings. In fact, the care taken of the health of ~~the~~ our army, and especially in attention to the prevention of disease, certainly compares favourably with that ~~of~~ Taken in the best organized troops of any other country in Europe. We are obliged however to confess that the fighting power of our forces is very considerably impaired by the great prevalence of venereal diseases amongst both officers and men; and this prevalence is, in many places, increasing. This great prevalence of Venereal diseases in the British Army, and the resultant loss of efficiency, have for many years been ~~a matter~~ subjects of discussion in military and medical circles. ~~and~~ At the present time, when

the nation has been called upon to make great sacrifices in order to increase its powers of defence and offence at home and abroad, all matters which adversely affect the efficiency of our Army and Navy have become ~~matters~~ of vital importance and interest. We therefore feel justified in saying that one of the most practical ways of increasing the fighting strength of our forces would be to take steps to protect our soldiers from the ravages of venereal disease, and the necessity for enquiry into and consideration of the subject with which this paper deals becomes evident.

Plan of this paper.

In the following pages I propose first to consider the prevalence of venereal diseases — 1., in our army at Home, 2. in our army in India, 3. in our army in the Colonies; and the factors which appear to influence that prevalence.

In the second part of this paper I propose to discuss the question of the prevention of venereal diseases in our army and to make such suggestions as to the preventive measures to be taken which my studies and my own experience lead me to think most practical and practicable. In order to do this properly, it will, I think, be admitted that a preliminary enquiry is necessary in order to

learn the lessons to be derived from a study of the history and natural history of the venereal diseases so that we may apply these lessons to the object we have in view — the prevention of these diseases.

The Prevalence of Venereal Diseases in the British Army.

The Army at Home. —

Prevalence of Venereal at Home, prior to 1860

We are very ignorant of the actual amount of venereal disease in our army at different times prior to 1860, when the Army Medical Department Reports first began to be issued. We know that returns existed prior to 1860. They were first put upon a proper basis by our first Director General,

Sir James ~~William~~ Mc Gregor, but these returns are, as far as I know, inaccessable to us. In a few of the medical works written by Army Medical Officers at the end of the 18th and beginning of the 19th Centuries we get a little information on the subject, but it is very little. Thus, from the works of Monro, Jackson, Fergusson, Guthrie, Hennen, Luscombe, and others we gather that venereal diseases were very prevalent in our Army but we get very little light as to the actual extent of this prevalence. It is possible that the old returns would now be of little value owing to want of detail. Jackson gives the following as the official form of hospital return used in 1802 at the Depôt Hospitals, in the Isle of Wight.

Form of Hospital Return used in 1802.

Acute	Chronic	Wounds and Ulcers.	Venereal	Furnished	Convalescent	Total.

Dead since last return .....
Decreased since last return .....
Increased since last return .....
Admitted since last return .....
Dismissed since last return .....

Jackson in his book† gives a more extended return, which shows that between 1st March 1801, and 30th April, 1802, inclusive, there were about 4,500 patients in the Depôt Hospitals, Isle of Wight. Of these, 257 were suffering from 'Lues Venerea' (of whom 2 died), and 151 were suffering from Gonorrhœa. This is, according to our modern ideas, a small proportion of venereal disease. Jackson however returns many patients under the headings of 'headache', 'opthalmia', 'ulcers', 'sore legs', 'yaws', &c, which probably included syphilitic

† "The Constitution of the Medical Department of the British Army &c, London 18[illegible]

cases. Indeed in all old books on Army Medicine we are greatly struck by the number of men treated for ulcers. It is conceivable that many of these were of syphilitic origin.

Luscombe in his book on "the Health of Soldiers" (Edint. 1820) gives a few figures which show the amount of venereal disease in the 34th Regiment, of which he was Surgeon. From May 1805 to August, 1808, during which period the regiment was for a few weeks on Active Service and the remainder of the time at Home, there were 248 admissions for Venereal. Whilst on Active Service in the Peninsula, in 1811, there were only 31 admissions for venereal diseases. In the following year, at

Dublin, there were 221 admissions.

If we take the strength of the battalion as being 1000 men (which is probably excessive), we get admission ratios for venereal diseases of 76.32 per 1000, per annum, at home prior to 1808, and 221 per 1000 at home in 1812, whilst on active service in the Peninsula the ratio was only about 31 per 1000.

Hennen, in his "Military Surgery" (Edin 1819) quotes a medical report on the British Army by J. Mc Grigor and W. Franklin, from which we gather that, between December 1816, and December 1818, 4,767 patients were treated for primary venereal sores (of all kinds), and that 147 of these afterwards had secondary

syphilitic symptoms. If we compare the admissions for primary Venereal Sores in the Army in 1816 & 1818, two years, with those for 1897 and 1898 in the Army at home we find that in the latter years there were 8,398 admissions from this cause whilst in the early period there were only 4,767. The strength of the Army at Home was, in 1897, 1898, over 96,000 men, in 1816 to 1818 about the same number.‡

It is obvious that no connected idea of the extent of prevalence of venereal disease in the army in former days can be gathered from these sources. The writer therefore restricts himself to the figures given by the Annual Army Medical Department Reports

‡ I cannot find the exact Strength for the years 1816, 1818. In 1815 it was 300,000 men. In the following years the army was, like on long wars, greatly reduced. In 1820 its strength was only 88,100 men. see "RAISE - Dict. of Dates"

from 1860 to date. He has however been unable to get access to all these reports; about a dozen, for years prior to 1888, are missing at this station. He has however been able to get the figures also from books and from numerous Parliamentary Returns.

Prevalence of Venereal Disease in HOME ARMY since 1860.

On these figures I have based a series of charts in order to show more graphically than would be done by mere columns of figures the rise and fall in prevalence of venereal diseases from year to year. Before considering these charts and the figures on which they are based, the following points should be noted.—

From 1859 to 1868, venereal diseases were classed together in the returns as enthetic diseases.

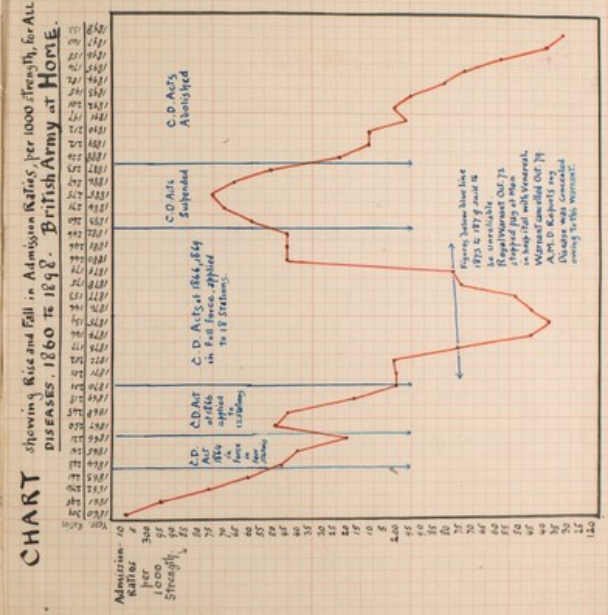
From 1869 to 1878, non-syphilitic venereal diseases were included under the

leading of "diseases of the urinary tract" and therefore the figures for this period are, roughly speaking, about 1 per cent (10 per 1,000) ~~less~~ greater than they should be. From 1879 to 1885 non-syphilitic diseases were classed under the heading "gonorrhoea and its sequelæ". From 1886 to date venereal diseases have been grouped under the headings,- Primary Syphilis, Secondary Syphilis, Soft Chancre, Primary Venereal Sores (that is, Primary Syphilis and soft chancre combined in one group), and Gonorrhœa.

CHART I. The first Chart (marked I) shows the rise and fall in the admission ratios per 1000 strength, in the Home Army, for all venereal diseases taken together, since 1860.

Total Venereal. This chart shows that from 1860 to 1875, inclusive, there was a steady fall in the prevalence of all venereal diseases taken together, whilst from 1876 to 1885

I. CHART showing Rise and Fall in Admission Ratios, per 1000 strength, for ALL VENEREAL DISEASES, 1860 to 1898. British Army at HOME.



Note:- The figures on which this Chart is based were taken from Parliamentary Returns 1860-1866, 1873-1879, 1883-1898, and C-8769 of 1897.
Figures from other sources, A.M.D. Reports etc, range higher for years previous to 1873.
After that date they are practically identical. The general course of the Curve may however be regarded as accurate.

1000 strength, in each class of venereal disease, as well as in the total venereal ratios.

CHART I.

Total Venereal.

in the prevalence of all venereal diseases taken together, whilst from 1876 to 1885

there was a continuous rise in prevalence, and from 1885 to 1898 there has been a steady fall, until it has now reached the lowest point known. With regard to Syphilis there was a gradual diminution in the admissions from 1860 to 1876. From 1876 to 1885 Primary Syphilis admissions increased and since then have steadily fallen. Secondary Syphilis admissions rose in the period 1876 to 1885, but continued rising until 1890, since which date there has also been a constant and steady fall. The variation in rise and fall in the curve of admission ratios for Secondary Syphilis has only ranged between 26.6 per 1000 and 37.3 per 1,000 since 1876.

Syphilis.—

CHART II.

The second chart (marked II) shows that there has been, since 1890, a steady and constant fall in the admission ratios, per 1000 strength, in each class of venereal disease, as well as in the total venereal ratios.

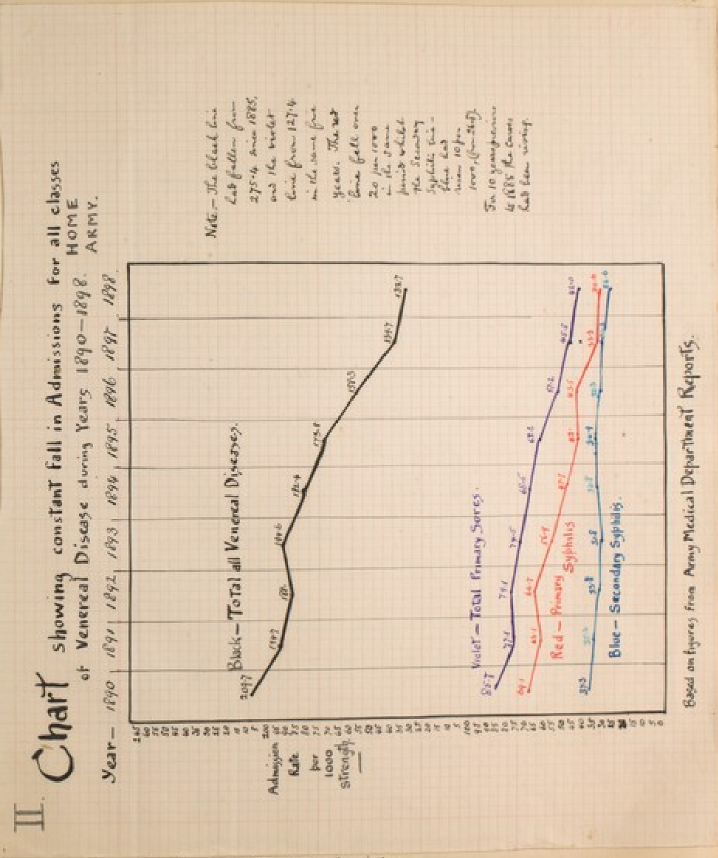
Chart II explains itself. In both charts I have also given the figures on which they were based.

Factors which may have Influenced Prevalence.

Let us now consider the factors, if any, which have influenced, or may have influenced, the prevalence of venereal disease in our Home Army since 1860.

a. The Terms of Military Service and Age of the Soldier

From 1847 to 1867, the Long Service Act of 1847 was in force. In accordance with this act, the soldier enlisted for a period of 10 years, which might be extended to 21 years. In 1867, another Act came into force by which the soldier first enlisted for 12 years with the colours, and reengaged for a further period of 9 years to qualify for pension. In 1870 the short service system was introduced by Lord Cardwell. This is still in force. By it the soldier enlists for a period of 7 years with the colours, and 5 years in the



+A. Cazenave. Traité des Syphilides.

Chart II -
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a. The Terms of Military Service and Age of the Soldier.

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reserve. Under this system also; battalions have been linked together so that a battalion serving abroad is kept up to strength by drafts of men from its link battalion at home. It is evident that our army prior to 1870 must have contained a large proportion of old soldiers and that the introduction of the Short Service System brought into the army a new element — a more youthful soldier than the service had hitherto seen. This increase in the number of young men in the army must have had an effect on the prevalence of venereal disease in the army. Cazenave† has shown that 49.14 per cent of acquired Syphilis is acquired between the ages of 20 and 30, in the general population, and only 27.1 per cent in the next decade. It follows therefore that the greater the number of persons in a community below

†A. Cazenave. Traité des Syphilides.

30 years of age the greater the prevalence of syphilis in that community will be. In the Army a very large proportion of men come within these ages. Thus in 1898, out of 10,000 recruits 7,975 were under 21 years of age, 7,632 being between the ages of 18 and 21. and these 7,632 will complete their 7 years with the colours between the ages of 25 and 28. It follows therefore that the Short Service System has so reduced the age of the soldier that we may assume that about 76 per cent are below the age of 28. In India, where our army is composed of longer servived soldiers than at home, in 1898, 54 per cent were below the age of 25 years and 81 per cent had less than 5 years service in the country. The proportions in the Army at Home are probably larger. The youthful age of the soldier†

† Lecky says "Sensuality is the crime of young men and old nations." see his "history of European morals."

may, therefore, I think, be considered a factor which predisposes to an increased prevalence of venereal disease in our Army, and, this increased youthfulness of our soldiers is a result of the Short Service System. This System was introduced in 1870, and its full effects were not felt at home until some years later, probably not under 5 or 6 years. After 1875 prevalence of venereal diseases at home began to rise in amount and continued rising until 1885, since which date it has steadily fallen. and yet the full influence of the short service system must have been at work after 1885 as it was for ~~after~~ some years before. To explain the fall in venereal prevalence after 1885 therefore we must look elsewhere it cannot be due to the youth of the soldier

b. Increase or decrease in Chastity, or Increased or diminished exposure to Temptation?

Is this fall in venereal prevalence since 1885 due to an increased chastity amongst the soldiery or can it be explained by a decrease in the amount of temptation? I fear that it would be very hard to prove the former; and a walk down Piccadilly at night (or the streets of most of our large towns), together with a study of our police courts and their work, disproves the latter. Public solicitation by prostitutes in our streets has certainly increased of late years and interference with 'the ladies of the Town' by our police has ~~also~~ been a diminishing factor since the celebrated Cass case some years ago. Lecky truly says‡ "Chastity, in England at least, is scarcely a rudimentary virtue amongst men," and again, "In large bodies of men an increase of temptation always brings with it an increase, although not necessarily a proportionate increase, of vice." The decreasing prevalence of Venereal

‡ "History of European morals", by W.E.H. Lecky. Lond. 1869. vol. I. pp. 152, 153.

diseases in our Home Army is not therefore due to either of these causes.

c. Relation between amount of Venereal in Army and amount in Civil Population.

It is very probable that the decrease in prevalence of venereal disease in our Army corresponds to a decreased prevalence amongst the civil community. It is very difficult however to estimate the amount of venereal disease prevalent in the civil population; most foreign writers, Lancereaux and others regard the prevalence of venereal disease in the army of a country as the best index of the amount of venereal disease in that country. This may be true of those countries where Conscription is the law but, when a country has a voluntary army, such as ours‡, the contention is obviously fallacious. We have however two ways of estimating the amount of venereal disease in the country and these are the returns of recruiting and the Registrar General's returns of mortality.

‡ Our Army chiefly represents the lower (and lower middle) classes not the whole community.

Roughly speaking, our Army requires 50,000 or more recruits annually. Of those examined in 1878, 15.1 per ~~cent~~ thousand were rejected for venereal disease, whilst in 1898 only 3.85 per thousand were rejected on this account; a diminution amounting to over 11 per thousand in 20 years. The Registrar General's Report, published in 1899, tells us that, whereas in the ten years, 1878–1887, on an average 82.4 persons per million died of syphilis; in the ten years, 1888–1897 an average of 67.5 persons per million died from that disease. ‡ It would therefore appear that venereal disease is on the decrease amongst the classes from which we recruit our army and also amongst the general population. ‡

d. Effects of an Improved Education, on the Soldier, the Prostitute, and on the Country.

As long ago as 1820, Edward Lecomble, M.D., Senior Surgeon to the 34th Regiment of Foot, published a book on "the means of preserving the health of Soldiers." In this work he insists that an improvement in the morals of the Soldier

‡ "Syphilis in the United Kingdom at the present moment is in the stage of an epidemic on the decline." — Encyclopædia Britannica 9th Edition.

‡ The Registrar Generals figures may also be read to indicate a diminished virulence of syphilis not necessarily a diminished prevalence.

"can only be effected by improvement in their education." It is interesting to note that Col. J. Lane Notter, late Professor of Hygiene at Netley, in a paper, read before the 13th International Congress of Medicine this year, on the subject of "The Prophylaxis of Syphilis in Armies," considers that the decline in prevalence of venereal diseases in our Home Army since 1885, is one of the results of the Education Act of 1873. I cannot do better than quote his own words, as reported in the Lancet. "In 1873 the Education Acts were adopted and it is significant that 12 years after the adoption the fall really began. The increase of Education affects both the soldier and the prostitute. In the case of the soldier he has greater liking for intelligent amusement and greater self restraint. The prostitutes on account of their education become of a higher order and therefore are more likely to endeavour to keep themselves in good health, or to endeavour to get cured of venereal diseases which they contract in the

"pursuit of their calling." "With increasing "education and a higher social and moral "standing in the Army there is every prospect "that the decline will continue." ‡

It may also be argued that the spread of education has also been associated with a spread of the doctrines of Malthus. The falling birth rate in England is an indication of the truth of this. Hence a more widespread use of "Malthusian appliances," which, while preventing conception, do, to some extent, lessen the risks of venereal infection. This may be one of the subsidiary causes of the declining prevalence of venereal diseases in the country.

I think we may therefore accept Col. Notter's opinion that the effect of the Education Acts of 1873, the results of which Acts

‡ I may note en passant that Mr. W. E. H. Lecky, in his "History of European Morals", says with regard to the effects of Education that it "raises many poor women to a stage of refinement that makes them suitable companions for men of a higher rank and not suitable for those of their own." The result is that many such women often do not marry into their own rank but become the mistresses of men of a higher rank than their own.

came into operation about 12 years later, coincides with, and perhaps also led to, the decline in the prevalence of venereal diseases in the Army at Home since 1885. And we may also, I think, consider this declining prevalence to be coincident with a generally declining prevalence of venereal diseases in the whole country.

e. The Contagious Diseases Acts.

I now come to a factor which is considered by many competent authorities to have led to a decrease in the prevalence of venereal diseases in the Army, whilst on the other hand many other observers, equally earnest, competent, and conscientious, consider it to have had either no effect or an opposite effect. I refer to the Contagious Diseases Acts. After reading a very large number of pamphlets, and books, and articles, written both by those in favour of these Acts and those opposed to them, all of whom appear to be very much in earnest on the question, I must confess to some confusion of mind. Each opposing side

References.— Articles in Lancet & British Medical Journal, Hansard for debates in House of Commons & House of Lords, Dr. Birkbeck Nevins' books, Mr. H. J. Wilson M.P.'s pamphlets, [illegible] Parliamentary papers, Papers at Royal United Service Institution in 1897 & discussions thereon particularly Major Magee's paper

attempts to draw opposite conclusions from statistics drawn from the same sources, and when for a period the statistics obviously do not support their contentions we have honourable men stating that they know these statistics are incorrect, whilst others say that Commissions and Sanitary Boards have purposely been composed of members with a known bias in opinion on the subject, that officials have been influenced by the opinions of their superiors, and so on. Some writers give quotations, (after the style of Dickens' Mr Vincent Crummles), leaving out sentences or words which modify or even tend to upset conclusions. A student therefore who has no bias and no formed opinion on the subject is, ~~therefore~~, like Pilate, constrained to ask "What is Truth?" Let us therefore shake ourselves free of all controversial trammels and bias, and, accepting the statistics of the Army Medical Department as being correct, whilst bearing in mind the various influencing factors already considered, try to

elucidate for ourselves the influence the operation of the Contagious Diseases Acts has had, or appears to have had, on the prevalence of Venereal disease in our Army. The facts are these. In 1862, a Committee of the House of Commons having reported on the extent and severity of venereal disease in the Army and Navy, the act of 1864 became law. This Act was only applied to three stations of the British Home Army, and was only in force for a little over a year. It provided that any particular woman who had been charged by some particular man with having given him venereal disease should be compulsorily examined medically and if found diseased detained for treatment. In the same year, 1864, a Medical Committee, Mr Skey's Committee, ‡ was appointed by the Admiralty and War Office "to enquire into the best mode of treatment of the disease (Venereal)" and to suggest to the Naval and Military Authorities "Any practical rules to diminish the frequency of the cases of Contagion, and which are capable of adoption in the daily life of the ship or barrack."

‡ The full report of this Committee, with all the evidence, forms one of the Army Medical Department Reports for 1865. It is well worth reading.

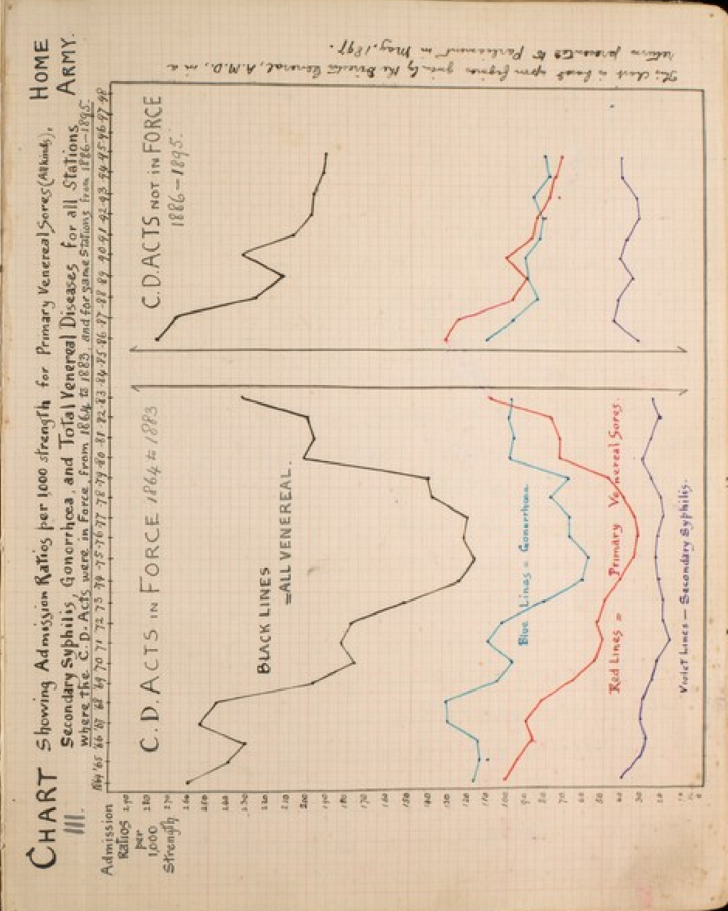
Mr Skey's Committee pointed out the defects in the Acts of 1864 and recommended the compulsory periodical medical examination of all prostitutes within the areas to which the Acts were applied. As a result the Act of 1866 was passed which was further extended by the Act of 1869. These Acts passed with very little opposition and were favourably reported upon by a Committee of the House of Commons in 1869 and by a Committee of the House of Lords in 1868. These Acts were gradually applied to various military and naval Stations being in force in 12 Stations prior to 1869, after which, from 1869 to 1886, they were in force in 14 stations. The opposition to these Acts began in 1870 when arose the first motion for appeal. Similar motions were made in 1873, 1875, and 1876. In 1870 a Royal Commission reported favourably on the Acts. A Committee of the House of Commons also sat from 1879 to 1882 and reported in their favour. In 1883 however the Acts were suspended and in 1885 were finally repealed.

It may be noted that Government Officials, including the different Secretaries of State for War, and the First Lords of the Admiralty consistently supported the acts in Parliament during the time they were in force.
Investigation shows that during the period the act was in force the admission ratios for venereal diseases were lower in the 14 protected stations than in 14 unprotected stations. Notwithstanding the acts however the admission ratios rose at the protected stations from 1874 to 1885 the admissions in 1884 being only 5 per 1000 less than they were in 1860. After the suspension of the Acts in 1883 the admissions increased considerably but this rise appears only to have been a continuation of the rise which had been going on since 1874. Since the final repeal of the Acts there has been a steady fall in all forms of the disease except in secondary Syphilis the fall of which as one would expect did not commence until a few years later but has been constant since 1890.
According to the Army Medical Reports the Acts

had practically no influence on the admissions for Gonorrhoea but lessened the admission rates for primary venereal sores, and Secondary Syphilis. ǂ It should be noted that when the Acts were first enforced in 1864, 1866, 1869 the curve for all venereal diseases was falling. (See Chart I at page) and that the Acts were suspended at a time when the curve was rising. The curve fell 2 years after the suspension of the Acts.

It is obvious that the results of the enforcement of the C. D. Acts were not very marked and it is not very evident that they had much effect at all in diminishing the prevalence of venereal disease in the Army. The fact is we have very little to go upon. The Acts were not applied to the whole country not to all military stations. The result was that the movement of troops from protected to unprotected stations and vice versa, the fact that at short distances from the protected stations were unprotected districts, and that men went on furlough to unprotected places bringing back disease with them, all tended to

ǂ See Chart III which explains itself. The curves for Primary Sores and Secondary Syphilis are lower under the acts than in the years not under the acts.



being protected and unprotected stations to one level. One thing is certain and that is that since 1885 the admissions for venereal diseases of all kinds has fallen independently of ~~the~~ any regulations. We cannot therefore reasonably recommend the re-enactment of the C. D. Acts at Home. But whilst saying this I cannot help thinking that additional powers should be given to the Police in order to enable them to keep better control over the prostitute class in our streets in London and most of our towns. It is a disgraceful state of things that no man can take his way down Piccadilly, one of the leading thoroughfares of the Metropolis, after sunset without being exposed to the open solicitations of a mob of prostitutes, mostly foreign, over whom our police appear to have no powers of control. When stationed at Homelow, some years ago, I traced 14 cases of primary syphilis to infection from one woman who hung around the

barrack gate. I reported the matter to the police who informed me they could do nothing unless they caught the woman ‡ sleeping outwhen she could be arrested as a vagrant.

f. Minor Factors.

1. Hospital Stoppage of Pay.

In October, 1873. Lord Cardwell, by Royal Warrant, stopped the pay of all men admitted to hospital suffering from venereal disease. This was no innovation, for many years before, the Royal Artillerymen were for a time fined half a guinea if they contracted venereal disease. This Warrant of 1873 however is stated to have caused the fall in the curve of prevalence of venereal disease between 1873 and 1875 and a diminished admission rate up to 1879. The Army Medical Reports say that the disease was concealed to avoid loss of pay. The Warrant was therefore cancelled in October, 1879.

‡ A soldier was given a sovereign to induce this woman to go away. He succeeded, taking her to London; but the sad result was – another admission to hospital for Primary Syphilis.

2. The Egyptian War.

The rise in venereal prevalence between 1882 and 1885 is accounted for by some on the supposition that a great deal of venereal disease was brought back from Egypt during and after the war and Occupation.

3. Increase in Pay.

Another minor factor which may possibly have had an influence is that about 1873 the pay of the private soldier was increased. We should expect an increase of pay to be followed by an increase in venereal prevalence – the soldier having more money to spend on his private amusements. The increase in Venereal disease however, did not take place until 1876; but we have already shown that the influence of the Royal Warrant, which stopped the pay of the patient in hospital with venereal, was at work in the same years. One factor possibly counteracted the effect of the other.

4. Intemperance.

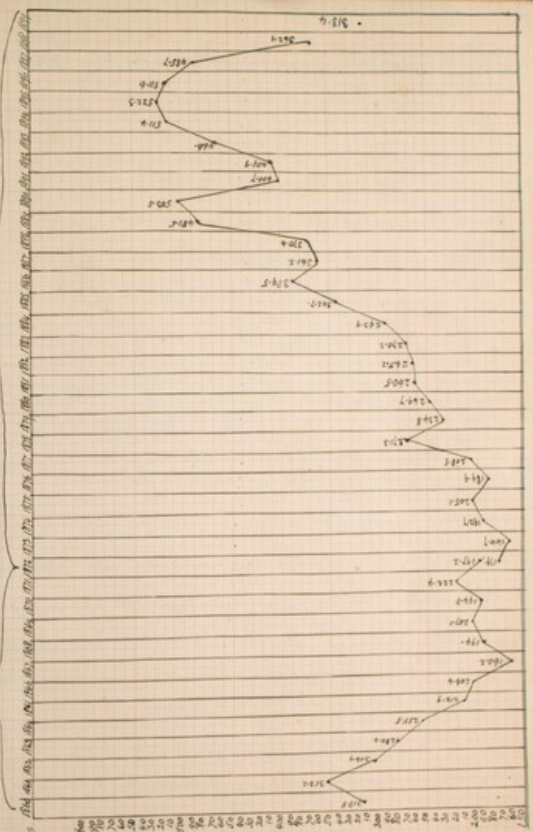
With regard to the relationship between

intemperance and immorality, it is usually considered that the two go hand in hand — the more drunkenness, the more the immorality. Personally, I am not disposed to accept this opinion as an axiom. The drunken man is not necessarily an immoral man. The more money he has to spend on drink the less he has to spend on women. On the other hand, the drunkard is more careless as to his associates and is more liable to consort with a low-class ~~type~~ (and probably diseased) prostitute. It may be noted that during the past 25 years temperance has been increasing in the army and drunkenness is now comparatively uncommon when compared to the amount in the army in the days of long service. The Army Temperance Association started work about 1873, and, since then, has steadily increased in strength, until, at the present day, we may fairly claim that the British Army is the most temperate body of English-speaking men in the world;— certainly much more temperate than the classes from which ~~they~~ it is ~~are~~ recruited.

hospital for [illegible]

CHART showing rise and fall in admission ratios for all Venereal Diseases among British Troops in INDIA, 1860–1899.

IV.



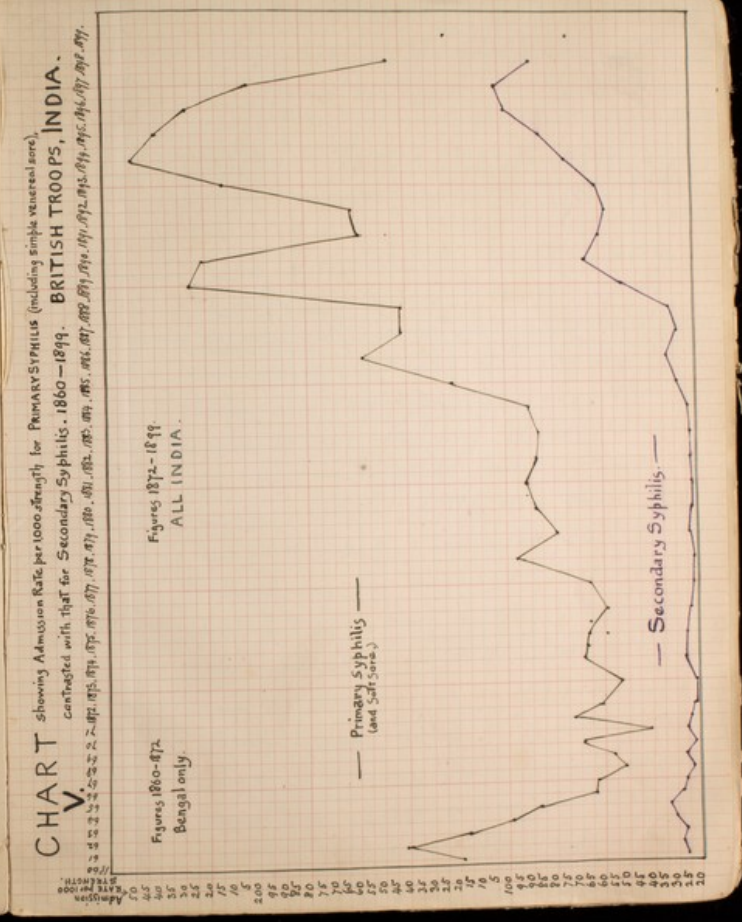
3.

The Prevalence of Venereal Diseases in our Army in India.

Our Army of British troops in India is the flower of the British Army. It is largely composed of full grown and mature soldiers, and it roughly numbers about two Army Corps, or 70,000 men. I have shown that in the Home Army venereal diseases are diminishing in prevalence and severity year by year. In our Indian Army however the contrary has been the case. From 1872 to 1896 there was a steady and constant rise in prevalence of all venereal diseases. Since 1896 there has been a fall. It will readily be understood that this steady and alarming increase in the prevalence of these diseases, with the necessarily accompanying diminution in efficiency, gave rise to considerable apprehension in the breasts of all who had the interests of the Army and nation at heart, and hence arose the stimulus for enquiry into the causes of this increasing prevalence, and the measures to

taken for the prevention and diminution of this prevalence. A reference to Chart IV, which shows the rise and fall in the admission ratios per 1,000 strength, year by year, since 1860, for all venereal diseases), tells us that all venereal diseases taken together were, in Bengal (and probably all India), declining in prevalence from 1861 to 1873, and that from 1873 to 1896 there has been, in all India, a constant rise, year by year, in prevalence. In 1873 the admission rate, per 1,000, all venereal, was 166.7. By 1882, it had risen to 265.2 per 1,000; and by 1886, to 385.5 per 1,000. In the two following years the ratios fell to 361.2, and 370.6, then jumped, in 1888 and 1889, to 481.5 and 503.3 ~~409.4~~ respectively. There was another fall in 1890 and 1891 to 400.7 and 409.9; ~~this~~ followed by a steady rise which culminated in 1894, 1895, and 1896, in the respective ratios 511.4, 522.3, and 511.6. In the last two years of which we have records, 1897 and 1898, there has been a fall in ratios to 362.9 in the latter year. The

CHART V. showing Admission Rate per 1000 strength for PRIMARY SYPHILIS (including simple venereal sore), contrasted with that for Secondary Syphilis. 1860–1899. BRITISH TROOPS, INDIA.



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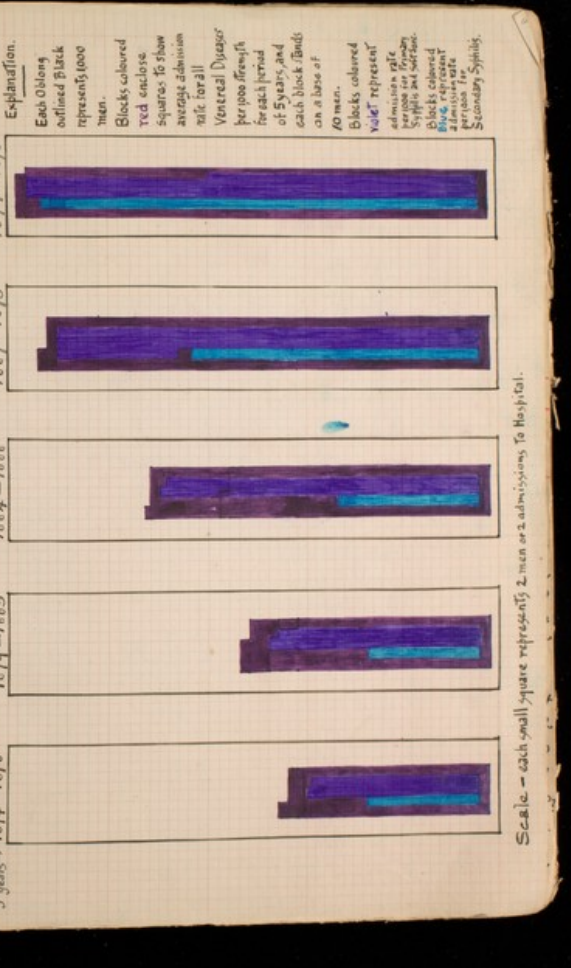
admission ratio per 1,000 strength has only once been lower than this in the 13 years previous to 1898, namely, in 1887, when the ratio was 361·2. The next chart (V), shows the admission ratio per 1,000 strength in the Indian Army for Primary Venereal sores (Primary Syphilis + soft chancre), and for Secondary Syphilis from 1860 to 1898. If we compare Charts IV. and V., we at once notice how closely the curve for Primary Syphilis (and soft sores), rises and falls, year by year, with that for total venereal diseases, whilst the curve for Secondary Syphilis rises and falls, not in the same years as the other curves but, as one would expect, a year or so after. Thus the corresponding rise in Secondary Syphilis to the rise in Primary Sores in 1889 occurs in 1890, the corresponding rise in Secondary Syphilis to the great culminating rise in primary sores in 1894 occurs in the following years, attaining its greatest height in 1897. Primary Syphilis (including all primary venereal sores) and Secondary Syphilis increased greatly in prevalence after 1884, a very marked increase occurring in the former in the

years 1889 and 1890, and 1892 to 1896, whilst Secondary Syphilis has been markedly on the increase since 1888 and more particularly so in the period 1894 to 1897, the last year having the highest admission ratio a record. In other words the great increase in total venereal diseases, prior to 1897, has been chiefly due to the great increase in prevalence in the worst form of venereal disease, namely, Syphilis. Chart VI. gives a diagrammatic representation of the growth of incidence of the various venereal diseases arranged in 5 yearly periods from 1874 to 1898. In this diagram I have drawn to scale blocks, each of which represents 1,000 men, one block for each period of 5 years. On each block I have colored to scale blocks which represent the average admission rate per 1,000 strength, for each period of 5 years, red for total venereal diseases, violet for primary Syphilis, (including other primary sores), and blue for secondary Syphilis. The red block naturally includes the others and the part actually colored red may be taken as representing the admission rates for gonorrhoea. The part of each large

CHART VI.

Graphic Representation of Admissions to Hospital for Venereal Diseases

British Troops, INDIA, during 25 years ending 1898. (Drawn to Scale.)



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block left uncoloured shows the number of men per 1,000 who were not attacked by venereal disease during each period.

It may be that the reader prefers the actual figures on which these charts and diagrams were based. I therefore give them in columns. These figures are taken from the Annual Reports of the Sanitary Commissioner to the Government of India and from the report of Lord Grosbor's Committee.

Year.	Admission Rate per 1000 strength. Primary Venereal Ulcers (Primary Syphilis + Soft Sores)	Secondary Syphilis	Gonorrhœa	Other Venereal Diseases	Total All Venereal Diseases
1857 †					149·0
1858 †	——— BENGAL ONLY ———				261·0
1859 †					359·0
1860	118·7	25·8	106·1	68·2	318·8
1861	140·4	28·7	116·9	66·2	352·2
1862	116·4	26·9	101·6	62·0	306·9
1863	98·1	30·2	94·1	58·0	280·4
1864	87·4	33·1	86·7	48·2	255·5
1865	64·8	28·7	80·8	40·5	214·9
1866	64·6	25·5	80·6	35·6	206·4
1867	51·4	23·7	59·7	25·4	160·2
1868	56·2	25·4	81·3	31·0	194·0
1869	59·8	23·0	88·4	25·9	207·1
1870	40·7 ?	25·0	88·7	40·4?	194·8?
1871	73·3	24·2	96·1	28·8	222·4
1872	62·3	22·8	87·4	24·6	197·2

† Figures for these years from Major Magnus' paper at U.S. Institution, 25 April, 1879 — an excellent paper, which I am much indebted to for much interesting venereal statistics in India

ALL INDIA.

Year.	Admission Rate per 1000 strength.				
	Primary Syphilis	Simple Venereal Ulcers.	Total Primary Ulcers.	Secondary Syphilis.	Total Venereal Diseases.
1872			61·2	22·4	179·0
1873			53·4	20·4	166·7
1874			68·3	25·2	192·7
1875			67·1	25·1	205·1
1876			59·8	23·9	189·9
1877			65·2	22·1	208·5
1878			95·3	22·0	271·3
1879			79·2	24·5	234·8
1880			87·9	23·1	249·7
1881			92·0	23·1	260·5
1882			87·6	23·2	265·2
1883			87·2	23·5	270·3
1884			90·2	24·4	293·9
1885			122·1	28·7	342·7
1886			157·9	33·3	389·5
1887	75·5	66·6	142·1	29·4	361·2
1888	72·1	70·0	142·1	32·4	370·6
1889	134·3	90·8	225·1	51·2	481·5
1890	135·6	85·1	220·7	66·3	503·5
1891	104·0	55·2	159·2	60·0	400·7
1892	102·6	58·5	161·1	57·8	409·9
1893	129·3	84·3	213·6	61·6	466·0
1894	173·0	75·1	248·1	74·6	511·4
1895	174·1	64·9	239·0	84·9	522·3
1896			226·4	97·7	511·6
1897			201·7	101·9	485·7
1898			145·0	87·1	362·9

The above figures are from the Annual Reports of the Sanitary Commissioner to the Government of India. They differ slightly from those in the A.M.D. reports and the Report of Lord Enfield's Committee. These differences are slight and prior to 1887, and are chiefly in the class "other venereal diseases" which may be obtained by deducting columns 3 and 4 from column 5.

When studying these figures it is necessary to bear in mind a few facts concerning the way in which they have been compiled. Prior to 1871, the venereal statistics for the different Presidencies were not compiled on an uniform basis. Prior to the Mutiny, the Bengal figures are not sufficiently detailed, but, since then, they have been so. In Madras, detailed figures are not obtainable prior to 1860, nor in Bombay prior to 1865. It has therefore been considered best to take the Bengal figures as fairly representative of the whole of India prior to 1871, and, since that date, the figures for the whole of India are given. A comparison of the different official returns prior to 1887 also shows discrepancies, particularly in the figures for admissions and admission ratios for total venereal diseases. On examination this discrepancy is found to be confined almost entirely to the heading "other venereal diseases" and are largely due to the inclusion of such diseases as "stricture," "inflamed glands," &c, when such were not the result of venereal contagion. It is obvious the discrepancies on this account must be very small but it does nevertheless make the figures prior to 1887 a little higher than they should be. Since 1893 venereal diseases have been classified under the headings, Primary Syphilis, Secondary Syphilis, Gonorrhœa, Ulcer of Penis & Soft Sore, and their Sequelæ, – a classification adopted earlier in the A.M.D. reports. The heading "other venereal diseases" therefore disappeared in 1894.

Increased Virulence in type of Venereal Diseases in last 10 years, is shown by:—

I have already shown that the great rise in prevalence of venereal diseases in the Indian Army, prior to 1897, was largely due to an increased prevalence of the worst of these diseases, namely, Syphilis. There is also some evidence to lead one to think that the type of disease has been increasing in severity during the last 10 years or so. The best indices of this consist in a. the increase of the number of men invalided for venereal disease in that period, b. the increased mortality, and c. the increase in the time it has taken to cure each case of venereal disease. With regard to

a. Increase in No. Invalided

a. the number of men invalided from India on account of venereal disease (principally syphilis):— in 1888, the number invalided for this cause amounted to 7·7 per cent of all the invalids, in 1895 the proportion had risen to 15·8 per cent, in 1897 to 29·3 p.c.: The actual number of men invalided for venereal in 1888 was just over half a company (65) and in 1897 it had risen to over half a ~~company~~ battalion (662), in other words the number of invalids for venereal in 1897 was more than 10 times the number in 1888. The strength of the Indian Army in 1888 was 68,887 men, in 1897, 68,395, so that the increase was not due to increase in establishment.

b. Increased Mortality.

With regard to b. the mortality from venereal disease, if we take the same two years for comparison, the strength of the Army in each year being nearly the

Some we find that there were 4 deaths in 1888 as there were 23 deaths e years, the mortality come multiplied by 5·6. mber of days in hospital ach case of venereal verage number of days e which year the steady 1897 and 1898 when respectively, 33.32 and te the facts which severity in types of 1888, we get this

			No. of Men Invalided for Venereal	Proportion of Invalids for Venereal To All Invalids	Deaths from Venereal Disease
			65	7·7	4
			66	7·2	6
			72	6·3	6
			112	10·9	3
			76	9·0	9
			27	3·7	4
			111	10·3	5
			130	15·8	15
1896	70,484	32.10	479	24·3	14
1897	68,395	33.32	662	29·3	23
1898	67,741	33.31	569	21·9	17

These invalids after a term of treatment in England come before a Medical Board for final disposal.

BOMBAY CENTRE,
ST. JOHN AMBULANCE ASSOCIATION,
42, WATSON'S ANNEXE,
BOMBAY, March 11 1901

PATRON:
H. E. THE GOVERNOR OF BOMBAY.

DEAR SIR,

I am desired by the Chairman of the Managing Committee to draw your attention to the following extract from a letter received from the Chief Secretary, in London.

"Viscount Knutsford and The Central Executive Committee have had under consideration the question of the qualification of Lecturers to the Association in India. I am authorised by his Lordship to inform you that it has been decided the following shall be the Regulation on the subject:—

1. In India all Graduates and Licentiates of any University recognised by the State are eligible for appointment as Instructors if approved by the Local Committee of the Centre.
2. Military Assistant Surgeons, specially recommended by their Medical Superiors to the Local Committee, shall also be eligible."

Yours truly,
GEORGE LUND,
Joint Honorary Secretary.

T. of Lyallpur

Increased Virulence in type of Venereal Diseases in last 10 years. is shown by:-

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a. the numb… account of … in 1888, the… to 7·7 per c… the proportio… The actual … in 1888 wa… and in 189… in other words … in 1897 wa… 1888. The … 68,887 me… in 1871, 68,070 … increase was not due to increase in establishment.

b. Increased Mortality.

With regard to b. the mortality from venereal disease, if we take the same two years for comparison, the strength of the Army in each year being nearly the same we find that there were 4 deaths in 1888 as there were 23 deaths … years, the mortality … rate multiplied by 5·6. … number of days in hospital … each case of venereal … average number of days … in which year the steady … 1897 and 1898 when … respectively, 33·32 and … to the facts which … severity in types of … 1888, we get this …

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b. Increased Mortality.

With regard to b. the mortality from venereal disease, if we take the same two years for comparison, the strength of the Army in each year being nearly the

same we find that there were 4 deaths in 1888 from this cause, whereas there were 23 deaths in 1897. That is, in nine years, the mortality from this cause had become multiplied by 5·6.

c. Increase in Time taken To cure each Case of Venereal

With regard to c.- the number of days in hospital it has taken to cure each case of venereal disease; in 1888 the average number of days was 25·68 days, after which year the steady rose year by year until 1897 and 1898 when the number of days was, respectively, 33·32 and 33·31. If we tabulate the facts which go to prove an increased severity in types of venereal disease since 1888, we get this table.

Year.	Average Strength of Army.	Average No. of Days in Hospital For each Case of Venereal.	No. of Men Invalided for Venereal.	Proportion of Invalids for Venereal To All Invalids.	Deaths from Venereal Disease.
1888	68,887	25·68	65	7·7	4
1889	69,266	28·39	66	7·2	6
1890	67,823	29·07	72	6·3	6
1891	67,030	29·50	112	10·9	3
1892	68,137	29·01	76	9·0	9
1893	70,091	29·82	27	3·7	4
1894	71,082	30·77	111	10·3	5
1895	71,031	31·49	130	15·8	15
1896	70,484	32·10	479	24·3	14
1897	68,395	33·32	662	29·3	23
1898	67,741	33·31	569	21·9	17

These invalids after a term of treatment in England come before a Medical Board for final disposal.

In 1897 about 34 per cent were finally discharged the service, in 1898 about 28 per cent. Roughly, one third of those invalided from India are finally discharged the service.

A study of these figures naturally gives rise to the question:— What factors were at work amongst the British troops in India which influenced (or may have influenced) the prevalence of venereal disease amongst them?

FACTORS which Influenced the Prevalence of Venereal Diseases amongst British Troops in India 1857–1898.

1. The Indian Mutiny and its Results.

The outbreak of the Mutiny in 1857–58 was followed by a great increase in prevalence of venereal disease. (See Charts III & IV) This increase was officially attributed‡ to the large influx of new and inexperienced troops, including a large proportion of young men, into India. By 1859, the troops in Bengal were nearly trebled and in April 1858, 16 per cent of the troops are said to have been under 20 years of age. In 1864, only 2·42 per cent were under 20 years of age. The Suppression of the Mutiny led to considerable changes in the Constitution and terms of service of the Indian Army. Prior to this the service of the Queen's troops in India was very long. Amongst the East India Company's

‡ By the Sanitary Commissioner to the Government of India.

troops service lasted practically for life and 30 per cent of their troops were allowed to marry. These conditions were never restored and the introduction of the Short Service System, by Lord Cardwell, in 1870, soon brought about a very great change in the constitution of the Indian Army as regards age and length

2. The effects of the Short Service System on the Army in India.

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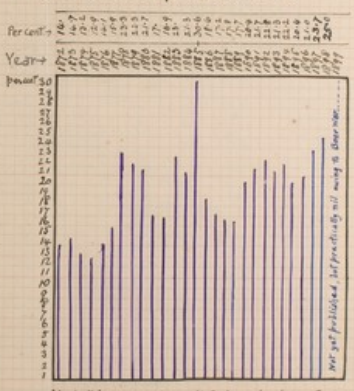
VII

CHART showing Percentage of New Arrivals to strength of British Troops in India, 1872–1898



Violet Lines are drawn to Scale and represent the figures given in the Top Column.

Note.– In 1885-6 exceptionally large drafts of new troops came to India on augmentation of establishment. This accounts for figure 30·6 % and length of violet line reached 1885.

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troops service lasted practically for life and 30 per cent of their troops were allowed to marry. These conditions were never restored and the introduction of the Short Service System, by Lord Cardwell, in 1870, soon brought about a very great change in the constitution of the Indian Army as regards age and length of service. The results of this change in the Indian Army were:—

1. An increase in the number of new troops arriving in India every year.
2. An increasing number of young men amongst the troops.
3. A reduction in the number of married men in the Army and the corresponding increase in the number of unmarried men.

The first two results did not make themselves felt until 1876 and did not attain their full development until, ten years later, 1886 (See Charts VII & VIII) The third result followed almost immediately. The percentage of unmarried men to strength, which, before the Mutiny, was as low as 70 per cent rose from 88·68 per cent, in 1872, steadily to 90·3 per cent, in 1877, and 96·71 per cent in 1894. It then fell a little, and, in 1895 was 95·4 per cent.

With regard to the influence of the Short Service System on the prevalence of venereal diseases in India, we can only say that it has, in that country, corresponded with a fairly steady increase in prevalence. The rise in prevalence commenced in 1872, and the Short Service System began to influence the Indian Army about the same time. It may be only a coincidence and not a result.

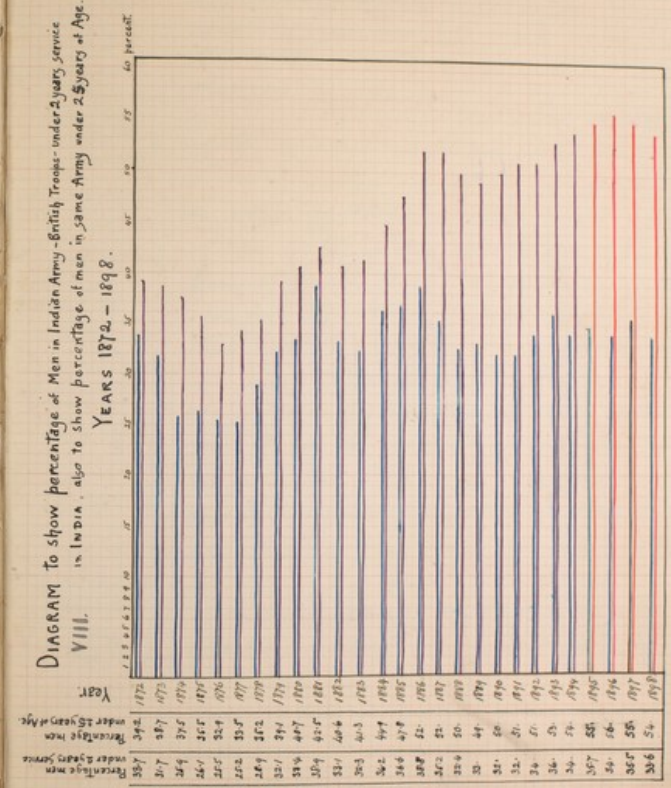
(1.) Increased No. of New Arrivals every year

If we consider the effect of the increase in the number of new arrivals in India, yearly since 1875, it is not so easy to make out the effect on the prevalence of venereal disease. It may however be noted that coincidently with a marked increase in the number of new arrivals in India in 1878 and 1885-86 there were marked increases in the prevalence of venereal diseases in the years 1878 and 1885-86. On the other hand a diminution in the number of new arrivals,- which amounted in 1881 to nearly 5 per cent less than in the year before, and which steadily fell between 1885-86 and 1889,- was not coincident with a fall in the prevalence of venereal diseases but with a continuation of the rise of prevalence. It will

DIAGRAM to show percentage of Men in Indian Army - British Troops - under 2 years service in INDIA, also to show percentage of men in same Army under 25 years of age.

YEARS 1872 – 1898.

VIII.



be interesting to note what effect the absence of new arrivals in India, in 1899-1900, has on the prevalence of venereal diseases in that country. (See Chart VII page 43)

ii.) Increase in No. of Young Soldiers.

Let us now consider the effect of the increased youthfulness of the soldiers in India. Between 1872 and 1876 the percentage of troops in India under 25 years of age fell speedily approximately 6 per cent; from 1876 to 1886 the percentage gradually increased by about 19 per cent - and in 1894 there were 21 per cent more soldiers under 25 years of age than there were in 1876. Since 1886, the percentage of soldiers under 25 years of age has not fluctuated much, year by year, and, it is during these years that the venereal diseases have attained their maximum prevalence in the Indian Army. (Chart VIII)

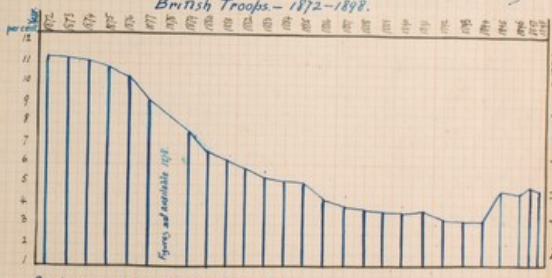
(iii.) Decreased percentage to Strength of Married Soldiers

The effect of the third result of the introduction of the Short Service System to India, namely, the increased percentage of unmarried men to strength may be briefly stated. The percentage of married soldiers fell from 30 per cent before the Mutiny to 11.32 per cent in 1872, and since then steadily year by year to 3.29 per cent in 1893

and 1894. It has risen to between 4·5 & 5 per cent in the years 1895 to 1898. In other words there was from 1872 to 1895 a steady decrease in the married strength of the Indian Army, and since 1895, the increase has been very little amounting to less than 2 per cent. This steady decrease in the number of married men since 1872 coincided with a yearly increase in the number of admissions to hospital for venereal disease. There is no doubt but that this factor does account for some part of the increase in venereal prevalence but, obviously, it cannot account for the whole. Let us consider for a moment what proportion of the increase in venereal diseases may be laid to the account of a diminution in the married strength of the Indian Army. The returns do not now differentiate the amount of venereal disease amongst married soldiers from that amongst the unmarried so that we must go back in the records in order to find a basis for comparison. Returns for the years 1867 to 1872 showed that the percentage of admissions for venereal disease amongst the unmarried soldiers was

50 times greater than the percentage amongst married soldiers. In 1875 the percentage of unmarried men was 89 per cent, in 1894 it was about 97 per cent. If we suppose the admission rate for total Venereal Disease in both years to have been the same, say, 100 per 1000 amongst the unmarried and $\frac{100}{50} = 2$ per 1,000 amongst married soldiers.

IX. CHART showing the Percentage Married Men in the Indian Army
British Troops – 1872–1898.



Blue Lines (drawn to scale) show percentages yearly year.
The Official Return on which this chart is based gave percentages on 1st May each year. (yearly)
The Return was discontinued in 1894. The later years '95, '96, '97, & '98 were calculated from Average Strength

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1867–1872, would, on the basis of 100 per 1000 admissions unmarried and 2 per 1000 admissions married, account for an increase in the total admissions per 1000 of 8·84 — a very serious increase.

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In 1875	89,000	unmarried men with 890 admissions	
whilst	1,100	married men gave	2·2
		Total admissions	892·2
In 1894.	97,000	unmarried men would give admissions	970
and	3,00	married men,	·6
		Total admissions	970·6.

That is to say an increase of 8 per cent in the percentage of unmarried men in the army, the venereal admission rate being the same proportion for married and unmarried in each year as in 1867–1872, would, on the basis of 100 per 1000 admissions unmarried and 2 per 1000 admissions married, account for an increase in the total admissions per 1000 of 8·84 — a very serious increase.

On a supposition basis of 500 per 1000 and 10 per 1000 admissions, respectively, an increase of 8 per cent in the unmarried, would account for an increase of 39.2 per 1000 in the venereal admissions. We may therefore, I think, certainly consider that the steady diminution in the married strength of the Indian Army, since 1872, has been a constant factor accounting for a part of the steady increase in the venereal admissions during that period. Another point worthy of note is, that the woman who marries a soldier nowadays, is a woman of better class and education than the married women in the army a generation or so ago. There is less venereal disease amongst soldiers' wives now than there was then, and, we may, I think, safely say, that there is less venereal disease amongst married soldiers now than ever before. If this be so, and it is difficult to prove it by statistics (except by the fact that congenital syphilis is decreasing amongst army children), it is probable that the diminution in the married strength has had a still greater effect, as a factor causing an

increased prevalence in venereal disease in the Army, than any argument based on the relative prevalence amongst married and unmarried men in the period 1867-72 would lead us to suspect.

3 The growth of Temperance in the Army.

The Short Service Era has coincided in point of time, in the Indian Army, with a rise in prevalence of venereal disease from 1872 to 1898. There is one other factor at work in our Indian Army which also coincides in point of time with this period. I refer to the Army Temperance Association, the good work of which commenced in 1873, and has, since then, increased year by year in influence amongst the soldiery. At the present moment nearly one third of the men in the British Army in India belong to the Army Temperance Association, and yet the amount of venereal disease in the Army has increased during the period of the great increase in temperance in the Army, whilst alcoholic excess may be said, roughly speaking, to have diminished in the Army in inverse ratio during the same period.

Personally, I do not think this is a matter of cause and effect; increase in temperance does not mean a resultant increase in prevalence of venereal disease. I think the causes which produce the increased prevalence of venereal diseases in the Indian Army as a whole, also produce a corresponding increase in the prevalence of venereal disease amongst the members of the Army Temperance Association. At the same time we have it on official record that in some regiments the members of the A.T.A. do suffer more from venereal disease than the non-members. Thus, in the Report of the Sanitary Commissioner to the Government of India for 1898, we read.—

"The Medical Officer at Cannanore states that good character men and members of the A.T.A. constituted the majority of the men affected."

The same remarks held good of the Shropshire Light Infantry when at Colaba, two years ago. At a meeting, the secretary of the A.T.A., Lieut. Meynell, drew attention to the fact (and gave figures showing) that the A.T.A. men were in a greater proportion sufferers from Venereal disease than the remainder of the Regiment. The difference was something like 20

Also
At Deesa, in 1897, the total admissions differed not

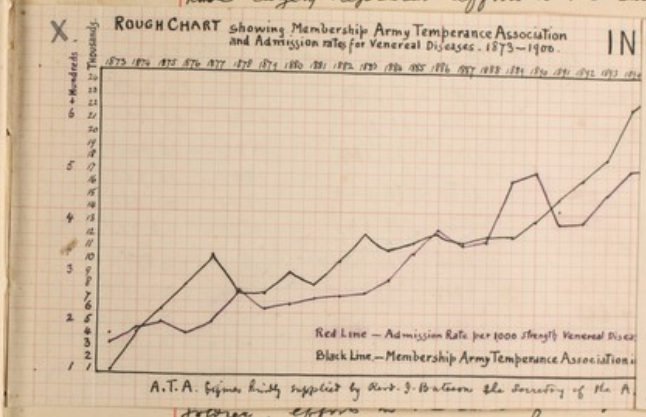
per cent but I have unfortunately mislaid the actual figures. In the Durham Light Infantry, at Poona, an officer of the regiment, interested in the A.T.A, expressed the same opinion with regard to his regiment. Major General Dashwood, quoting the authority of a distinguished officer who held a command in India, said, "temperance men were laid up with these diseases a great deal more than those men who were not temperance soldiers." ‡ My own experience of three regiments, since my attention was drawn to this point, does not support Major General Dashwood's opinion, in fact, in two Irish Regiments and one East Anglian, the proportion of venereal admissions was certainly less ~~than~~ amongst temperance men than amongst non-temperance men, but the difference was very little. Considering the question a matter worthy of further enquiry, I wrote to the Secretary of the A.T.A. in India and asked him for figures showing the number of soldiers in India who were members of the Association each year since its inception, and he kindly gave me the figures I required.

‡ In a Lecture on 'Venereal Prevalence in India' at the Royal United Service Institution, 19th Feb. 1897.

When we consider the large number of soldiers in India who belong to the A.T.A., we may fairly expect that, if there is any relationship between the prevalence of venereal disease and the increase in temperance, there will be some relationship between the numbers of admissions to hospitals for venereal diseases in each year and the numbers of A.T.A. members in the army. I have made out a chart which shows in thousands the membership of the A.T.A., from 1873 to date, and also the admissions to hospitals for all classes of venereal diseases, in the whole Indian Army, in ratios per 1,000. Placing both curves on the same chart we get Chart X. On examining this, there does appear to be a connection between venereal disease and temperance during the first ten years dealt with, for it will be noted that in years when the membership of the A.T.A. rose the venereal ratio fell, and vice versâ, since 1884, however, the curves rise and fall very much together, year by year, which perhaps shows that the curve of ratios of admissions for the whole army fairly represents the curve of ratios of admissions for venereal diseases amongst the members of the A.T.A.

It is a gratifying fact that temperance is increasing so greatly in the Army. This increase is largely due to the efforts of the authorities, particularly of the Commanding Officers of regiments and the regimental officers. I fear however that efforts in the cause of temperance have largely replaced efforts in the cause of

X.



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soldiers, efforts [illegible] do so only to a minor degree. (I trust that these remarks, which are, to some extent, a digression, will not be construed into an unfavorable criticism of the A.T.A. and temperance work in the Army, such a construction would be very far from expressing my sentiments.)

‡ The motto of the A.T.A.

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A.T.A. Memberships from 1873–1900.

1873 – 1,015	1881 – 8,247	1890 – 13,487
1874 – 4,343	1882 – 10,180	1891 – 15,040
1875 – 6,242	1883 – 12,114	1892 – 16,948
1876 – 8,217	1884 – 11,020	1893 – 18,355
1877 – 10,703	1885 – 11,827	1894 – 22,369
1878 – 7,647	1886 – 12,321	1895 – 23,715
1879 – 9,647 ?	1887 – 11,947	1896 – 23,711
1880 – 9,051.	1888 – 12,119	1897 – 22,810
	1889 – 12,140	1898 – 21,574
		1899 – 20,668
		1900 – 23,472

The A.T.A. rose the venereal ratio fell, and vice versâ; since 1884, however, the curves rise and fall very much together, year by year, which perhaps shows that the curve of ratios of admissions for the whole army fairly represents the curve of ratios of admissions for venereal diseases amongst the members of the A.T.A.

It is a gratifying fact that temperance is increasing so greatly in the Army. This increase is largely due to the efforts of the authorities, particularly of the Commanding Officers of regiments and the regimental officers. I fear however that efforts in the cause of temperance have largely replaced efforts in the cause of religion. Temperance, in fact, is now becoming the Soldier's religion. The belief amongst the rank and file that "an A.T.A. man can do no wrong" is on the increase. The precept "Watch and be sober",‡ has been cultivated to the neglect of the higher precept "Watch and pray, lest ye enter into temptation." The pity of it is that, whereas efforts in the cause of religion, (no matter what form of Christian religion), produce an improvement in the morals of the Soldier, efforts in the cause of temperance do so only to a minor degree. (I trust that these remarks, which are, to some extent, a digression, will not be construed into an unfavourable criticism of the A.T.A. and temperance work in the Army, such a construction would be very far from expressing my sentiments.)

‡ The motto of the A.T.A.

4. The Influence of Legislative Measures of Sanitary Police.—

I come now to a factor concerning which it is very difficult for an unbiassed man to form a definite opinion, namely, the effects Legislative measures of Sanitary police have had in the past on the prevalence of venereal diseases in the Indian Army. My former remarks (v. pages 23, 24) on the controversy over the C. D. Acts at Home are particularly applicable to the controversy concerning the Lock Hospital System in India. I need not repeat them. The facts concerning legislative measures with a view to the prevention of venereal diseases in India are, as follows.—

Historical Resumé.

The great outbreak of venereal disease which occurred in India after the Mutiny was considered by a Royal Commission which sat from 1859 to 1863. This Commission collected evidence concerning certain preventive measures adopted at different times and places in India, prior to the Mutiny. These measures were chiefly two in number, at some stations Lock Hospitals had been established and in many regiments an establishment of approved regimental prostitutes had been made. Thus, in 1808, Lock Hospitals were largely established in Madras.

In 1808, they were officially stated to have failed in preventing disease, owing to the lack of an efficient police. In 1809, nine out of seventeen hospitals were abolished. In 1810, it was stated that one seventh of the troops at Bangalore were diseased. Government therefore reestablished lock hospitals at all stations where there were British troops. In 1825, a similar system appears to have been in existence in Bengal. In 1830, the Bengal Lock Hospitals were abolished largely as a result of a protest by the Indian Bishops. In 1835, Government closed the Lock Hospitals in Madras in spite of the protests of the Madras Medical Board. In 1838, venereal diseases were said to have decreased in prevalence in Bengal, and increased in Madras. In 1842, hospitals were re-opened at many stations but more as voluntary charitable dispensaries than as lock hospitals. In 1855–60, regular Lock Hospitals are said to have been re-opened at many stations. In 1861, registration and inspection of prostitutes were made compulsory in Madras. In 1863, the Royal Commission presented its report to Parliament. It recommended ~~that~~ — 1. Repressive measures of police;
2. Marriage and moral restraint,
as being the only two ways of combating the evil.

The Lock Hospital System was accordingly introduced in India. The introduction was gradual, thus, —

In 1865, ~~two~~ Lock hospitals ~~were~~ established in India;
In 1866, one Lock hospital was established in India.
In 1867, 22 Lock hospitals were established in India.
In 1868, 5 Lock hospitals were established in India.
In 1869, 1 Lock hospital was established in India.
In 1870, 1 Lock hospital was established in India.
In 1871, 11 Lock hospitals were established in India.
In 1872, 3 Lock hospitals were established in India.

Namely, 25 Lock hospitals were in operation before 1868, 30 before 1869, and 46 before 1873. Four were afterwards added. This system remained in full force until 1884. It was partially suspended from 1st Jan. 1885, to Spring of 1887, and was abolished (as a result of a resolution of the House of Commons in June,) in the latter part of 1888. It is said to have existed ~~but~~ was in some Stations until 1893. In 1889, a new Cantonment Act was passed which authorised the Governor General in Council to make rules for the prevention of the Spread of infectious and contagious disorders within a cantonment, and for the appointment and regulation of hospitals

and other places, within or without a cantonment, for the reception and treatment of persons suffering from any disease. As a result, Cantonment Hospitals were established, in the latter part of 1890. In 1892, the Government of India issued instructions with a view to ensuring a strict observance of these Cantonment Rules and of the resolution of the House of Commons of 5th June, 1888. In 1894, several of the Cantonment Hospitals were closed. In 1895, an Act was passed by the Governor General in Council which prohibited any "compulsory or periodical examination of women by medical officers or others." The same Act prohibited the registration or licensing of prostitutes in any Cantonment. In the same year many more Cantonment hospitals were closed. Station Followers' Hospitals were however established in many stations which were intended to provide medical treatment for Cantonment followers and native inhabitants and were voluntary. At the end of 1895 only 13 of these hospitals existed. In November, 1896, a Departmental Committee, with the Earl of Onslow as Chairman, was

appointed to report" on the Prevalence of Venereal diseases among the British troops in India." The report of this Committee ‡ was presented to Parliament on 20th Feb. 1897. This report was a very full one but confined itself to pointing out the alarming increase in prevalence of Venereal diseases amongst the troops in India, and to the increase in Syphilis both in prevalence and virulence. The Committee considered that "the military efficiency of the Army was ~~injured~~ most seriously impaired", and that the annual return of so many men suffering from contagious and inheritable disease to England constituted a growing danger to the health of the Community. It also drew a harrowing picture of the invalids at Netley. No recommendations were made as to the future, but it was pointed out that the authorities had by encouraging temperance, recreation, education, sports, &c done all in their power to improve matters without success. The Committee therefore "expressed" their strong conviction that without some fresh powers, no instructions or regulations could have any material effect in mitigating this Scourge."

‡ Parliamentary paper "East India (Contagious diseases), No 1, 1897.

The publication of this report and the discussions † it gave rise to in Parliament, and in the military, medical, and lay press, strengthened the hands of Government; and, in a despatch, dated 26th March, 1897. from the Secretary of State to the Government of India, it was stated that "with # regard to the prevalence of venereal disease in The British Army in India, Her Majesty's Government Cannot acquiesce in the continuation of the present state of things which has led to such a disastrous increase in venereal disease among the British troops in India, and requires the immediate adoption of remedial measures." The ultimate result was the introduction of the East India Contonment Act and Regulations which have now been in force since October, 1897. These regulations differ greatly from those which were in force up to 1888. "Venereal diseases, are, as far as possible to be dealt with on the same lines as other contagious and infectious diseases." The regulations do not countenance the provision of prostitutes for the troops, the compulsory

† See especially the fine debate in the House of Lords, upheld in Times 14:3:97, when speeches of a high order were made by Lord Roberts, Lansdowne, Kimberley, Playfair, & Clarke, & by the Bishops and the Duke of Cambridge. Also an excellent paper, by Major Mayne, R.E., read before the R.U.S. Institution on 8:4:97 and articles, in 1897, in British Medical Journal and Lancet, Times, Standard,

Parliamentary paper C 8401, 1897.

"examination of women, or any scheme of registration
"and licensing for the purpose of prostitution. If a
"prostitute is suspected of being diseased or a source
"of danger to other persons, she may be required to
"be examined, and if she refuses to be examined,
"she may be required to quit the Cantonment."
"No prostitute will be examined against her will."
Medical officers are also allowed to examine any
woman who presents herself voluntarily for
examination. The regulations provide for the
establishment of hospitals and dispensaries, so
that all poor sick suffering from any contagious
or infectious disease may be gratuitously
treated there. If the medical officer in charge
of the hospital has prima facie grounds for
believing that any person living within the
Cantonment is suffering from an infectious or
contagious disorder, he may, by notice in writing,
require such person to attend at the hospital or
dispensary and to remain there until the medical
officer is satisfied that such person is not
in fact suffering, or is no longer suffering, from
such disorder. If any person required to
attend hospital refuses to do so, or if having
attended, leaves hospital without the medical
officers' permission, the Cantonment Authority

may direct such person to leave the Cantonment
and prohibit such person from re-entering it.
The Cantonment authority may also prohibit
the keeping of a brothel or the residence
of a public prostitute in the Cantonment or
in any special portion thereof. The Cantonment
Authority has similar powers with regard to
regimental bazaars within the Cantonment,
and no person is to be allowed to loiter for
the purpose of prostitution or importune any
person to the commission of sexual
immorality. Respectable persons who will
themselves adopt measures for the prevention of
the spread of the disorder from which they
are suffering need not be detained in the
hospital. In 1898, the year following the
introduction of the Act and regulations there
was a marked fall in prevalence in Venereal
diseases, primary Syphilis falling to a lower
point than in any year since 1888, Secondary
Syphilis fell for the first time since 1892, and
total Venereal disease fell to a lower point
than it had been since 1887. We cannot
fairly attribute this improvement wholly
to the effects of the Act and regulations but
the fact is nevertheless significant. We may

I think, expect the enforcement of the Act and regulations to bring about a decrease in the prevalence of venereal diseases in India, but we are not yet in a position to state the amount of this decrease. One thing is certain, all the Indian authorities agree, that some form of regulations is ~~the~~ absolutely necessary in India. This is largely due to the fact that no means, as yet, have been devised by which the moral and social standard of the Indian prostitute can be elevated. She is a member of special caste, her trade brings no social stigma with it. Education, which there are grounds for believing, had improved their English compeers, has had no effect, and will have no effect, on the Indian prostitutes She is satisfied with her position which is much higher than that of the members of many other castes. The Kunbi, or prostitute, caste holds a recognised position in the Indian racial economy. Many are very wealthy. Their children are not looked down upon as they would be in England and many have attained eminence in different professions. I know of one man,

educated at an English College, a registered medical practitioner, greatly respected in Bombay, – and married to an English woman.

The Act has brought about a marked improvement, in 1895, in twelve Stations in India, whilst in six others no improvement has been noted. This latter, however is not the fault of the Act. In some stations it could never get a proper trial. At Shahjehanpore, for instance, where the prostitutes do not live in the Cantonment but in the neighbouring city no regulations applied to the Cantonment could have any effect. At Rawal Pindi and Mhow however the prostitutes live in the Sudder and Regimental bazaars – there is no native city close to the Cantonments. In such stations the Act will have full scope, and will, if properly enforced, certainly lead to a decrease in the disease. In Mhow, the enforcement of the Act has brought about an immediate improvement in the prevalence of venereal. I am informed that the admissions fell in a couple of months about 30 per cent. An incident which occurred this year, proves to my mind that the Act is doing great good. The Act

had been working well at a station when the 'Holi' festival ‡ a Hindu religious holiday, arrived, and the Hindu prostitutes in the Cantonment hospital, broke out of hospital, and went with the troops to keep the holiday. A very great increase in venereal admissions amongst the troops was a result of this and it was some months before the Act again began to make its effects tell. In many hill stations also the Act will not bring about marked results because in these stations venereal disease is contracted from the hill-women who do not live in the Cantonment but lodges in the neighbourhood. I am told by a medical officer, who knows the Himalayan Valleys well, that the hill people, residing even in valleys far away from any Cantonment, or European residences, suffer terribly from venereal diseases. This severity is largely due to want of any medical treatment and the lack of all hygiene. Gonorrhoea and syphilis are very prevalent amongst the people of India

‡ This festival celebrates the first manifestation of the goddess or Princess Sarasvati, and at this time the Hindu ~~Stains~~ stains his clothing with red dye and in many places indulges in licentious pleasures.

and this prevalence is very great amongst the inhabitants of the larger towns, particularly those where many races meet. In Bombay, syphilis is very common amongst the lower castes and the women of these castes are very much given to clandestine prostitution. When I was on plague duty in Bombay, in 1897, I frequently saw as many as six or seven cases of Secondary Syphilis in a morning's house to house visitation, and was frequently called upon to examine men with bubroes due to venereal causes. In the charitable dispensaries and extern departments of the large hospitals, I am informed, nearly one third of the cases show signs of venereal disease of some kind or another. In the country villages of Central India the people ostracise any man suffering from venereal disease, and the result is, such sufferers go into the towns and Cantonments until they are well. In the Deccan venereal disease is common amongst the villagers and the same may be said of most of the Native States. Many of our

Large cantonments in India are situated near native states or large cities. They are purposely so situated in order to watch over such states and cities. In such cantonments "Cantonment Acts & Regulations" will be unable to decrease venereal diseases contracted outside the Cantonment, and in fact there would be insuperable difficulties in applying similar legislative measures to the country surrounding these Cantonments. Still greater would be the difficulty in applying them to the whole of India. It would be impossible to do so, owing to the religious and caste prejudices of the population. It is obvious therefore that the present Cantonment Act & regulations for the prevention of contagious and infectious diseases can be efficiently applied only to the Cantonments, and although the ideal conditions in order to effect the full benefits of these legislative measures would be to extend

them to the whole country, or at least, to the country within a radius of some miles of the Cantonments, the conditions of life in India, and the religious and caste prejudices of the people debar us from attempting to apply these measures to a more extended area. I consider the present regulations to be suitable to the conditions of life in the Cantonments, not likely to arouse the feelings of the people, and yet thoroughly capable of combating a great deal of the disease which has been ~~decimating~~ scourging our soldiers. The only suggested improvement I can make is, that if a small amount of daily pay in addition to the daily food were given to the inmates of the Cantonment Hospitals there would be less difficulty in getting people suffering from disease to come voluntarily to these hospitals. We want these people to come voluntarily to hospital not be forced to come, under pain of banishment. In the height of the opposition to plague measures in Bombay I never had any difficulty in keeping the ~~inmates~~ inmates of my segregation

huts contented after I arranged to pay them a small sum daily whilst they were in them. Nothing appeals to the native mind more than the idea that he is getting something, however small, for nothing and he will be contented anywhere if properly fed and put in possession of a small sum of money with which to buy betel nut, cigarettes and native sweetmeats. The Act and regulations apply to men as well women and it will be well to ensure that they are applied in fact to men as well as women. Most women of the prostitute castes keep men and such men probably need supervision as much as the women do.

Causes of Decreased Prevalence of Venereal Diseases since 1897.

a. Cantonment Acts &c.

I have already said that the fall in prevalence of venereal disease in the Indian Army during the last few years cannot be wholly attributed to the legislative measures introduced in October, 1897. One reason for saying this is that the decrease is to some extent apparent and not real for since

b. Numbers of Men are now treated outside hospital.

1897, increasing numbers of men have been under treatment for Syphilis out of hospital. Such men attend daily or weekly for treatment. Treatment is usually by hypodermic methods (such as Dr. Lambkin's method). These men would formerly have swelled the returns they do not now appear at all in the returns. The returns however are not affected very much, because it is extremely rare for any man showing signs of active disease to be treated out of hospitals. The custom will however probably show a diminution in the returns under the heading, "number of days in hospital."

c. Tirah War.

A certain amount of the diminished prevalence in 1897, 1898 and probably to date, is also probably due to the effects of the Tirah Campaign in 1897-98, and the Boer & China Wars in 1899-1900. In the former war a large number of troops were on active service in a country where women were scarce and prostitutes practically absent. In the latter wars have taken many

d. Boer War, &c.

b. Few Fresh Arrivals from Home and resultant increase in Average length of Service in India of the Soldier in India.

troops out of the country and their places have not been refilled. Time expired men have been kept in India, and practically no new drafts of young soldiers have come out from England. The result has been an increase in the average age of the soldier during the last few years and a marked diminution in the number of men under two years service in the country. A study of the medical documents of a regiment ‡ in India brings out the fact that 150 admissions to hospital for venereal disease in every 292 admissions for the same cause, occur in the first two years after arrival in India, (there being 83 admissions in the 1st year after landing and 67 in the 2nd year). That is, on the basis, the Army in India contracts over one third of its venereal disease in the first year after landing in the country, and more than one half within two years of arrival in India. It is clear therefore that some of the diminution in

‡ 1st Battalion Norfolk Regt. But opinions differ greatly.

prevalence of venereal disease in India has lately been due the diminution in the number of fresh arrivals in the country.

c. General Order by C. in C. in India of 14. July 1897

On 14th July 1897, the Commander in Chief in India issued a General Order directing regimental officers to use "their personal efforts in their several spheres of duty to combat the evil" namely, the great prevalence of venereal disease in the Army. This order recommended the delivery of lectures to the men by selected combatant and medical officers on the subject of the moral and physical degradation resulting from venereal excesses in general.

It was also recommended that certain measures should be enforced to prevent men from frequenting infected areas. The result of this order was, that nearly every soldier in India was addressed by his officers and other officers on the subject, and these lectures did a certain amount of good. In one regiment certainly lectures had an effect for good. Two months after a lecture a soldier came to hospital suffering from inflammation of the inguinal glands. He declared that the men in his "room" had, since the lecture, "sworn off the women" and

PATHOLOGY.

(150) A Bacillus Isolated from the Blood of Syphilitics.

DE LILLE AND JULLIEN (*Académie de Med.*, Paris, July 2nd, 1901) report the successful isolation of a characteristic bacillus from the blood of syphilitics. The blood in each case was taken from a vein of the arm; in this blood are to be seen the spherical refractile bodies which have been described by other writers, but the nature of which has not been elucidated. The authors believe that the negative results of culture experiments hitherto have been due to the presence in the coagulated blood of a bactericidal alexin. They have used for culture blood plasma separated from the serum, and also fluid from blisters which they state is alexin-free. From these on the ordinary media they almost always obtained a culture; in cases primarily negative they were successful by using the method of culture in a collodion sac. The bacillus is polymorphic, either short or threadlike. The appearances on culture media are described. The bacillus is pathogenic to guinea-pigs, and produces locally an indurated ulcer with swelling of the nearest lymph glands; the organism was in no case found in the cadaver. The blood of syphilitic patients added to a three days' old culture of the bacillus causes agglutination of the latter; normal serum produces no such effect. Inoculation of the bacillus on animals already infected with syphilis was without effect. From a rabbit inoculated from a culture a large quantity of blood was obtained on the third day: on separating this into plasma and serum cultures were obtained from the plasma, not from the serum, an observation which supports the theory of an alexin in the serum. This alexin, the authors state, is "fixed" by the isolated bacillus when the latter is injected into animals already infected with syphilitic products.

1. Few Fresh Arrivals from Home and resultant increase in Average length of Service in India of the Soldier in India.

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axed, and any vessel that bleeds is tied. The peritoneal folds of the pedicle are sewn over its bare surface. Out of 51 cases under Jordan, before the adoption of the new method, exudations occurred in 23 (45 per cent.). Since then, out of 56 cases where the pedicle was treated as above described, exudations were noted only in 5 (9 per cent.); whilst in 26 cases where the pedicle was tied in one piece there were exudations in 14 cases (23 per cent.). The advantages of the new method are self-evident.

THERAPEUTICS.

(166) The Action of Atropine in Bradycardia.

JOHANNESSEN (*Wien. med. Blätter*, July 4th and July 11th, 1901) points out that an injection of atropine may sometimes decide whether bradycardia is due to direct or reflex stimulation of the inhibitory centre in the medulla oblongata, or of the cardiac branches of the vagus, on the one hand, or to intracardiac causes on the other. If the bradycardia is of extracardiac origin, atropine causes its disappearance. A man, aged 37, had right hemiplegia due to thrombosis of the left Sylvian artery. The pulse-rate was 45 in the minute, though the heart was normal. A hypodermic injection of 0.001 gram (1/60 gr.) of atropine caused it to rise to 110 in the minute. If, however, the bradycardia is of intracardiac origin, it is uninfluenced by atropine. The most common cardiac changes, which may be accompanied by bradycardia, are, in order of frequency, fatty degeneration of the myocardium, sclerosis of the coronary arteries with the resulting fibrous myocarditis and thrombotic myomalacia, aortic stenosis, and mitral stenosis. In the last-named lesion, however, bradycardia is very rare. Since, however, these lesions are more often unaccompanied by bradycardia, they cannot be its cause, and the slow pulse can only be explained by a diminution in the energy of

‡ 1st Battalion Norfolk Regt. But regiments differ greatly.

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e. General Order by C. in C. in India of 14. July 1897.

On 14th July 1897, the Commander in Chief in India issued a General Order directing regimental officers to use "their personal efforts in their several spheres of duty to lessen the evil" namely, the great prevalence of venereal disease in the Army. This order recommended the delivery of lectures to the men by selected combatant and medical officers on the subject of the moral and physical degradation resulting from venereal excess in India. It was also recommended that disciplinary measures should be enforced to prevent men from frequenting infected areas. The result of this order was, that nearly every soldier in India was addressed by medical and other officers on the subject, and these lectures did a certain amount of good. In one regiment certainly lectures did have an effect for good. Two months after a lecture a soldier came to hospital suffering from inflammation of the inguinal glands. He declared that the men in his "room" had, since the lecture, "sworn off the women" and

since he was the first man in the room to "go sick" he was very anxious to prove he was not suffering from venereal disease. As there were no obvious signs of a venereal cause for his condition, his disease was not shown as of venereal origin,-greatly to the man's relief. It was very clear to me that the public opinion of the men in this man's barrack-room was strongly against those men in hospital with venereal disease, and this opinion had been aroused (strengthened) by the lecture given two months before. A certain amount of the diminution in prevalence of venereal disease in India, since 1897, may, ~~how~~ I think, be attributed to the effects of this General Order of July, 1897.

f. Effects of Plague Measures since, 1896.

Plague appeared in epidemic form in Bombay in the autumn of 1896, and has, since that date, extended to many other parts of India. As a result, the troops in Cantonments, near towns or districts affected by the epidemic of plague, have been subjected to disciplinary measures to prevent them from exposing themselves to

Contagion. The infected towns and districts have been put "out of bounds" for the troops and, in many places, natives of these towns and districts have been kept out of the Cantonments. A result has been a diminished prevalence of venereal disease amongst most troops subjected to these restrictions. This is proved by the reports of numerous medical officers (although in one or two places no improvement was noted). ‡‡ A certain amount of decrease in the prevalence of venereal disease in India since 1897 ‡ may be traced to these restrictions; but, obviously only a small amount, because the restrictions were only in force in a few infected areas at a time.

To sum up, therefore, the decrease in prevalence of Venereal disease in India since 1897, has been due, as may be attributed to, these causes acting together not to one cause alone, and these are,

a. The Cantonment Act and regulations of 1897;
b. The increased number of men treated out of hospital,
c. War on the frontier and outside India and its effects, chiefly the increased number of new arrivals in India of late years.

‡‡ See Reports of the Sanitary Commissioner to the Government of India 1897–1898 and A.M.D. Reports for same years.

‡ The troops at Calcutta were the only ones restricted in 1896, & 1897 many other stations were affected. In 1898 still more.

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1882	14.7	5.9	34.4
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[illegible]	[illegible]	6.4	38.9
[illegible]	[illegible]	6.9	41.1
[illegible]	[illegible]	6.9	37.9
[illegible]	[illegible]	7.9	39.6
[illegible]	[illegible]	9.0	36.4
[illegible]	[illegible]	8.2	32.3
[illegible]	[illegible]	7.3	31.3
[illegible]	[illegible]	8.9	37.2
[illegible]	[illegible]	9.0	40.8
[illegible]	[illegible]	11.5	40.0

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THE UNIVERSITY OF LONDON.

The Earl of Kimberley, K.G., who died last week in his 70th year, was for more than forty years a member of the Senate of the University of London, and succeeded the late Lord Herschell as Chancellor in 1893. By his death therefore a vacancy has arisen in the Chancellorship of the University. By the new constitution of the University the Chancellorship will, for the first time be filled by Convocation voting as at a senatorial election by voting papers. The date of election has been fixed for May 13th, at 5 p.m., nominations will be receivable by the Clerk of Convocation on or before April 22nd. The University has hitherto been fortunate in its Chancellors,

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1885	11·2	5·9	30·1
1886	13·7	6·0	28·1

Year.	Primary [illegible]
1887	1
1888	1
1889	1
1890	1
1891	1
1892	1
1893	1
1894	1
1895	1
1896	1
1897	1
1898.	1

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SYPHILIS IN AFRICA AND ASIA.

A PAPER by Dr. Quennec, a French military surgeon, in the *Archiv für Schiffs und Tropen-Hygiene* (vol. vi, No. 4, 1902) contains some interesting details with regard to syphilis. The disease is very common among the Moors inhabiting the regions north of the Senegal River. They diagnose syphilis when a venereal sore is followed by iritis, retinal haemorrhages, and neuritis, with or without amyotrophy. These localizations may be explained by the exposure to heat and light, and muscular work. The race as a whole does not, however, appear to suffer greatly as a result of the disease, and abortion is uncommon. The treatment of syphilis by mercury perchloride is well known to all the tribes occupying the regions lying between Morocco, Algeria, and Senegal. Dr. Quennec never observed salivation, a fact which he attributes to the scrupulous care the Moors take of their teeth. Gonorrhœa is also of frequent occurrence.

With regard to the negroes south of the Senegal, the author concludes from his observation that the black race is more resistant to the syphilitic virus, but that half-castes are more prone to the disease. The more European blood the worse the disease. A negress who has escaped

E COLLEGE OF SURGEONS. [THE BRITISH MEDICAL JOURNAL 977

infection from a syphilitic European may contract syphilis from a mulatto. Conversely, a negro who has been infected by a half-caste woman may be troubled with little more than a hard sore and adenitis, and get well without treatment. The European, however, infected from the same source will run through the whole gamut of symptoms.

According to Dr. Quennec, Port Said is a hotbed of syphilis. The prostitutes suffer greatly from the disease, and he complains that the Egyptian authorities tolerate the pornographic traffic of the Levantine scum, which lives on the Levantine prostitutes. He is of opinion that Saïgon and the island of Réunion have been contaminated by Port Said, and possibly Colombo and Singapore also. When Port Said has become too hot for them, the infected women are sent on to Japan.

From his observations in the Comoro Islands, Nossi-bé, and the west coast of Madagascar, the author concludes that syphilis affects the pure Arabs and the Hindus in the same way as it does Europeans. Both Arabs and Hindus, he found, responded very rapidly to specific treatment. In the negroes the disease is attenuated, as in those of the West African coast. The Sakalaves, like the negroes, do not suffer from secondary symptoms, but they are more prone than the latter to tertiary manifestations. The Sakalaves have been wrongly accused of spreading syphilis among the French troops, for in 1894-95, when Dr. Quennec was attached to the Majunga Hospital, not a single case of syphilis came under his care, although the garrison amounted to 3,000 men. But when Creole women arrived from Réunion a great many cases occurred. According to Dr. Lacaze, syphilis is very rife among the Hovas, of Malay origin, who occupy the highlands of Madagascar. It may be said that the Sakalaves avoid intimacy with the Hovas. The chief foci of syphilis on the East Coast of Africa are the villages of Steamer-Point and Cour-Saignant in the Island of Réunion. At one time these villages contaminated Australia, but now the French mail steamers call at Colombo instead of Réunion.

As to syphilis in China and French Indo-China, the disease contracted in those parts by a European is particularly severe and very resistant to treatment. Dr. Quennec does not agree with Professor Fournier that this increased virulence is due to the climate. In his opinion it arises from the greater virulence of the disease when it occurs in half-castes (Chinese and Annamite for instance). This racial exaltation of the virus is an interesting point, on which he insists.

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THE VOLUNTEER MEDICAL ASSOCIATION.

The annual dinner of the Volunteer Medical Association was held at the Hotel Cecil, on April 9th, when Surgeon-General W. Taylor, C.B., K.H.P., Director-General A.M.S., occupied the chair. About seventy-five members and guests were present. Amongst the latter were Surgeon-General Keogh, Colonel Babtie, V.C., Major Macpherson, and Colonel Gubbins, P.M.O. of the Home District. Of the members, Brigade-Surgeon Lieutenant-Colonel Andrew Clark, the chairman of Council of the Association, was supported by Brigade-Surgeon-Lieutenant-Colonels Russell, Gandy, Waterhouse, Raglan, Thompson, Danford Thomas, Surgeon-Lieutenant-Colonels Khallmark, than by individual effort only. Brigade-Surgeon-Lieutenant-Colonel Danford Thomas proposed the toast of "The Visitors," which was most cordially received. Colonel Gubbins, R.A.M.C., Principal Medical Officer of the Home District, responded. The toast of "The Chairman" was then given by Surgeon-Lieutenant-Colonel A. Cooper, and was drunk with musical honours. The Director-General replied, and in proposing a toast to Surgeon-Major Marshall, the Secretary, thanked him for the able manner in which he had arranged all the details of the entertainment. This was warmly responded to. During the evening selections of vocal music were given by the members and their friends.

EAR DISEASE IN SCHOOL CHILDREN.

The report which Mr. Cheatle presented on April 14th to the Otological Society on the examination of the ears of 1,000 school children attending the Hanwell District School is most instructive reading. The author describes his results as "startling," and this is a perfectly fair description of them, showing as they do what a large amount of unregarded aural disease of a serious kind exists amongst the children of the poorest class. The following is a summary of Mr. Cheatle's general results: In 43 per cent. of the children the ears were approximately "normal"—that is, capable of hearing a quiet whisper at 18 feet distance. In 30 per cent. there was disease of the middle ear causing deafness. The composition of this 30 per cent. is of great

1880	15·0
1881	17·5
1882	14·
1883	13·
1884	11·
1885	11·
1886	13·

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It will be noted that the venereal ratios amongst Native troops are fairly constant from year to year. They have not been characterised by the great variations which the venereal ratios of British troops underwent during the same period. When we compare the two armies we find the amount of venereal disease amongst our Native troops trivial as compared with that amongst our British troops. The proportion, in 1898, was as 40 is to 363 – a very considerable

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difference. Native troops had, in 1898, less than one sixth the amount of venereal disease in the British Army in India. The causes of this comparatively small amount of disease amongst the Native troops are briefly explained. Nearly every Native soldier is a married man,— this factor makes for a smaller amount of venereal infection than if the soldiers were unmarried. The native soldier is a long service man, and serves practically for life if he attains the higher grades of ranks.† When a Native regiment changes its station and moves to any great distance from the part of India from which it is recruited, and when on the march, their wives being left behind, venereal admissions increase amongst the Sepoys. I speak from personal experience and enquiry. The outbreak of war on the frontier or elsewhere, as in the Afghan, Tochi, Tirah, Chitral, China, and Soudan campaigns, always necessitates considerable movements of the native regiments — regiments often being moved from their own Presidency to replace regiments which have gone on service. Such moves are always associated with an increased prevalence of venereal disease.

† In 1897, I saw a native officer, still serving in the 9th Bengal Cavalry, who was serving with Hodson's Horse, at Delhi, in 1857-58.

With regard to the racial characteristics of the different regiments, low caste regiments, and Gurkhas, suffer most from venereal. The Gurkha in habits, percentage of married men, &c, approximates more nearly to the British soldier, and in Gurkha regiments the venereal prevalence rates is very much higher than amongst other native troops. Thus in Meerut in 1898, the admission rates, amongst the Gurkhas, was as high as 158·4, per 1000 strength. Another factor which tends to lessen the numbers of admissions to hospital for venereal diseases amongst Native troops, is that if a native soldier becomes temporarily disabled on this account he has little difficulty in getting a "sick furlough", which enables him to go to his native place until he has recovered. During this period, although suffering, he is not shown in the medical returns. In addition, there is little difficulty in invaliding out of the service all chronic cases. The native Sepoy is cheap when compared with the British soldier and native recruits are easily obtained. The Lock Hospital System did not apply to native troops in India, so that no variations in venereal prevalence amongst them can be

traced to legislation or non-legislation.

OUR ARMY in the COLONIES.

The Prevalence of Venereal Diseases in the British Army in the Colonies.

Strength.

In 1898, 37,270 British soldiers were garrisoning our Colonies, roughly distributed as follows;- over 9,000 in Malta, over 8,000 in South Africa and St. Helena, nearly 5,000 in Egypt and Cyprus, and 4,556 at Gibraltar, whilst the garrisons of the West Indies, Bermuda, Canada, China, Ceylon and Straits Settlements ranged in strength between 1,808 men and 1,401. Mauritius had a small garrison of 823 men, and in West Africa, the British troops only numbered 72.

Source of Statistics on which Charts & remarks have been based.

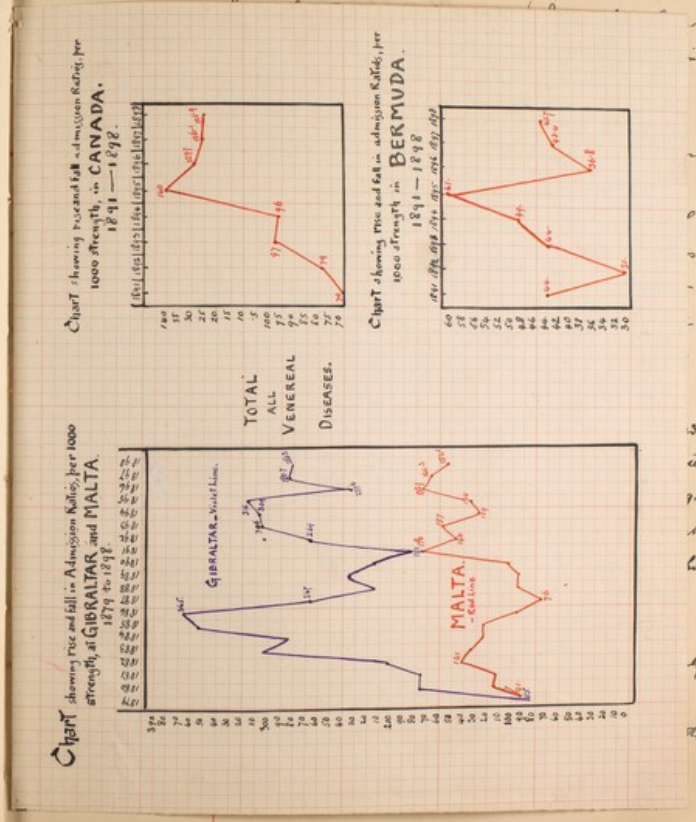
I have prepared a series of small charts showing the curve of prevalence of all venereal diseases taken together, in each Colony, in Malta and Gibraltar, for the last twenty years of which we have records, and of the other colonies for the years 1891 to 1898. These charts are based on figures taken from the Army Medical Department Reports, and these Reports also form the basis of most

of my remarks on Venereal prevalence amongst our troops in the Colonies.

Gibraltar.—

Gibraltar.- The curve for all admissions for venereal disease is much higher than that for the home army but not so high as that for the Indian Army. Between 1881 and 1886 there was (with one slight remission in 1884) a steady rise in prevalence of all venereal diseases taken together;- the increase in admission ratios being about 190 per 1,000. There does not appear to be any explanation for this rise. During the next five years, the admission ratio fell from 365 to 181 per 1000. In 1892 it again rose considerably, and since that year, has remained inordinately high. I gather from the A.M.D. Reports that the ratios of admissions per 1,000 strength for Syphilis are below those for both the Indian and the Home armies but the admissions for soft chancre are extraordinarily high, particularly since 1894. The loss of efficiency on this account is very great. A study of the chart does not show any tendency in the curve of admissions for total Venereal disease.

to fall; thus differing from the similar curves for the Indian and Home Armies. It would appear therefore that the enforcement of some Special remedial measures are indicated at Gibraltar. Since we have to deal with an isolated fortress the ideal conditions for some form of Contagious Diseases Act exist, and, if introduced, should produce an improvement. Within late years many aliens, Maltese, Spaniards, and others, have flocked to Gibraltar on account of the extensive harbour works which are being constructed there. An Act on the lines of the Cantonment Act and regulations, India, 1877, would appear therefore to be the form of remedial measure most suitable for adoption. Voluntary hospitals should be provided for the treatment of those suffering from contagious or infectious diseases. If prima facie evidence exist to show that any person is suffering from such diseases, the medical authority should be empowered to order such person to come to hospital for treatment. Failure to come to hospital when ordered should entail banishment



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from the Town and Fortress. (I gather from a recent newspaper (Nov. 1900) that Mr Chamberlain's recent visit to Gibraltar has resulted in the introduction of some Legislative measure against Aliens. The scope of the measure however is not indicated.) In May, 1883 compulsory weekly medical examination of alien prostitutes was introduced. It does not appear to have had any obvious result in the reduction of prevalence of venereal disease, and was repealed in 1887. The issue of certificates of health, after voluntary medical examination, continued until 1888, and supervision by the police until, a few months later, in January, 1889. It may be noted that no alien is permitted to live in Gibraltar without written authority. The lack of a permit to reside in the place entails removal from within the bounds of the fortress. This law could obviously be utilised in ensuring the exclusion of diseased or undesirable characters from the Rock.

Malta.

Malta.

In Malta we have all the conditions present which would lead us to expect a high rate of prevalence of venereal diseases. A small island with a dense and mongrel population, a large garrison (over 9,000 men), a station of one of our largest fleets, a sea port on the great highway between East and West, all these conditions tend to the introduction and the spread of such diseases as those of venereal origin. We find however that from 1859 to 1895, the admission rates for all venereal diseases has been lower in Malta than elsewhere. Since 1895, it has been higher than in the Home Army but it is considerably lower than in the Indian Army or in the Gibraltar garrison. A reference to the chart will show at a glance however that the admission ratios, per 1,000, for all venereal diseases, have, during the last 10 years shown, been on a higher level than in the first 10 years. The only explanation for this increased incidence lies in the fact that many regiments stop at Malta for a year or so on their way

to England from India. During this latter period of 10 years, venereal disease attained its highest prevalence in the Indian Army, and, it is only reasonable to expect regiments leaving India during that period to carry with them a high prevalence of venereal disease, which would naturally affect the total ratios of a small garrison such as Malta. A study of the A.M.D. Reports shows a remarkable and inexplicable reversal of what has occurred at Gibraltar. In Gibraltar, the admissions for Soft Chancre have, of late years, been greatly on the increase, whereas, in Malta, we find that Soft Chancre (more prevalent than primary syphilis prior to 1894,) has, during the last 5 years shown on the chart, fallen in prevalence, whilst primary syphilis has increased until it now exceeds the prevalence of Soft Chancre. A glance at the chart, on which I have placed both the cases, for Total Venereal, for Malta and for Gibraltar, also brings out a point not readily to be explained. It would appear that with remarkably unanimity, in years when

total Venereal admissions fell in Gibraltar, they rose in Malta, and, when they fell in Malta, they rose in Gibraltar. At the same time, venereal prevalence has during the past 20 years been less in Malta than in Gibraltar. We can only find one explanation for the long-continued low level of prevalence of venereal in Malta, and, that is, the long continued operation of legislation directed against the spread of these diseases. This legislation in Malta is said to date back, 300 years, to the times of the Knights of Malta. ‡ In 1859 the measures of sanitary police were temporarily suspended, but the consequences were so serious, that it became necessary to pass the Ordinance of 1867 which is still in force notwithstanding many attempts at repeal. By this Ordinance prostitutes are compelled to undergo periodical medical inspection. That the operation of this Ordinance in a crowded island, continually open to the introduction of foreign sources of contagion, has been of beneficial effect may be judged from the

‡ See Article on "the propagation of Venereal Diseases" in the Lancet of Feb. 1st. 1879. It deals very fully with Malta.

facts that, in Dec. 1885, the Duke of Cornwall's Light Infantry, 900 strong, landed with 28 cases of venereal, and, 11 months later, in Nov. 1886, had only one case of venereal (gonorrhoea) in hospital; and in May 1886 the Black Watch, 740 strong, arrived from Egypt with 33 cases of venereal and, six months later, were quite free from venereal. The people of Malta evidently have faith in "the Acts", for all attempts at repeal of the Ordinance of 1867 have been defeated by the elected representatives of the people, (although repeal was supported by the Government authorities;) and the local press has also consistently opposed repeal. Dr. Pisani, the Chief Government Medical Officer, reported in 1886, "Venereal disease is not
" very prevalent here. Bad forms of Syphilis
" are uncommon in comparison to what is the
" case in other countries and in proportion to
" the population." "I am convinced that this
" exceptional relative immunity from Venereal
" disease is due to the supervision of prostitutes
" which is here enforced by law."

It would appear therefore that no special measures of prophylaxis against Venereal

diseases are indicated as being necessary in Malta. The local conditions are, however, favourable to the enforcement with benefit of C. D. Acts on the lines of the Contagious Act and regulations, India, 1897.

Canada.

CANADA. Between 1880 and 1891, total venereal disease fell, in ratio of admissions, per 1000 strength, from 251 per 1000 to 70 per 1000. The ratio rose between 1891 and 1894 to 96 per 1,000, and, in the following year, took a sudden jump to 140 per 1,000. Since 1894 it has been slowly falling ~~and~~ but is still higher than the decennial average. Canada was under the Contagious Diseases Acts for a short time after their enactment, but not during the years shown in the chart. The ratios of admissions per 1,000 strength, for total venereal diseases and for all forms of venereal disease except gonorrhœa are now lower than those in the Home army. With regard to gonorrhœa, either on account of better treatment or a greater mildness of type the loss of efficiency on this account is less than in the

Home Army. No special measures of prevention are therefore to be recommended. It

Bermuda.

BERMUDA. In Bermuda, where the strength of the garrison is but little more than that of Canada, the venereal diseases are very small in amount; the ratios of admissions for Total Venereal, usually ranging below 49. per 1,000 strength, although in 1895 it rose to 61 per 1,000. Contagious Diseases Acts were in force until 1887. No special measures of prevention are necessary because the normal prevalence is low and what does occur is largely brought from outside. Thus in 1898, all the primary syphilis (and one half the gonorrhœa) was imported.

West Indies.

In the West Indies where the troops number very much the same as in Bermuda, the venereal ratios are rather high although there was a marked improvement in 1898 in all forms of venereal disease. In Barbadoes the ratios are

nearly double those in Jamaica. This is probably due to the fact that Barbadas is more densely populated than Jamaica. The West Indies were formerly under 'the Acts' but venereal prevalence increased notwithstanding legislation. I have no personal knowledge of the Islands, but think it probable that there would be great difficulties in enforcing the Acts efficiently on account of the large population of negroes and the consequent difficulty in restraining clandestine prostitution. The Islands are also in constant communication with the South and Central American ports where venereal diseases are notoriously common and syphilis (especially) both prevalent and of virulent type.† Under such conditions matters should be left to the local Governments and special attention paid to the moral and physical training and instruction of the men.

West Africa.

West Africa.

The statistics with regard to British troops in West Africa deal with such a small strength that no comment is necessary and no lesson can be learnt from them.

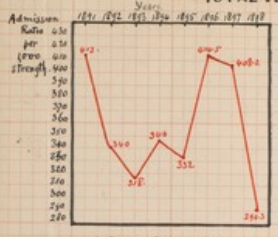
† So I am informed by a Naval Medical Officer who knows these ports well.

South Africa (including Cape Colony, Natal and Saint Helena).

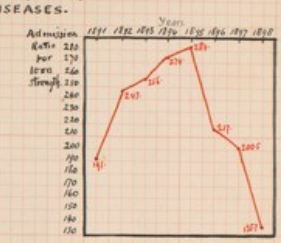
SOUTH AFRICA.

In our South African Colonies we have to deal with a Garrison strength

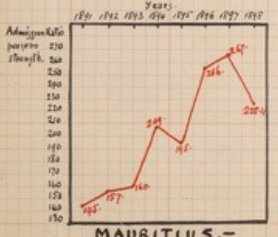
CHART showing RISE and FALL in Admission Ratios per 1000 strength, in our Army in the COLONIES.— 1891–1898.
TOTAL VENEREAL DISEASES.



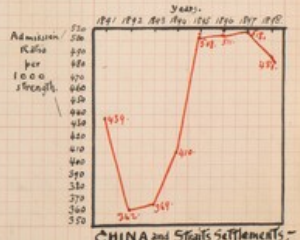
WEST INDIES.



SOUTH AFRICA (Cape Colony Natal & St. Helena.)



MAURITIUS.—



CHINA and Straits Settlements.—

of sanitary police measures, [illegible] a new Contagious diseases act was brought into force in Cape Town. This is still in

nearly double those in Jamaica. This is probably due to the fact that Barbados is more densely populated than Jamaica. The West Indies were formerly under 'the Acts' but venereal prevale-

West Africa.

Th

Africa dealt with such a small strength that no comment is necessary and no lesson can be learnt from them.

† So I am informed by a Naval Medical Officer who knows these ports well.

SOUTH AFRICA.

South Africa (including Cape Colony, Natal and Saint Helena).

In our South African Colonies we have to deal with a larger strength of British Troops. In 1898, there were 8,313 men in Cape Colony, Natal, and St. Helena. It is unnecessary to discuss the conditions of life, population, &c, there for owing to the War everyone is au fait with these facts concerning the Colonies. There have been great variations in the prevalence of venereal diseases amongst the troops since 1860. The total Venereal ratios rose from 56 per 1000 to 365 per 1000 in 8 years, then fluctuated a good deal until 1891 since when there has been a steady rise from 191 per 1000; to 284 per 1,000 in 1895. Since 1895 there has been a constant, marked, and rapid fall to 135·7 per 1,000 in 1898. There were many different Contagious Diseases Acts between 1868 and 1885, then followed a period of absence of sanitary police measures, until, in 1889 a new Contagious Diseases Act was brought into force in Cape Town. This is still in

force. A study of the A. M. D. Reports show that the decline in prevalence of venereal disease in South Africa during the last three years or so was solely due to the decrease prevalence in Cape Colony. In 1898 there was however also a decrease in Natal. In an admirable paper, in the Army Medical Dept. Report for 1897, Surg. Capt. T. Browning, (now Major, R. Amd.) shows beyond all contradiction that the new C. D. Act in Cape Town has produced a most marked improvement.

Cape Town

The total venereal ratio per 1,000 ~~to~~ admissions in 1888, before the Act, was 828. ~~per to~~ In 1889 when the Act came into force it fell to about 340 per 1,000, rose to just under 450 per 1000 in 1895 and has since then fallen to ~~276~~ 257.3 per 1000 in 1898. The combined primary and secondary admission ratio fell from 380 per 1000 in 1888, next year to 200 per 1,000 and to 216 per 1,000 in 1897, and 182 per 1,000 in 1898. The secondary Syphilis ratio fell from 209 per 1,000 in 1888 to 54 per 1,000 in 1889 and to 27 per 1000 in 1896. It has risen since 1896 to 76 in 1898. Major Browning also shows an improvement in general

C. D. Act (Women's) Cape Colony, 1889.

health of the troops in Cape Town since the introduction of the Acts. This Cape Colony Act of 1889 is a severe one. It compels the prostitutes to attend at stated intervals for medical inspection and enforces their segregation in Lock Hospitals if found diseased. It is only in force in certain proclaimed areas, mostly either Garrison or seaport towns. The Resident Magistracy also have powers to oblige sufferers from venereal disease, other than prostitutes, to place themselves under medical treatment. The penalties under the Act are heavy fines and imprisonment in gaol. The Cape Colony Act then is working well and has brought about a diminished prevalence of venereal disease. It has had to contend against an increase in the number of prostitutes, mostly foreign, who were expelled from Johannesburg by the Transvaal Government. The Act might be extended with great advantage to Natal and St. Helena. No further measures, other than those of purely military character, are therefore indicated in Cape Colony.

Major Browning also shows a remarkable parallelism in venereal prevalence in Rothikhaud District and Cape Town during periods when under and not under the Acts.

Mauritius.

Mauritius.

The garrison of Mauritius is a very small one, in 1898, only 823 men, a larger number than usual. (Decennial average is only 580 men). No C. D. Acts have ever been in force in the island. As usual in a small garrison, venereal prevalence has fluctuated a good deal from year to year. At one time as high in admission ratio per 1,000 strength, all venereal diseases, as 353 per 1,000, it had come down to 145 per 1,000 by 1891, after which it rose fairly steadily to 267 per 1000 in 1897. In 1898 it fell to 228.4 per 1,000. The decline has been in all forms of the disease. The gradual rise may have been due, to some extent, to increased communication with India by the importation of cooly labour and of native regiments. It is also one of the stations of our East Indian Squadron.

CHINA and STRAITS SETTLE^{ts}

China and the Straits Settlements.

The garrisons of Hongkong and Singapore are very much of the same strength, 3,000 altogether men in both stations. Two of the greatest ports in the world — in greater

tonnage of shipping goes into Singapore yearly than in to London — on the great highway to the far East, both places are thickly populated by oriental and mixed races, Chinese, Malays, Japanese, Philippinos, and Europeans. We would therefore expect a high prevalence of venereal diseases in both places. For many years however the rates of prevalence were comparatively low. These stations have been a great puzzle to opponents of the C. D. Acts which were formerly in force. Under these the ratio of admissions for total venereal disease fell from 215 per 1,000 to 189 per 1000. The repeal of the Acts in 1889 led to an immediate increased prevalence. Total venereal ratio rose in one year to 360 per 1,000, and since then there has been some fluctuation but the ratio has never fallen to what it was when under the Acts. The small chart shows a curve like the letter S, the lower curve touching 362 per 1000, and 369 per 1,000 in 1892 and 1893 whilst the upper curve went as high as 508 per 1000, 511 per 1000 and 518 per 1,000 in 1895, 1896 and 1897.

In 1898 it fell to 4.81 per 1000. It will be noted that the ratios from 1895 to 1897 have been very nearly the same as those in India. The ~~increase~~ increase in these years was an increase in every form of venereal disease, and chiefly due to Hongkong where the prevalence of these diseases became so great that it was officially stated that a permanent increase in the medical and hospital establishment would soon become necessary on this account. In the Straits the rise did not occur the ratios remaining below the decennial averages. It is obvious that remedial measures towards prevention are urgently needed in these colonies. The East Indian Cantonment Acts & Regulations as now enforced in India would probably act equally well in the Colonies and should at any rate be tried.

Ceylon.

CEYLON.

Ceylon has a garrison of 1,400 men, very much the same as Singapore. Syphilis is generally very mild in Ceylon. The total venereal rates of admissions per 1,000 show variations from year to year.

This is very usual in Stations with a small garrison and is due largely to changes of regiment. A regiment from a highly infected area introduces a high prevalence in the garrison whilst a regiment from home brings down the prevalence. Most of the disease is contracted chiefly at Colombo, one of the great ports of the world, whilst at Trincomalee, a quiet port out of the main lines of traffic venereal prevalence is low. The A. M. D. Report for 1898 informs us that "steps are being taken to introduce the Indian Cantonment Regulations". The local recruit and other conditions favour the proposal and we may look forward to a decline in the disease should they be adopted.

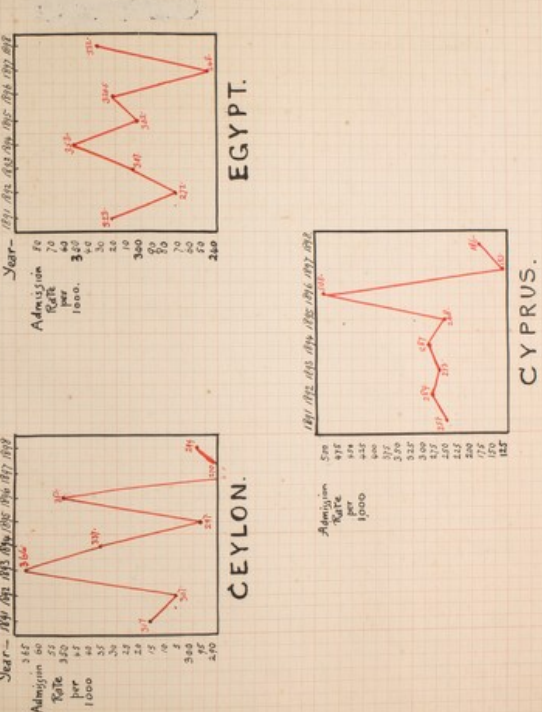
EGYPT.

EGYPT.

Egypt is not yet a British Colony, but we keep there an Army of occupation numbering just under 5,000 men. Venereal disease has always been very rife in the Nile Valley from the Soudan to Rosetta. Egypt presents a conglomeration of Oriental, Semi Oriental, Afric

and European races. It has never been under the C. D. Acts and probably owing to religious and other difficulties they are insuitable to the Country. Venereal prevalence fluctuates sharply year by year but within limits as my small chart shows and the admission ratios are very high. Venereal diseases are more prevalent amongst the troops in Alexandria than in Cairo. In Egypt legislation will probably be of little effect owing to mixed population, the opposition of the Mahomedans, and the furtive opposition of our European confrères. Medical men too are numerous, of all classes of qualification, creeds and nationalities so that medical certificates would probably be easy for any infected person to get and thus oppose official interferences. Placing infected areas 'out of bounds' has been found to be of good effect as far as the troops are concerned. At other places a sanitary cordon at night was found of value. A little practical point which might usefully be employed elsewhere, as in India,

CHARTS showing rise and fall in Admission Rates per 1000 strength, for All Venereal Diseases British Troops in CEYLON, EGYPT, and CYPRUS.



was found effectual up the Nile. This was to paint a red cross on the door of any brothel where diseased prostitutes were known to reside. Syphilis is very rife and virulent in Egypt so that action by the Authorities is necessary but what action is most suitable is very hard to say. It must be left for those on the spot to decide, but, general measures of prevention, such as, instruction in personal hygiene, military discipline measures, &c, should be applied to the soldiers in addition.

Cyprus.

The garrison is very small and venereal diseases are very prevalent amongst the general population. There was an extraordinary rise in prevalence in 1896, but it was followed by a great fall. The garrison is so very small that the statistics go for very little.

The Colonies Generally.

Our smaller Colonies, that is small as regards strength of garrison, bring out a point in venereal prevalence which is also applicable to the venereal prevalence

in stations at Home, in India and elsewhere. and that is the regimental prevalence of venereal. Regiments differ greatly in their numbers of admissions to hospital for venereal. This is largely ~~a question~~ the effect of tradition. If you trace some regiments through the years, from place to place, you will find them always associated with a high prevalence of venereal disease and whenever such a regiment goes to a new station, or a small colony, the ♀ venereal prevalence in that station or colony increases in amount. We constantly find medical officers stating in the A.M.D. Reports that a rise in admissions for venereal was due to the arrival of a certain regiment in the station or colony. The A.M.D. Reports do not now give us any regimental statistics. Such statistics would be of value because they would direct attention to those regiments affected greatly with venereal disease. A regiment would soon get annoyed at being considered the worst regiment in the Army (or Command) for venereal and both officers and

men would of themselves take steps to remove the reproach from their corps.

Inspector General Lawson, as long ago as 1875† and again in 1879‡ brought out this point. He stated that at Aldershot in one Regiment the ratio of admissions for Venereal Diseases was 23 per 1,000, in another 42 per 1,000, and in a third 84 per 1000, and in a fourth 124 per 1,000. His deduction was that there were conditions at work of which we know little, but, possibly, the differences were due to the character of the men and the traditional habits of the regiment.

With regard to the measures to be adopted for the prevention of venereal disease in our Army in the Colonies, we should adopt ~~these~~ by some measures as regards the soldier no matter where he is stationed; but measures affecting public women must necessarily vary according to the local conditions which obtain in each colony. Where Oriental conditions exist, the Indian Contonment Regulations are generally indicated. In our Self Governing Colonies, the institution of legislative measures should be left to the local Governments.

† Speech before Medico Chirurgical Society, April 13, 1875.
‡ Evidence before Select Committee, House of Commons, 1879.

The Results of the Prevalence of Venereal Diseases in our Army.

I have dealt rather fully with the prevalence of Venereal Diseases in our Army, at Home and Abroad. It will not be out of place to discuss briefly the results of this prevalence upon the Army itself in peace and in War and its ultimate results on the Nation.

In Time of Peace.—

No. of Men Constantly Sick.

Speaking generally, there is a greater prevalence of venereal diseases in the Army in times of peace than when the troops are on active service. In time of peace large numbers of men are constantly sick in hospital for venereal. The numbers vary in different stations. Thus, in India, in 1898, 2,202 men were constantly inefficient from this cause; in 1897, nearly 3,000. At Home, the constantly sick with Venereal numbered in 1898, 1129 men, in China, nearly 6 per cent of the garrison. If we compare the constantly sick ratios for all diseases with those for venereal diseases we get a Table such as the following, for the year 1898.

Station.	Constantly Sick ratios per 1000.	
	All diseases.	Venereal Diseases.
United Kingdom	37.84	11.77
Gibraltar	56.74	28.42
Malta	53.12	11.54
Egypt & Cyprus	83.75	23.52
South Africa	56.50	14.42
China	112.10	59.85
Straits Settlements	76.46	34.97
India.	90.75	33.77.

Proportion of Men in Hospital admitted for Venereal Disease

Speaking roughly therefore we may say that from one half to one quarter of those constantly sick in the Army are sick with venereal. In our large Indian Army over 1/3 of the constantly sick are sick with venereal, in Gibraltar, one half. We can estimate therefore the great loss of efficiency in the Army due to this cause.

An Increase in Expense in Military Hospitals due to this cause.

The rate-payer can also estimate that from one quarter to one half the working expenses of our military hospitals in different Stations would be saved if there were no venereal diseases, and this sum, a large one, would be available for improving the efficiency of the Army in other ways.

The Resultant Deterioration in Moral Character of the Soldier.

An increased prevalence of venereal disease in our Army is an index of a deterioration in moral character. It has an effect in preventing a good class of recruits from enlisting. We have not yet tapped the best sources, physically and morally, for recruits — our middle classes. Our middle classes still regard the soldier as a low character, and the widespread knowledge of the prevalence of venereal disease in our army deters many a respectable man from enlisting. He does not care to associate with men of presumably low moral character.

Effect on Recruiting of Army.

Loss of Military Training due to Absence in Hospital with Venereal.

The number of men constantly sick in hospital with venereal disease frequently interferes with the military training of a regiment. In my present station at the present time 28 men in hospital with venereal and 5 men attending hospital out of a strength of four companies are unable to go through their course of musketry. Thirty men out of four companies missed their field training last year on this account. It is common talk that one noted character in this regiment has not done a guard for 3 years on account of being nearly always in hospital usually with venereal disease. He has spent 937 days in hospital in his seven years service, and most of this time in hospital has been during his tour of Indian service.

In Time of War.

The Tirah Expedition.

It is, however, in time of war that the evil results of the Prevalence of Venereal diseases in Our Army become fully evident. In the Medical Report on the Tirah Expedition we read "A rigid medical inspection for venereal disease revealed 769 cases among the 21,683 European troops who proceeded on service in 1897-98, and 484 broke down during the campaign from these diseases." During this Campaign 2 British Officers and 541 men were admitted to hospital suffering from venereal disease. Amongst the Native troops 235 were admitted and amongst the followers 287. This makes a grand total of 1,065 admissions or an admission ratio of 28.7 per 1,000 strength. Venereal diseases come fifth on the list of frequency of diseases admitted to hospital during the expedition. Gunshot wounds only numbered 948 admissions, with 99 deaths. That is to say the cases of venereal exceeded the cases

of gunshot wounds by 117. And this was in a country where the opportunities of contracting venereal disease were practically absent. Surgeon General Ince, compares the incidence of venereal disease amongst British troops in the Tirah Expedition with the incidence of those diseases in the new army in Bengal in the Mutiny year, 1858. The Mutiny men gave an admission ratio of 270.6 per 1,000. The Tirah soldiers in Tirah gave an admission ratio of 65.4 per 1,000. In Bengal the population was dense and women were plentiful and accessible. In Tirah, the women were enemies and had fled to places of concealment amongst the hills so that the only women with the soldiers were a few prostitutes who followed the army during the earlier part of the Campaign. It is probable that lack of opportunity had more to do with the lesser prevalence in Tirah as compared to the Mutiny, than lack of virility or a higher standard of morality.

The Mutiny.

Surg. Major General J. B. Hamilton (A.M.S., R.P.) tells us (in the R.U.S.I. Reports 1897) that when the 5th Lancers left Dublin for Suakim in 1885,

Suakim 1885.

they were examined for venereal disease but before reaching Suez there were 30 cases of venereal disease (about 1/8th the strength), and states that as a fact from 7 to 8 per cent of the Regiment from this cause never saw the Soudan at all.

In the Nile Expedition of 1898, after a rigid preliminary inspection, 121 men were admitted to hospital on account of Venereal disease during the 9 months campaign. This was out of a strength of 3,651.

Soudan 1898.

During the Tirah War, I was at Rawal Pindi, in charge of the Section Hospital for venereal patients for a fortnight, and at the Base Hospital of the Expedition during the whole period of its existence. An Irish Regiment had been sent back to Rawal Pindi in the early part of the war having broken down from sickness and other causes. I am unable to give the actual figures, but certainly the Section Hospital for venereal patients counted amongst its patients a very large number of men of this Regiment. The hospital contained 112 patients belonging to the above regiment, the two regiments of the

Reserve Brigade and a few from the real garrison. I was, at the time, greatly struck by the number of men with enlarged inguinal glands. In a great number of these cases the venereal disease from which they had originated had occurred and been treated months before - and I could only conclude that these cases were due to the effects of marching acting upon men who had been in hospital with venereal disease a short time before proceeding on service. Once on service such men do not at once fall sick but struggle on until some unusual strain or increased hardships causes them to suddenly break down. There were also cases of Secondary Syphilis and I noticed, both here and afterwards at the Base Hospital, that the hardships inherent to active service appeared to predispose to an early and severe outbreak of the Secondary forms of Syphilis. I remember, one fine, well built, young soldier who had been sent down from the front to the Base Hospital suffering from severe skin

Cases of enlarged Inguinal Glands on Service.

Early onset of Secondary Syphilis on Service.

eruptions, and with ulcerations of the mouth, throat, and palate. He was finally invalided to England. The debilitating effects of Active Service also appear to predispose to the outbreak of the mucosal forms of Syphilides.

Cases of Rupia on Service.

Syphilis and Blood Deterioration.

Effect of Syphilis on Coagulation of the Blood?

Syphilis produces blood deterioration, certainly a diminution of the red blood corpuscles. Does it diminish the coagulability of the blood? If it does, a man suffering from Syphilis in its constitutional form is more ~~likely~~ liable to severe hemorrhage if wounded than a man in normal health. I made ten experiments on ~~eight~~ men in hospital suffering from Secondary Syphilis, using of temperature apparatus (broken thermometers) ~~and~~ on the lines of Professor Wright's method - and using my own blood as control. My own blood and that of one patient in the early stage of the disease took the same time to coagulate, the blood of all the other cases took longer to coagulate, four took from 25 to 30 seconds longer, two only 10 seconds longer, but the remaining man's blood took 2 minutes longer to coagulate and the clot was not a firm one.

These few experiments are however of no value because all the cases were well under the influence of mercury and most of them (5) were subject to malaria. According to Mitchell Bruce and other writers on the physiological effects of mercury, that drug induces impoverishment of the blood plasma, and, under these circumstances the blood is more watery and coagulates less firmly. In order therefore to properly test the effects of syphilis on the coagulability of the blood it would be necessary to test the blood of men suffering from secondary syphilis who had had no mercury given to them and who were free from other blood-degenerating diseases. Personally, I do not consider it would be justifiable to leave a case of secondary syphilis untreated in order to clear up the point, and, since every man gets syphilis in the army is given mercury, I have no opportunity of properly testing the cases without suspect of error. In civil life, however, it occasionally happens that patients seek advice who have ~~had~~ secondary syphilis and have never had mercury and experiments

Syphilis Retards the Healing of Wounds. Cases.

with such cases as these would clear up the point.

I know, from my personal observation of several cases, that Constitutional Syphilis, although no symptoms may be present at the time, does retard the healing of wounds. At the Base Hospital of the Field Force, at Rawal Pindi, Major Phelan, R.A.M.C., had under his care an officer of a British Infantry Regiment, who had been shot through the muscles of the thigh, at Saran Sar. There was apparently no reason why the wound should suppurate so freely, the X rays revealed the presence of no bullet or splinter of one, and no injury to bone, and antiseptics was rigidly carried out. The case went on from bad to worse, there was much fever of hectic type, (usually up to 105° F. every evening), with profuse sweatings, and pus simply infiltrated the whole thigh. Openings, and counter-openings, were made, but the case did not improve, and, it was ultimately feared that the officer would succumb to the severe drain on his system. On enquiry into the officer's medical history

elicited the fact that the patient had had syphilis some eighteen months before. Mercury was at once administered, and continued, with the happy result that all suppuration had practically ceased and the fever had left him in a fortnight and the external wounds were healing when the Officer left for England. I saw two other cases, both wounded soldiers where the administration of mercury produced similar effects in hastening the healing of wounds which were previously showing no progress towards recovery. Vernueil and Delpech, the eminent French surgeons, both insist that syphilis prevents the proper healing of wounds after operation, and my own experience leads me to support their opinion. These surgeons recommend a course of mercury previous to operation in Syphilitics. In the case of the Officer above related the administration of mercury removed the necessity for any operation.

A writer on "The Fallacies of the Faculty", writing in the "Thirties," says, "The greater number of the diseases

Manifestations of Syphilis following the hardships of Active Service.—

"that made their appearance ~~during~~
"during the Rangoon War could the
"subjects of them have been transported
"to a London Hospital, would, I am
"certain, have been termed and treated as
"syphilis. In the General Hospitals of
"India after that war, you might have
"seen every kind of ulcer of the throat
"and palate, every eruption of skin and
"disease of bone, that were ever supposed to
"be the exclusive production of the Venereal
"poison; and, of what were these the
"offspring?— depraved food, hard work,
"and much exposure." The writer did not believe in the existence of syphilis as a distinct disease, but his description leave little doubt in my own mind that the cases he mentions were, in fact, Syphilis, and that the "depraved food, hard work, and much exposure" of the Campaign had brought about a severe manifestation of the syphilitic diseases.

Syphilis after Injury.

It has always been the teaching of the Dublin Medical School that parts of the body most exposed to injury, however slight, are more liable to

tertiary deposits in the injured parts than elsewhere. This was a point strongly insisted upon by the late John Kellock Barton, of Dublin, who was for many years the leading Irish authority on Syphilis, to whose teaching I am indebted for many practical points in the treatment of Syphilis. Most English works on Syphilis however do not make any reference to this determining factor in the site of gummatous deposit. Continental writers generally consider injury a prominent predisposing factor when tertiary syphilitic deposits are concerned. Mraczek, the Viennese author of a recent work on Syphilis supports this opinion. Lancereaux says, "traumatism is one of the causes which chiefly serve to fix the seat of the anatomical determination of Syphilis." Virchow considers injury a determining factor in the production of syphilitic diseases of the liver; and I was once present at a Post mortem Examination where gummatous deposits ~~were~~ were found in the anterior part of the liver in a man who had been struck on the hepatic region by the shaft of a cab, whilst trying to stop a runaway horse, three months

Cases.

before his death. Guillemin, a French Surgeon, has pointed out that slight injury in a person of syphilitic history may give rise to ulceration which will not yield to treatment until anti-syphilitic medication is adopted. Swediaur stated that syphilis renders the bones more brittle and more liable to fracture and other Surgeons support his opinion. He gave a case in which a fracture of the leg refused to unite after nine weeks' treatment. The patient was put on specific anti-syphilitic treatment and union followed in due course. A century and a half ago Duverney pointed out the greater incidence of exostoses upon the bones situated superficially, and attributed this greater incidence to the fact that these bones are more liable to contusions and other injuries. In the Army it is not unusual to find foot ball players coming to hospital with late secondary & tertiary ulcerations of the leg not confined to the skin over the bony parts but, as in a case now under my care affecting the softer tissues over the calf of the leg. Syphilitic bone disease

particularly attacks the superficial bones. Nearly every Surgeon can recall cases where this sequence of events has occurred. I once had a young man under treatment for nodular thickening of the periosteum of the ulnar bone. He was in the habit, as boxers do, of warding off blows with this part of the forearm. The enlargement caused an increase of one inch in the circumference of the forearm. Under treatment by mercurial inunction, with doses of Potassium internally and plenty of water, he rapidly recovered. During the Bombay Riots of 1898, a Sergeant of the Shropshire Light Infantry was stunned by a blow on the nose from a lathi (quarter-staff). The nose was cut and broken but healed rapidly. Six months later however he came under my care with well marked symptoms of gummatous deposit followed by necrosis of the septum nasi and nasal bones, and he was finally invalided to England for Secondary Syphilis.

Cases such as these lead one to think that injuries in Syphilitic subjects are

certainly more likely to be followed by serious results, other things being even, than in other people; and, since injuries are more likely to occur during active service than in time of peace it is probable that Syphilitic subjects in war-time suffer more severely from the results of injuries received than is the case with those free from all Syphilitic taint.

In August, 1900, I had under my care eight cases of enlarged and inflamed inguinal glands. Each of these patients had been under my care from two to six months before suffering from Soft Chancre. Why should these cases have all occurred at the same time? I consider that this was the result of the annual route marching which commenced about 10 days before the men came to hospital. None of them had fresh venereal sores or any abrasions about the penis or abrasions or wounds of the feet or legs. What conceivably occurs in such cases as these is that the venereal virus, bacterial or otherwise, remains latent in the inguinal glands until re-awakened by unusual strain or muscular effort on the

on the part of the patient. Now these men might very well have been on active service they would certainly have been passed 'fit' at the preliminary medical inspection and they would as certainly have broken down on service after two or three days marching.

Syphilis and Hospital Phagedæna.

In all the British Campaigns prior to 1882, the scourge of the military hospitals on service has been the outbreak of hospital or phagedænic gangrene. In the Crimea, in the Mutiny, in the Peninsular, our troops suffered greatly from this terrible disease. It is our duty therefore as Military Medical officers to take measures to prevent such an occurrence again in our hospitals on service in war. Now Jonathan Hutchinson, Sen., a careful observer, and our greatest English authority on Syphilis deliberately states as his opinion. "Syphilitic inflammations of "all kinds and all stages, whether primary, "secondary, or tertiary, are liable to take on "phagedænic action." "The disease known as "Hospital Phagedæna, which may spread "through a hospital, attacking all operation

"wounds and other wounds, is, I believe, "almost always set going by the admission "of a case of Syphilitic phagedæna into "the wards." In his Commentaries, he goes to my mind conclusive proof of the connection between Syphilitic phagedæna and hospital gangrene. On active service a soldier with a syphilitic history gets debilitated from hard work, bad food, bad sanitation and exposure to weather, and, it is not surprising if, under these conditions, the Syphilis lying latent in him again shows itself. The same conditions, as the medical history of the Peninsular War tells us, also predispose to syphilitic phagedæna. This man then, taken into the field or the Base Hospital, may originate an outbreak of hospital gangrene amongst the wounded with results terrible to contemplate.

Prevalence of Syphilis in Army constitutes a danger to the general population.

Does the prevalence of Syphilis in the Army constitute a danger to the General population?

Yes, inasmuch as the soldier may infect many women outside the army and these women infect civilians and so on in a vicious circle. We must remember

however that there are many authorities who regard ~~Syphilis~~ venereal disease in the army as part and parcel of the venereal disease in the population and consider the prevalence of venereal disease in the army an index of the amount in the general population. I have already shown that this opinion is probably fallacious when applied to the British army, for that army does not proportionately represent all the classes of the civil community. The danger to the civil community has probably been greatly overrated. The soldier when he leaves the army, if he has ever had syphilis has generally got over the infective stage of the disease. Invalids as a rule are in the late secondary stage (tertiary) and are probably cured before leaving Netley. With regard to Congenital Syphilis, the propagation of syphilitic children by soldiers - I am convinced that this danger is not so great as is generally supposed. During the last six years, I have, at my different stations, been in charge of the women and children. I have, during that period, only seen five cases of women affected with Syphilis in the ~~primary~~ secondary stage and one in the

Congenital Syphilis. —

serving, and have only seen three children suffering from congenital syphilis. Of these, two children and the case of primary syphilis were in England, the remainder in India.

Syphilis in the 3rd Generation?

Jullien, of Paris, and Tarnowsky, of St Petersburgh, have recently published 92, and 25 cases, of respectively, of syphilis in the third generation, but, since they do not prove that the second generation was free from acquired syphilis, their cases can hardly be considered convincing. There is, as far as I know, no recorded case of an undoubted case of congenital syphilis being carried on to the third generation.

Venereal Disease acquired & congenital amongst Women & children in the Army.

In 1898, there were only 8 women under treatment for secondary Syphilis and one for Gonorrhoea out of 11,824 women on the married strength of the Home Army. There were only 16 admissions (with 6 deaths) for congenital Syphilis amongst their 21,641 children. Amongst the women on the married strength of the Indian Army, in the same year, the admissions were ~~proportionately~~ higher in proportion to the strength, but, even then, only amounted to 3·2 per 1,000 strength. All with secondary syphilis. Only 4 out of their 5,592

children were under treatment for Congenital Syphilis. It is evident therefore that there is very little venereal disease amongst the women and children in the army. In civil life, in the Children's Hospitals at home, out of 180,000 children in hospital, one ~~army~~ in 124 was admitted, in 1895, suffering from Congenital syphilis.† In the Home and Indian Armies, in 1895, out of 15,346 sick children, only one in every 767 was treated for ~~congenital~~ Congenital Syphilis. (It appears probable therefore that there is less chance of a child in the Army getting ~~Congenital~~ Syphilis than there is of a child in the Civil Community.) Fournier, (quoted in "Bartish Medical Journal" 1879) found no traces of Congenital disease on examining the 156 children of 87 men known to be Syphilitic. 6 the Surgeons give similar testimony. It is evident therefore that the great capital made out of the cry for the protection of future generations from the ravages of venereal disease has really

Congenital Syphilis amongst Army Children compared with that amongst children in Civil Childrens' Hospitals.

Syphilitic Men do not necessarily propagate Syphilitic Children.—

† According to Dr Bulkley Morris, in an address before the International Federation for the Abolition of State Regulation of Prostitution, 1896.

little foundation on fact. That is, if statistics are worth anything at all as bases for argument. The fact is we have no proof of the result of the letting loose of so many discharged and time expired soldiers annually amongst the general population. We may be told, with harrowing details, the awful results of the return of the soldier to his people, after having venereal disease taken in the army, but it has yet to be proved that such results do occur. The statistics of the prevalence of Syphilis and other venereal diseases amongst the general population are practically non-existent. We may say there are no collated statistics other than the mortality returns of the Registrar General. One of the Universities has recently approached Government to take advantage of the Census next year to obtain from medical men (and hospitals) figures as to the amount of Syphilis in the population. If the notification Act (Contagious diseases), included venereal diseases, a great deal of useful knowledge as to the

The need for Statistics Showing Extent of Prevalance of Venereal Disease amongst Civil Population!

prevalence of venereal disease in the civil Community would become available, and we should have a proper basis on which to compare the 'Venereal' prevalence in the Army with that in the general population. Until we have bases for comparison we shall be only too apt to make statements, as to the effects of venereal prevalence in the Army or the General population, the outcome of our bias one way or another, or of our impressions, not, as they should be, based upon the eternal foundations of Truth.

I have now dealt rather fully with the prevalence of venereal disease in our army, at home and abroads, and have briefly indicated the ultimate results of that prevalence upon the General population. The preceding pages also, to the ~~observant~~ observant, prove the necessity for action, and the desirability for action, in the direction of prevention of these diseases in our army. After a preliminary enquiry into the History and Natural History of these diseases, I purpose to deal with the measures of prophylaxis best applicable to our Army.

Account of the Venereal Diseases.

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Similar opinions.

122.

It is requested that in any further communication on this subject, the following Number may be quoted; and the Letter addressed to—

The Under Secretary of State,
War Office,
London, S.W.

Med Div.
56297
6

WAR OFFICE,
LONDON, S.W.,
13th April 1901.

Sir,

In acquainting you that the Assessors of the Parkes Memorial Prize have unanimously awarded you the prize for your essay on the subject of "Venereal Diseases in the British and Indian Armies. their prevalance and prevention", I have to offer you my Congratulations and to inform you that a Note of the award will be made in your record of service.

I am, Sir,
Your obedient Servant.
J Jameson.
DG.

Captain
H.A.L. Howell
R.A.M.C.
Principal Medical Officer
in India.

ARMY HEAD QUARTERS INDIA
MAY 6 1901
MEDICAL DIVISION

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Dr 31. 2329
15-5-01

No. 2120

Medical Department Officers.

Army Head-Quarters, India,
Medical Division;
Simla, the 10th May 1901.

Memorandum,

Forwarded for transmission

Captain H.A.L. Howell, Royal Army Medical Corps, with a request that that officer be asked to kindly furnish this office with a copy of the Essay in question.

By order,

W. Taylor
Surgeon-General, A.M.S.,
P.M.O., H.M's Forces in India.

The Lieutenant-General,
Commanding the Forces, Bombay.

BOMBAY COMMAND
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2329
21 MAY 1901
POONA.
MEDICAL DIVISION.

OFFICE
CRANCH
23-3-88-4
Inward No. 21257

To
The General Officer Comd^g
Bombay D^n

Memo

Forwarded.

2. Please direct Captain Howell R.A.M.C. to forward to this office a copy of the Essay in question

By order

Surgeon Genl. Comd^g
P.M.G. Bom Command

122

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DISTRICT STAFF OFFICE. No 88.4 23 MAY. 1901 BOMBAY.

OFFICE OF THE PRINCIPAL MEDICAL OFFICER BOMBAY & SIND. I. R. No. 2794 G. R. No. Date 23/5/01 TOWN HALL.

To P.M.O. Bo: & Nagpur Dists. Bombay.

Forwarded.

Hamilton Captain, D.A.G. Bo: Dist.

V

No. 2915

HEAD QUARTERS,
BOMBAY AND NAGPUR DISTRICTS.
MEDICAL DIVISION.
Town Hall. Bombay, 27th May 1901

Forwarded for favor of com-
-plaint and return.

Major Dirs.
for P.M.O.
B & R Dts

To
Captain Howell Ridette

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Historical Account of the Venereal Diseases.

A study of the history of these diseases is necessary because we desire to know the circumstances under which they have at different times made their appearance, have attained their greatest prevalence, or have shown their maximum virulence.

Häser, Hirsch, and Creighton, the greatest authorities on historical pathology and epidemiology, are of opinion that venereal diseases were known at every period of the world's history, even from biblical and mythical times. Gonorrhœa can certainly be traced back to the remotest periods of antiquity, and descriptions and references to ulcerous conditions of the generative organs are to be found in many of the ancient (and mediæval) works on medicine. Syphilis, both as a local and a constitutional disease was in early times confounded with leprosy and early writers regarded it as developing out of leprosy ‡ If it existed, it was probably in a mild or modified form, perhaps differing from what

‡ As late as 1857-58 there appeared at Hamburg a book by Friedr. Alex. Simon which maintains the origin of Syphilis from Leprosy. In 1897, Brigadeboy. Bright, M.D. (IMS) expressed similar opinions.

we now observe, and probably the early writers did not recognise of the definite relationship of the secondary phenomena to the primary sore. At any rate, Syphilis first attracted public attention, in Europe, in the latter half of the 15th Century, when it appeared in a virulent epidemic form and swept over Europe. Many writers have stated that both gonorrhoea and Syphilis originated at this time in Europe, certainly the first accurate description of gonorrhoea appeared in 1551, when Brassavola's treatise "de Morbo Gallico" was published. Gonorrhoea however is probably the contagious disease referred to in Leviticus (Ch. XV.) where Moses enjoins the isolation of the sufferer and the practice of frequent washings. It was also known amongst the Arabs, and, in England, from early times, a disease known as "the Brimming" ‡ was common, and is supposed to have been gonorrhoea. In 1370, John Ardern, who was, by the way, an Army Surgeon, on the staff of the Black Prince at Crecy, made the first English note on Gonorrhoea, for he describes "Calor interni cum excoriatione urethræ" under the name of

‡ "Brimming" = burning.

"l'argone". Another English Surgeon, Escorpe, wrote in the 15th Century — "Cognovi duenos viros, qui mortui fuerunt ex putrefactione membrorum suorum genitalium, et corporis sui, quæ corruptio, et putrefactio, ut ipsi dicerunt, causata fuit per exercitium copulæ carnalis cum mulieribus." The fifteenth century, was, on the continent, a century of licence and debauchery. The frequent wars, associated with the movements of large bodies of mercenary troops, together with the general lack of hygiene amongst the population led to the great outbreak of Syphilis in epidemic form which swept over the whole of Southern and Western Europe and lasted as an epidemic for a century. This epidemic was also associated with an increased prevalence of Gonorrhoea, indeed, for centuries, all the venereal diseases were regarded as one and the same disease arising from the same cause. It was at the time believed that the disease had been introduced from America, a belief very general until within recent years. Monro, ‡ an Army physician, writing in 1780, gives a good description of the 15th Century epidemic.

‡ "The Diseases of Soldiers", 2nd Edition, 1780.

of which Hirsch and Creighton write more fully. I wrote Munro.—

"Venereal disease does not appear to have been known in Europe before the year 1494, when it is alleged to have been brought by the Spaniards from America." "The first European who suffered from venereal disease of whom we have any records was one Peter Margarit, a Catalonian nobleman, who accompanied Columbus on his second voyage to America, and contracted the disease in Hispaniola, where Columbus first landed; and being sent home to Spain at the end of 1494 brought the disease with him. In 1495, John Aguado was sent from the Court of Spain to try Columbus for some crimes laid to his charge in Hispaniola. He returned to Cadiz about the end of the same year, with 200 soldiers who had been in the West Indies for some time, all of whom were affected with this disorder.

In 1496, when Charles VIII's (of France) troops were besieging Naples, it began to rage in both armies; and, as it was never known before in either nation, the French called it the Neapolitan disease; and the Neapolitans called it by the name of the French; though it is generally

believed that the French got it from the Spanish and Neapolitan women who frequently stole out of the city to their camp at night. After the French returned from the siege, they soon spread the disease, by their commerce with other nations, through Germany, Holland, and the rest of Europe; and, so quick was its progress that it was raging in Scotland in the year 1497." Munro's account is fairly accurate, but Creighton produces evidence to show that the disease was in Southern France, Languedoc, before the siege of Naples, indeed the French king is supposed to have contracted the disease at Lyons, whilst on his way to Italy.

There is plenty of evidence to show that the movement of troops in large bodies in peace and war has frequently been followed by ~~outbreaks~~ outbreaks of Syphilis and other venereal disorders among the general population with whom they have been quartered. Cromwell's invasion of Scotland was associated with an outbreak of a disease called "Sibbens", which is supposed to have been syphilis of a severe type with frambœsia-like exanthems. This ceased as an endemic which reached its highest prevalence in the Southern Counties of Scotland in the middle of the 18th Century and cases of

which were described as late as 1840.
The Russian invasion of East Prussia in the 18th Century was followed by a general spread of Syphilis amongst the people of that province. (Metzger) The neighbouring Russian provinces have since that time been noted for a prevalence of a virulent type of the disease. The return of the Swedish troops to Sweden after the Seven Years War, in 1762, was followed by an outbreak of Syphilis. A similar result followed the return of the Swedes from Finland in 1790.
An increased prevalence of Syphilis occurred in Asia Minor after the military operations there before the Crimean War. (Bulletin des Sciences Méd.) Syphilitic endemics also originated in Servia, in 1810, in Greece in 1820-25, and in the Danube provinces in 1828-29, as a result of the events of warfare. A virulent endemic broke out in Illyria in 1850, which was said to have been introduced by returning sailors and soldiers from the Turkish War. Syphilis became very prevalent amongst the British and Prussian troops which invaded France after Waterloo. In the Soudan, according to Slatin Pasha, the frequent movements of the tribes under the Mahdi

led to a virulent endemic of Syphilis at Condurman and has spread over the whole Soudan. Syphilis became much more common in Algiers and Tunis after the French occupation. The Portuguese conveyed Syphilis to the Philippines and the Moluccas in the sixteenth Century, and we find that it was introduced in Oceania, New Zealand and Australia from Europe by sailors as commerce extended, and, even now, we find that those places farthest removed from the general stream of traffic have suffered least from the disease. Even now places like the Faroe Islands and Iceland enjoy a comparative immunity from the disease.

The Geographical Distribution of Syphilis.

The geographical distribution of Syphilis and the venereal diseases generally has been very fully dealt with by Hirsch and other writers. They may be considered to be of universal distribution over the whole globe, only a few isolated tribes in unexplored

or only partly explored territories being exempt.
(I plotted out on a map of the World the distribution of Syphilis ‡ marking out as well as I could in different shades the different grades of severity, and, from this map I drew the following conclusions.) Venereal diseases are more prevalent and more severe in places on the great highways of commercial traffic than elsewhere. In seaports, where many nations meet for commercial purposes, venereal prevalence is greater and more severe than in smaller towns on the coast where the trade is less and the crews of nations less marked. The severity of these diseases is particularly marked where European and oriental races meet. The Port Said, and Alexandria, and Hongkong treaty ports in China, are instances.
Syphilis is said to still prevail with 15th Century virulence on the shores of the Baltic. It prevails with less intensity in the Centre of Europe. It is very prevalent, but of mild type, in Central Asia, India, China, and Japan are considered by Hirsch to be the original homes of Syphilis,

‡ Authorities:- Lawrence on Syphilis, and Hirsch on Geographical Pathology, published by New Sydenham Society

and the disease is very prevalent in these countries. It is more prevalent in Southern Italy than in the North. In the Mediterranean ports generally it is noted for its severity and frequency. The same may be said of the coasts of the Adriatic. Montenegro suffers little.
In the Indian Archipelago it is common on the coasts but uncommon inland. Corea, China, Tonking, and Anam suffer from the disease in its most severe forms. In Africa it is apparently uncommon in the interior but very common in countries bordering the Sea. In the Soudan, Nubia, Darfur, and Kordofan Syphilis is rife and severe, as well as in Tunis, Algiers and Morocco. In North America the prevalence resembles that in Europe, the large towns and seaports suffering most. In Canada it was at one time epidemic but is not now so common. Mexico suffers greatly from Syphilis in its severe forms. In South America, the coast generally suffers greatly. Inland it is not so common. To sum up, wherever there is an agglomeration of people not yet acclimatised, as in seaport towns or in large centres of commerce Syphilis is severe, and, other things being equal, Syphilis is least severe in places where prostitution is under control

Does immunity from Syphilis exist?—

Immunity from Syphilis.—

Syphilis, although frequently introduced is said to have never become prevalent in Ireland † Greenland, † Miquelon (Newfoundland), † amongst the Malagasys (Not the Hovas) ‡ and according to Livingstone ϕ amongst pure blooded negroes in certain Central districts in Africa. The Malagasys are also pure blooded negroes so their immunity and that of the african tribes mentioned by Livingstone may be a racial one. The Greenlanders are Esquimaux and the Icelanders come of Scandinavian Stock, both of which peoples suffer greatly from Syphilis elsewhere. Their immunity may therefore be a local immunity, It is not a climatic immunity for we find Syphilis very prevalent in Arctic Asia, Alaska, and Arctic North America. According to Drs Daniells and Corney (Sydenham Society—Selected Essays 1877) Syphilis is unknown amongst the Fijian Natives. The evidence given in support of this statement is conclusive. The immunity is a racial one for Europeans and East Indians in the Fiji Islands suffer from Syphilis, and from these the Fijians have had ample opportunities of contracting the disease. Yaws is very common in Fiji and the

† Bonnis in Archiv. de Medecin Navales. 1870, & Robert quoted in Lancereaux

‡ Daverin "Sur la Syphilis à Réunion". Montpellier. 1875.

ϕ "It seems incapable of permanence in any form or person of pure African blood anywhere in the Centre of the country." Livingstone Travels London 1867. p. 128.

Yaws protects against Syphilis but Syphilis does not prevent Yaws.

opinion has been brought forward that this disease protects against Syphilis. In support of this is the statement that Syphilis has never been known to follow Yaws but it has been known to precede it. (Jon. Hutchinson believes Yaws to be Syphilis modified or altered by Climate. Medical men who have known Yaws on the spot, do not agree with him.)

Influence of Altitude on Syphilis.—

Altitude and Syphilis.

Two French Writers, Julhien and Rey, have attempted to prove that high altitudes predispose to an increased severity in the disease as compared to that on the plains. The chief, if not the only, support of their contention lies in the fact that Syphilis is very severe on the high table-lands of Abyssenia, Armenia, ‡ and Mexico; beyond this there is no evidence, and, even this severity may be explained by the fact that these parts of the globe are not under proper medical supervision, the syphilitic person gets no proper treatment and so the disease runs its uninterrupted course. Certainly in India Altitude does not appear to affect the severity or prevalence of Syphilis.

‡ Wagner, in a German book of travel (Reise nach dem Ararat, Stuttgart, 1848), says Syphilis is very mild as a rule in Asia Minor but assumes a more severe type on the high tablelands of Armenia.

In the Annual Report of the Sanitary Commissioner to the Government of India, 1897, there is a table, which I copy here, which shows that Altitude does not affect Syphilis in India.

Table showing admission ratios per 1000 according to groups of Stations, arranged according to their heights above sea-level, excluding Convalescent depots and places the altitude of which is unknown. Years 1895 to 1897.

Altitude →	Below 100 feet.	100 and below 500 feet.	500 and below 1,500 feet	1,500 and below 3,500 feet	3,500 and below 5,000 feet.	5,000 and below 8,000 feet.	8,000 and below 13,000 feet.
Venereal Admission ratios per 1000 Strength. →	471·6	572·1	538·1	522·7	302·8	528·0	330·8

We cannot base upon this Table any arguments in favour of the theory that removal of a regiment from hills to plains, or vice versâ, will affect the prevalence of venereal disease in that regiment in any way.

Climate and Venereal Disease.

Climate.—

With regard to the relationship between Climate and the prevalence and severity of Syphilis and the other venereal diseases, many conflicting statements have been made. Hirsch, after carefully examining the evidence of numerous writers on Syphilis, concludes that he is unable to satisfy himself that climate has any influence on the severity; or on the greater or less malignancy of the type of Syphilis. Fergusson and Guthrie contended that change of climate from a cold to a hot one was one of the causes of the

aggravation of type. Surgeon J. Marston (R.A.), in 1863, noted that there was an increase in the severity of Syphilis during the summer months at Malta and Gibraltar. Syphilis is very malignant in Southern Italy, India, Algiers, India, Malaga, the Chinese Ports, Cochin China and West Africa. There is however a series of data tending to show that Syphilis has a milder type and a shorter duration in warm and tropical climates. These data are based on observations from Italy, Egypt, the Abyssinian littoral, Tunis, the West Indies, Peru, and the Coast of Mexico. Other writers say that Venereal diseases are more amenable to treatment in warm climates than in cold ones. L'Agneau, in his Treatise on "La Maladie Vénérienne" (Paris, 1812), Speaks of this as being the generally accepted opinion of his time. To quote him:— "La maladie vénérienne exige (dans les pays d'une température plus chaude) moins d'attention de la part du médecin et du malade que dans les autres. Tout le monde sait en effet qu'aux Antilles, et même dans les provinces méridionales de l'Espagne et de l'Italie, la guérison de la vérole† s'opère par le seul effet des remèdes, sans qu'on soit astreint à des précautions et d'une régime très rigoureux. Il paraît que l'abondance et

† In old books, - Vérole = Syphilis or pox. La petite Vérole = Small pox.

et le rétablissement faciles des évacuations cutanées contribuent beaucoup à ce résultat. En France, au contraire, et surtout dans les pays plus au Nord, les chaires se passent différemment, or L'Agneau considered the treatment of Syphilitics in cold climates required the most rigid care in treatment for the slightest neglect on the part of patient or physician rendered the treatment illusory. He also considered that the disease which may have remained latent in a warm climate is apt to reappear on removal to a cold climate.

One feels justified therefore in arguing from these data that Climate does not in any way affect the malignancy of the type of syphilis.

Personal Opinion. — My own experience is confined to the United Kingdom and to India and Burmah, and, judging by my own cases, I do not consider the type of disease in India more severe ~~in India~~ than at home. In Dublin, and in Edinburgh, I have certainly seen worse cases of syphilis than I have in India. In India syphilis appears to me to be more precocious, that is, the different stages of the disease appear more rapidly after infection than at home and as a natural corollary patients get over the whole

period of the disease in a shorter time than at home, although the patient may spend more time in hospital in the years immediately after infection in India than at home.

The Soil and Syphilis.

Soil. — The very nature of the Venereal diseases precludes any conception that soil would be likely to have an effect upon their course or prevalence. These diseases thrive as well on one soil as another. There is no geological distribution of these diseases.

Syphilis and Race. —

Syphilis & Race. — I have already referred to one or two races which appear to enjoy immunity from Syphilis. With these possible exceptions no race is exempt from the disease. The idea is very prevalent that Syphilis may become aggravated by transmission from one race to another. M. Gauthier, in a book "Deux années de pratique médicale a Canton (Chine)." (Paris. 1863), says: — "If we renew the poison by drawing it at distant sources from subjects of a different race, inhabiting a different climate, and submitted to a different hygiene, we shall immediately see the disease assume a surprising intensity, and become the most

insignificant become very serious." Gauthier bases this opinion on the fact that Soldiers and Sailors who land at the seaport towns in China and there contract the disease suffer from a more severe type of disease than the native Chinese do. There are however other influences at work, such as the debilitating effects of climate, of malaria, the lack of acclimatisation, the frequent intemperance, and so on. Fergusson regarded the transplantation of the virus from the mitigated disease of the native (Portuguese) to the foreigner, as one of the causes of the aggravated type of Syphilis amongst the British in Portugal. The severe type of Syphilis contracted in the large sea ports has often been noted. Sea ports are the meeting places of nations.

Hirsch, writes — "It has often been "alleged that syphilitic infection is of "a particularly severe character and "follows a very protracted course, when "it is the sequel of sexual intercourse "between people of different nationalities; but

"whether that be so, we have not facts enough "to generalize upon." The question is one of importance to us, for our Soldiers in India, and elsewhere abroad, contract venereal disease from individuals of another race, and, if it be true that this is a factor in increasing the virulence of the disease, we should endeavour to elucidate the point. We know in Bacteriology that if we desire to increase (or diminish) the virulence of the bacterium of a disease obtained from a certain animal we can in many instances do so by "passages" through other more (or less) susceptible animals. Thus, rabies passed from dog to dog diminishes in virulence, but if passed from dog to cat (or rabbit) increases in virulence. It is conceivable that a similar thing may occur when venereal disease, such as Syphilis, is passed from race to race, although we have no real proof that it is so. It is doubtful if it will ever be proved, for, in order to do so, it would be necessary to exclude all those other

influences, pre disposing, climatic, pathological, or, which may have a bearing on the severity or otherwise of the disease and even then there would always remain the individual factor to consider.

Age and Syphilis.—

The influence of Age on the prevalence and progress of Syphilis.—

Syphilis may be acquired at any age, from the cradle to the grave man shows an unfortunate susceptibility to infection by this disease. Syphilis is however more common at some ages than at others. Cagenave † took 158 consecutive cases of Syphilis and found that they included.—

Under 10 years of age one case (congenital).
Between ages of 10 and 20 years, 2 cases;
Between ages of 20 and 30 years, 67 cases;
Between ages of 30 and 40 years, 43 cases;
Between ages of 40 and 50 years, 27 cases;
Between ages of 50 and 60 years, 11 cases;
Between ages of 60 and 70 years, 2 cases.

In other words early manhood, and manhood at its prime are the periods when acquired Syphilis is most frequent and this is what we should expect because in these periods men expose himself most to contagion. With regard

† A. Cagenave "Traité des Syphilides."

to the progress of the disease when once contracted, age certainly influences the prognosis. Syphilis contracted in early life is more amenable to treatment and may in some cases be cured. Syphilis contracted in middle or late life is very apt to run a rapid course and tertiaries usually appear early. The arteries and nerves are also more likely to be affected and these patients are not so amenable to mercurial treatment. † Mrazek, the Viennese Authority on Syphilis, says ϕ "Very young, undeveloped individuals, and children, who have become infected with Syphilis, suffer more severely, as the tender, growing organism falls an easy prey to the ravages of the disease." I have already shown that the greater number of men in our army are within the ages most frequently affected with syphilis; most of them being in the younger period, under 30 years of age. If a man is going to get Syphilis this is the best time for him to contract it for at this age there is greater prospect of cure and treatment is of most value in fighting the disease. It is also evident that very young undeveloped soldiers should not be exposed to contagion more than can possibly be helped, that is, they should not be sent to places where Syphilis is common or virulent.

† – Article on Syphilis – Allbutt's Manual of Medicine, 1900.
ϕ – Atlas of Syphilis & Venereal Diseases, with Treatise on pathology & treatment, 1899.

such as India or China. There would doubtless be a great decrease in the loss of efficiency in our army due to this disease, if it were possible for the authorities to keep away from India all soldiers under 24 years of age. In a Short Service System this is not possible and the financial difficulties in the way would also be too great.

The Influence of Sex.

Sex.

Sex has no influence on the incidence of Syphilis & the other venereal diseases. Men and women are equally liable to contract these diseases. Fewer women are affected with these diseases because women, from their training, have greater powers of self control in this respect than men. Women are also more susceptible to public opinion and the voice of scandal. The number of women who give themselves up to debauchery is infinitely less than that of men.

The influence of Marriage.—

The influence of marriage on the prevalence of venereal disease in an army has already been fully dealt with elsewhere. Experience considers marriage may in a syphilitic man elicit an outbreak of the latent disease. Pregnancy is said to have a

similar effect on syphilitic women.

Cause of Syphilis—
A specific Infective Organism.

Proofs.—

The Cause of Syphilis and of the other Venereal Diseases:— Probably specific infective micro-organisms.—

No one at the present day doubts that a specific infective organism is the chief etiological factor in the genesis of Syphilis: the whole etiological and pathological history of the disease, its resemblances to diseases such as tubercle, glanders, and leprosy, known to be originated by bacteria, all compel this conclusion. For a long time all venereal diseases were considered to be one disease. Arthur Cooper (Dictionary of Medicine) says this was largely confirmed by the teaching of Hunter until the diseases were differentiated by Balfour (1767), and Benjamin Bell (1793), who were confirmed later on by Ricord. Bassereau in 1852 produced evidence to show the distinction between Syphilis and soft Chancre (the dualist theory). Some known regard these as one and the same disease (Unicists). Syphilis never develops de novo, but arises in consequence of the conveyance of the morbid virus, such transmission taking place by way of direct Contagion (in the strict sense of the word), mediate contagion,

Cause of Syphilis?

by fomes, cusps, glanders, surgical instruments, &c, and by Hereditary transmission.

'Stellar Influences.'

'Venereal Miasm.'

'Bile'

'A virus.'

The earliest writers thought Syphilis to be due to stellar influences, Paracelsus spoke of a venereal miasm, Massa and Fallopius originated the disease in the liver and bile. Later on the idea of a 'virus' grew and was finally established by John Hunter's experiments. There has been no lack of enquiry into the nature of this specific infective material (virus or micro-organism). In 1868,

Salisbury's Fungus.

Salisbury described it as a filamentous fungus developing from spores, which took root in the connective tissue spread into the surrounding parts and finally reached the blood producing the constitutional disease. In the same year Hallier claimed to

Hallier's Micrococcus.

have discovered the cause of Syphilis in a micrococcus which, on cultivation developed into a fungus which he named Coniothecium Syphiliticum.

Lostorfer's Syphilitic Corpuscles.

Some years later Lostorfer came forward with a discovery of "Syphilitic corpuscles" in the blood. In 1878, Cutter, in America, wrote that

Cutler's 'Copper Colored Spores and Mycelial Threads.'

in Syphilis the white blood corpuscles became "enlarged and distended by intercellular vegetations the spores of which were copper colored," whilst the blood serum contained copper colored mycelial threads

Kleb's Rods.

In the same year Klebs described rod-like mortile organisms as occurring in Syphilitic tissues,

which, on cultivation, become spiral like masses, and these, when given to monkeys, produced the disease. He was confirmed by Bermann. Then

Pisarewski's Zooglea.

Pisarewski (in the 'Centralblatt für Chirurgie', 1880) declared that he had found in the chancrous induration a finely granular zooglea-like mass of small round particles packed in the spaces of the tissue. He thought it probable that these originated the rods of Klebs. In 1884, Lustgarten,

Lustgarten's Bacillus.

discovered a bacillus, closely resembling the tubercle bacillus but smaller, in the primary syphilitic sore. Other observers have found the same bacillus in tertiary gummata and in inflamed mucous membranes. In the same year Drasc

The Disse-Taguchi diplo coccus.

and Taguchi discovered a diplo-coccus which they were able to grow in artificial media and which on inoculation into animals produced a disease analagous to Syphilis. In 1896,

Van Niessen's Diplo-bacillus

Van Niessen described a diplo-bacillus in Syphilitic cases. This diplo-bacillus consists of two rods arranged at an angle like the letter V. On cultivation a blood serum it is said to produce mycelial threads and spores. It also liquefies gelatine. Van Niessen's account has not been confirmed by other observers. Van Niessen says that his diplo-bacillus when inoculated into a rabbit's ear an indurated papule appeared at the site of inoculation in 9 days. Also that the bacilli

are not destroyed by phagocytosis and this explains the persistence of the disease. He considers the real ~~cure of~~ cure for the disease has not yet been discovered but will ultimately probably be some form of anti-toxin. On the whole, there is more

Evidence in favour of and against Lustgarten's Bacillus.

evidence in favour of Lustgarten's bacillus, but, as the Lancet says, (4·1·96) "it has not yet been sufficiently widely accepted to be regarded as solving the problem." Koch's canons have not been fulfilled. Lustgarten's description of his bacillus is to a bacteriologist, very like that which applies to Hansen's leprosy bacillus. Both resemble the tubercle bacillus, both are found in the diseased tissues and inflamed mucous membranes and neither have yet fulfilled Koch's Canons. ϕ We must consider therefore that

The real Cause probably still remains to be demonstrated.

a possibility, (and a strong probability,) still remains that the real cause of syphilis has not yet been demonstrated. The Syphilis bacillus (or other micro-organism) may be officially of the same refractive index as its surroundings and thus invisible without staining, and it may also be incapable of being stained by any of our present methods. It may also be so small as to be invisible.

Lostorfer's "Syphilitic Corpuscle" theory revived.

In the Lancet, June 16th, 1900. Lostorfer again comes forward, after over 20 years, and revives his theory of "syphilis corpuscles" in the blood. He says they appear in the interval between primary sore and Secondaries and are small, round, and lustrous, do not stain, form into

ϕ From personal enquiry I know that the following are very sceptical about Lustgarten's bacillus - Hankin, Haffkine, Lusty, Polevin, Mayo, Herbert, Professor Wright, Lamb (M.S.), & J. Hill Simond.

groups (of from 2 to 20) of oblong shape and last for only 3 days after the appearance of the chancre. Pattocef confirms his observations.

Gonorrhœa.

The Gonococcus.

In 1879 Neisser discovered a diplococcus in gonorrhœal pus which is now accepted as the cause of the disease. In 1885, Bumm cultivated it on blood serum and after culture through twenty generations its introduction into the urethra of a healthy man produced the disease. This diplococcus is found in the pus cells, is decolourised by Gram's method, and readily stains with Löffler's blue. Fourteen other diplococci and micro-organisms have been found in gonorrhœal pus by Bosc so close differentiation is necessary. The gonococcus has also been found in cystitis, and in bubos. In the latter case however other pyogenic organisms are nearly always present. Gonococci are always in pairs and face each other like two kidneys.

Soft Chancre.

Streptococci are nearly always present in soft sores but in 1889, Ducrey of Naples claimed to have discovered a specific bacillus. It is a large short bacillus with rounded ends, lying, sometimes free sometimes

within the pus cells and arranges itself either in chains or in masses. It stains readily by ordinary basic aniline dyes but not by Gram's method. It has not yet been grown on artificial media. Unna and Nicolle support Dmercy. Many observers, including Hutchinson, are inclined to regard soft sore as an attenuated form of syphilis or at least as having some connection with that disease.

Syphilis and Other Diseases.

There are interesting data to prove or suggest that Syphilis may aggravate or ameliorate, or, on the other hand, be aggravated or ameliorated by, the coincident occurrence of other diseases in the same individual.

Syphilis and Tubercle.

Graves many years ago made the statement that "Syphilis and the abuse of mercury are the two causes which most favour the development of pulmonary phthisis." Lancereaux, Morgagni, Laennec and others say that Syphilis is a debilitating cause which, in persons

predisposed to it, favours, hastens, and aggravates the development of pulmonary phthisis and other tubercular conditions. At the time these writers expressed this opinion the tubercle bacillus was unknown. Most of the modern English text-books on Medicine (Fagge, Roberts, Taylor, Allbutt, and Bristowe for instance) state that the syphilitic cachexia constitutes a prominent predisposing factor in the development of tubercle of the lungs. Sydney Martin, says "Syphilis diminishes the resistance to tuberculosis." In the Army, it is not at all uncommon to find a man after long continued syphilis to develop tubercle of the lungs. In this Station, this autumn, one man was invalided and another died from tubercle which had followed after severe syphilis. If, as I think we should, we accept these statements as facts, we must admit that the measures of prevention against Syphilis are to some extent also indirectly preventive measures against the tubercular diseases. It may be noted that according to several authorities acute phthisis and other acute inflammatory diseases occurring in Syphilitic subjects ameliorate the

syphilitic condition. Lancereaux gives two cases where an attack of cholera caused syphilitic symptoms to disappear.† A similar effect has been noted to occur after severe Enteric Fever. This action on Syphilis is probably explained by the fact that Cholera and Typhoid Fever cause profound and rapid changes in nutrition and in this way affected the syphilis. Ducrey, of Pisa, lately stated that Typhoid seems to weaken or even destroy Syphilis, at least so far as external symptoms do." (Professor Wright has recently endeavored in vain, to produce, by means of an anti-toxic serum, the condition produced ultimately in the organism by an attack of typhoid fever, as a protective measure against that disease. It would be interesting to learn whether Wright's Anti-typhoid serum has any effect on Syphilis. It has on Gonorrhoea, and so also has Haffkine's anti plague inoculation. Haffkine at least says so, and recently endeavored to get it tried in a Military Hospital, in India, Unfortunately no soldiers would volunteer for inoculation so I am unable to state from my own knowledge the actual effect of Haffkine's prophylactic on Venereal

† The Venereal Wards in Paris hospitals are said to have escaped cholera when epidemic there in 1849 and 1854.

Syphilis and Ring worm.

disease.) Ducrey considers the syphilitic soil peculiarly favourable for the growth of hyphomycetic fungi, such as ring worm. Certainly in India and Burmah, forms of ring-worm (locally known as dhobi-itch) are very common amongst the men. In Bombay after the rainy season quite one half the troops are affected. But I have never noticed syphilitics to be more susceptible than others.

Syphilis and Plague.

There certainly at first sight appears to be some grounds for thinking that Syphilis exerts a protective power against plague. I was on plague duty, in Bombay, in 1897 and 1899, and in the latter year was, for a time, employed in collecting the statistics of the disease. I know of no case where a member of the prostitute class, or where a patient suffering from acute manifestations of syphilis, were attacked by plague. This fact has been noted again and again by writers on plague. In Bombay there was less plague in the prostitute quarters than in the surrounding parts of the city. I have however seen cases where plague attacked persons with a syphilitic history or

however, actually suffering from that disease. Europeans soldiers, the great majority of whom have a history of syphilis, suffered very little from plague. (I saw Ten cases I think, with one death at Calcutta.) I do not, however, myself believe that Syphilis protects against plague. I think the protection is merely a question of nutrition. The prostitute classes do themselves well, they are well fed, well clothed, and well housed, and so is the European Soldier in India.

Syphilis and Yaws.

Syphilis is also said to protect against Yaws. A person who has had yaws never contracts Syphilis but a person who has had syphilis may contract Yaws. ϕ

Syphilis and Erysipelas.

Erysipelas is said to modify syphilitic eruptions, probably by altering the local nutrition of the skin.

Mixed Infections.

Hallopeau of Paris, thinks that mixed infection by pyogenic organisms and Syphilis gives rise to pustular syphilides and other severe complications. In India I have often found streptococci and staphylococci in cases of primary syphilis. In Bombay mixed infection is common enough as is shown by the number of cases of syphilis in which suppuration of the inguinal glands occurs. The pus in these cases always contains pyogenic organisms.

ϕ See 'Monographs on Yaws'. New Sydenham Society. London. 1897.

Syphilis and Gonorrhœa.

Gonorrhœal affections of testes and epididymis predispose to syphilitic affection of the same organs.

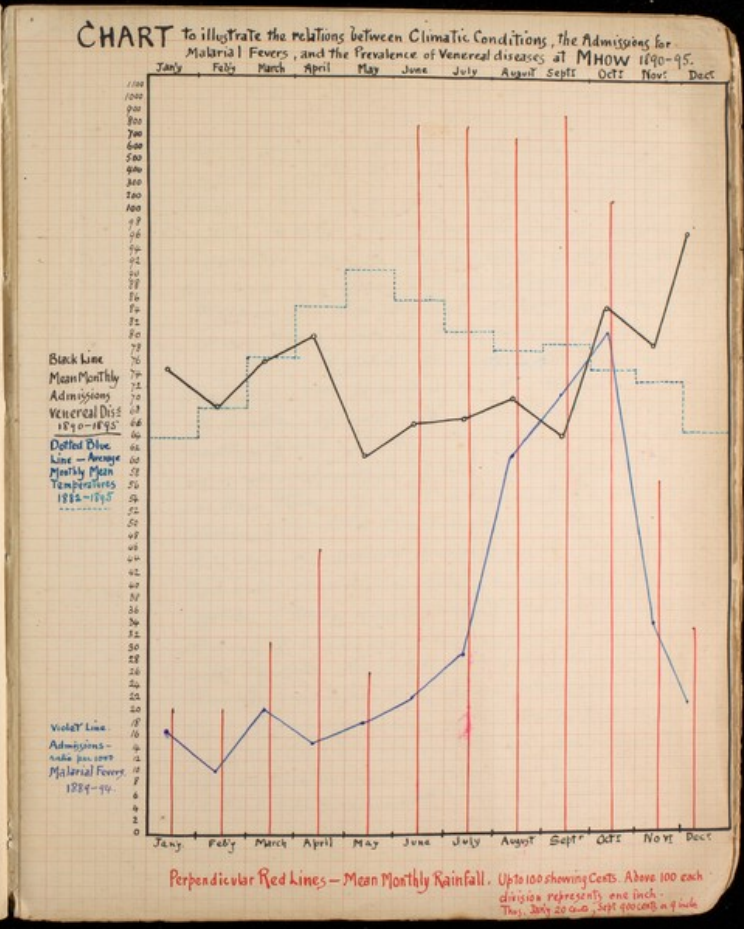
Syphilis and Malaria.

Many writers lay great stress upon the part malaria plays in the production of malignant syphilis. There is little doubt that, at any rate in the tropics, malaria does aggravate the disease. We still however lack sufficient data to say definitely that malaria has this effect. In some places where there is no malaria there is malignant syphilis. We have no statistics, so far, to show in what proportion of cases of severe Syphilis there is a history of malaria. We also lack statistics to show the comparative frequency of malignant syphilis in malarious countries and in non malarious countries. Fournier had 69 patients who had had malaria and syphilis. He says 37 of these cases were severe and 18 of them might be called malignant. The proportion would probably be less if larger numbers of cases were collected. Malaria may account for the severity of many of the Indian cases. It appears to some extent to affect the prevalence of the disease in different districts. We read in the Report of the Sanitary Commissioner to the Government of India, 97, that "some medical officers consider that venereal disease and ague vary inversely to each other, ague diminishing virility." I investigated this point

In India, Malaria diminishes virility and thus tends to reduce prevalence.

Proofs.

From the A.M.D. Report for 1897 and arranged in order all the military districts in India which had, during that year, admission ratios for malaria, total venereal disease, gonorrhœa, & Syphilis above the average admission ratio for the year. The lists are too long for insertion here. Sind heads the list for malaria with an admission ratio of 1017 per 1000 and is at the bottom of the lists for admissions for venereal disease. Peshawur, Lahore, Meerut, and Poona whilst are very high in the list of malaria are well below the average yearly ratio of admissions for total Venereal disease. Deesa whilst has the third highest ratio for malaria is highest on the list of ratios for gonorrhœa and secondary Syphilis, but primary syphilis is very low. Mhow, 7th on the list of malarial ratios is also very high in the lists for primary Syphilis and Secondary Syphilis. If we test the effect on virility by taking the admissions for primary venereal diseases as an index we find that Sind, Peshawur, Poona, Meerut, Lahore and Deesa come lowest on the list for primary venereal disease, Sind and Peshawur showing the lowest admissions for all India. These six stations also show the highest ratios for malaria. We may fairly argue therefore that malaria does diminish virility. Some stations show high ratios for both classes of diseases; this may be explained by the fact that malaria occurs chiefly at one season of the year, during which period venereal admissions are at their lowest and most of the venereal disease is contracted during the non-malarious period. I attach a chart showing the seasonal prevalence of both diseases at Mhow, a station which ranks high in all the lists.



This chart† shows that Venereal prevalence is at its lowest in this Station during the months May to September, inclusive, and during these months Malarial prevalence is steadily rising. In October both diseases are high, probably owing to the arrival of new drafts from England, Malarial prevalence falls during the Cold weather whilst Venereal prevalence rises. High temperatures seem to indicate either a diminished prevalence or a diminished virility. (Mitchell: warm months) Malaria then does diminish virility and in that way reduces the prevalence of the venereal diseases.

Malaria when Associated with Syphilis makes the latter more Severe.

Syphilis has been noted to be more severe and more prevalent in the Italian Army in the Southern districts and in Sicily than in the northern parts of Italy. The difference amounts to an increased prevalence of 22 admissions, per 1000. in Southern Italy and to 12 admissions, per 1000, in Sicily. (Formanni) The Southern parts of Italy and Sicily have also the greater prevalence in Malaria. Neumann considers malaria an aggravating factor in Syphilis. ("Etiology of Syphilis Maligna", Med. Press & Circ: 1899). Durney of Pavia, says, when malaria is associated with Syphilis, the latter is markedly more severe. Henry Lee supported these opinions many years ago and in a long correspondence, in the British Medical Journal, in 1898, Capt. E. C. Freeman, R.A.M.C., and many others expressed similar views. Mrazek of Vienna says "Patients who have been weakened by malaria, will probably suffer more under similar conditions than otherwise healthy subjects." My own experiences make me

† Reduced from a chart in a Special Sanitary Report on Malta, 1899. By a Board of Medical Officers. Lt. Col. Kirkpatrick, R.A.M.C. President.

Personal Experiences.

think that severe malaria, particularly those cases in which 'crescent bodies' and pigmented leucocytes are found in the blood, if associated with Syphilis greatly aggravate the latter. Papular eruptions and deep ulceration of the soft tissues are very common in these cases, and, as there is a great difficulty in giving mercury, that drug being contra-indicated in severe malaria, we find such cases do very badly. Such are the cases invalided from Burmah, Mean Meer, and Kurrachee. (I always give Quinine for a week or two in such cases and then give Mercury by inunction and Iodide of Potash internally. Quinine should also be continued; I give 8 to 10 grains every morning. I have never yet had to invalid a case of Syphilis from India.)

Measures of prevention against malaria will therefore in many instances tend to reduce the severity in type of Syphilis but will not affect the prevalence of venereal diseases. I noted, in one regiment, removal from a malarious to a non-malarious station was followed by a very marked increase in the prevalence of venereal in that regiment. This aggravating effect of malaria on Syphilis is probably due to the great debilitating effects of that disease, for we know all debilitating influences tend to a precocious and severe form of syphilis.

Summary — Syphilis & Other Diseases.

To sum up, a consideration of the data adduced does not authorise us to state dogmatically that there is any real antagonism between syphilis and any other disease, with the exception perhaps of Yaws (and even in the case of Yaws the antagonism is disputed by some writers who affirm that Yaws is, in fact, Syphilis).

The Prophylaxis of the Venereal Diseases.

Historical Resumé.

During the first half of the 19th Century Jenner's discovery of vaccination as a preventive of Small pox and the earlier practice of inoculation against the same disease led numerous investigators to try and discover a similar method of prophylaxis against other contagious diseases, including Syphilis. In 1816, Luna Calderon published a book in Paris, called, "Practical demonstrations of Syphilitic Prophylaxis," in which numerous experiments were described which had been carried out before a committee of Medical men in Paris and which tended to prove that the author possessed unfailing means of preserving himself from Contagion. The experiments were authentic some of them being quoted by Ricord. Calderon allowed himself to be inoculated with syphilitic material upon his prepuce and glans penis. He then privately applied his prophylactic. No sores followed, nor were there scars of any kind the result of old sores or of Cauterization. His prophylactic was supposed to be a caustic saponaceous alkaline substance, but Calderon never revealed his secret remedy and the secret died with him. It has been known for a long time that if syphilitic material be first mixed with an alkali or a concentrated acid it is not inoculable.

I. Medical Measures.

In 1851 appeared Langlebert's prophylactic which prevents the sore from forming. His prescription was, Alcohol 3xij, Striped soap prepared with potash 3 x ß. Dissolve the Soap in the alcohol, strain and add Essential Oil of Lemon 3v. His experiments are said to prove that if applied immediately after inoculation no evil results would result from the inoculation. M. Diday then came forward with a theory that inoculation with the blood of a case of syphilis in the tertiary stage confered immunity against the secondary manifestations of the disease. This was soon disproved and M. Diday himself afterwards agreed that the procedure was futile and of no value. In the previous century, Percy, the French Army Surgeon, had advocated inoculation with Syphilitic virus as a curative measure in the treatment of cases of severe secondary Syphilis which resisted ordinary treatment. He did not however refrain from giving mercury innunctions at the same time so that his cases prove nothing. In the early fifties, M. Laval revived Percy's practice after inoculation experiments on himself. The after history of his cases however discredited his methods of treatment.

In 1851, M. Auzias Turenne declared that he had produced syphilis in monkeys by inoculation and that inoculation of man from the sore produced in the monkey was followed by ~~Chancre~~ an indurated sore and later by secondary Syphilis. This was contrary to the teaching of Hunter, Ricord, Cullerier and others. It is true the monkeys contracted a hard sore at the seat of inoculation but no secondary symptoms followed, thus showing

that the virus was probably a "transplantation" not part of a constitutional disease such as Syphilis is. During these experiments on monkeys M. Auzias thought that each attempt at inoculation in the same animal produced a milder type of sore until at last the animal became "Syphilis proof" or "Syphilized." He argued from this that repeated inoculation with Syphilitic virus, would also, in men, ultimately protect against Syphilis. Thus was born the theory and practice of 'Syphilization' as a preservative against Syphilis. Hundreds of people were inoculated repeatedly with Syphilitic material; in one case as many as 200 inoculations being made in the same man. M. Auzias' prophylactic inoculations naturally gave rise to some great opposition, discussion, and some support but after some hundreds of people in France, Italy, Sweden, and elsewhere had been given Syphilis by his methods his theory based as it was upon insufficient experiment and imperfect deductive reasoning was exploded. Syphilization however took many years to die. A full account of the method was given by M. Boeck to Mr. Skey's "Venereal Committee," in 1864 (Report of Committee is in A.M.D. Report 1865.) Boeck, of Christiana, strongly advocated Syphilization.

About this time there started in Russia a theory that Vaccination was of value as a preventative against Syphilis in its constitutional forms.†

Auzias Turenne, at the Vienna Medical Congress

† A similar opinion that Vaccination prevented plague was eagerly believed by natives in Bombay during the plague in 1896

1873, advocated that all male children should be inoculated with syphilis as a safeguard against their contracting it for themselves in the future. †

Within recent years Continental bacteriologists have introduced serum-inoculation treatment for syphilis. The serum of dogs, horses, and calves which have previously been inoculated with blood serum and syphilitic material from patients in the Secondary Stage of syphilis is used but it is a curative not a prophylactic treatment. Lang lately (Berliner Med. Wochenschrift, June 2/1900, quoted in B.M.J. Aug. 4th 1900) remarks that we should not wait until we have a complete knowledge of the biology of syphilis before endeavouring to find a means of immunisation against the disease; this is proved by Jenner's historical discovery. He suggests experimental inoculations in persons in the stage between the initial ~~stage~~ lesion and the initial symptoms and thinks criminals undergoing long sentences, being under continuous medical supervision, are the most suitable persons on whom to try experiments.

2. Legislative measures.

From the earliest times attempts have been made to restrain the ravages of venereal disease by means of legislative measures principally in the direction of regulation of prostitution. Amongst the Romans during the unrestrained libertinism of the Empire measures were taken to ensure cleanliness in person, dress, and the surroundings

† During the reign of King Rhadama VI., of Madagascar, a French physician, Dr. Maillon, carried out a colossal experiment to see if inoculation with syphilitic virus would protect against syphilis, or produce a milder type of the disease. Two thousand slaves were inoculated and all of them contracted syphilis.

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† L'Agneau's Work on "La maladie Vénérienne", Paris, 1812

Nov. 22, 1902.] A PARASITIC ORGANISM IN SYPHILIS. [The British Medical Journal 1665

refuse any federal association with any other College, as, for example, University College, Sheffield.

The Yorkshire College, Leeds, is opposed to the disruption of Victoria University, and will resist any proposal by Owens College to carry on the corporate existence of Victoria University in an independent university in Manchester. It has the support of the county councils of the three Ridings of Yorkshire and of the Corporation of Leeds, and all these bodies, as well as the College itself, will be represented by counsel at the hearing of the matter by the Committee of the Privy Council. Leeds, therefore, it would seem, has been forced into a three-cornered duel: it objects to the proposal of Liverpool to dismember the Victoria University, and it objects to the desire of Manchester, should the dismemberment be decreed, to continue the Victoria University as a local University in and for Manchester.

With regard to the attitude of the graduates of Victoria University, it would appear that the majority are in favour of change, but that a respectable minority are opposed to it. Convocation, however, has presented a memorial to the Privy Council in support of that of the Court of Governors referred to above, so that it favours the creation of three separate universities should Liverpool obtain the charter it seeks.

If the question could be considered from the medical point of view alone, the reasons which exist against the policy of increasing the number of universities empowered to grant medical degrees would deserve very great weight, for a medical degree is tantamount to a licence to practise, and with each addition to the number of such degrees the degrees from universities, and diplomas from corporations, would be of the nature of honorific distinctions. This is an end which the British Medical Association long sought, and we conceive it to be probable, though we have no authority to speak on the subject, that when a measure to amend the Medical Acts is again brought before the Association, it will contain provisions for the erection of a single portal, or for some close approach to that ideal.

But, in the meanwhile, if three universities are to come into existence in the two counties of Lancashire and Yorkshire the question may become pressing, and several expedients have been suggested. Dr. Brown's plan is to let the other faculties in Liverpool, Manchester, and Leeds go their own way, but to make the Victoria University a medical university, by the federation of the medical colleges, or rather the medical faculties of the colleges in the three cities, with power to affiliate other colleges of medicine. This scheme was not accepted, and although Dr. Brown brings forward statistics to prove that the number of medical degrees at present granted by Victoria University is not large, and that some of the medical students of the three colleges seek degrees elsewhere, it does not seem to be in accordance with modern views and tendencies in respect to higher education. The strength of the movement in this direction which we are witnessing is due, to a very large extent, on the one hand to the existence of a feeling of local patriotism, and on the other to the opinion that medical education intimately related as it is, or ought to be, to subjects taught in the faculties of arts and science should

refuse any federal association with any other College, as, for example, University College, Sheffield.

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In 1900 Professor Max Schüller stated that in primary, secondary, and tertiary syphilitic lesions, he had found certain bodies which he held to be parasites and character-

istic. Since this time he has examined bacteriologically and histologically a large amount of material[1] on the same lines as the work he has done on carcinoma. The first series of observations was made on coverslip preparations from the surfaces or from the incised edges of primary chancres. In all cases he has found in these preparations certain capsulated bodies, some with protoplasmic contents, some empty, which he takes for one stage in the life-history of the parasite. They are for the most part pear-shaped or triangular, and brownish-yellow, but darker in the centre, which is often dark-brown or black-brown. In the same preparations there are protoplasmic masses similar in appearance to the contents of these capsuled forms; they are probably actually escaped contents, as alongside there are found empty capsules; smaller isolated or grouped forms, round or oval, with a double-contoured wall, greenish-yellow colour, and characteristically striated wall, are also seen, Professor Schüller speaks of this as the young form of the organism. It resembles exactly the young organisms which developed in cultures to be described later, and which arise in part from subdivision and escape of the contents of the capsule form and in part by multiplication by direct division. All these forms are found on the surface of initial lesions, but also characteristically in certain tracks which lead from the surface to the deeper parts, and along which the parasites make their way inwards.

Occasionally Professor Schüller has seen a mycelial form which he believes has some relation to the others. He looks upon these coverslip preparations as valuable for diagnosis; they are best made unstained by drying the slip in the air and clearing in xylol. The same appearances were seen in a chancre of the upper lip of a young girl, and the invasion of the parasites into the connective tissue and between the muscle bundles could be traced. In sections, staining with a solution of iodine in potassium iodide gave good results, and clearing in lavender oil is specially recommended. The characteristic tracks are easily shown by ordinary methods. The parasites in the capsule form are well shown by thionin, in the young form by Gram's method; they give a good double stain with indigo carmine and bismarck brown. In the primary chancre the parasites give the haemosiderin reaction, and iron can also be demonstrated in them. In an old primary ulcer of four months' duration the invasion tracks were not seen, and the organisms were present diffusely in the form of young free parasites or capsules filled with the same.

In one case Schüller had the opportunity of examining the primarily infected glands, and was able to demonstrate the parasite within them; he has also found them present in a secondary condyloma, in the enlarged spleen of a patient who died during the secondary stage of the disease, and in five cases of tertiary syphilis affecting joints. They were found also in congenital syphilitic lesions, such as gummatous nodules in various situations, in syphilitic osteomyelitis, lesions of the knee and other joints, and in enlarged glands.

What are described as cultures of the parasite were produced by incubating portions of tissue from primary chancres from primarily infected lymphatic glands and enlarged glands in the congenital form of the disease. These were placed in flasks closed with rubber stoppers and incubated at 37.5° to 38° C.

Contamination with other organisms usually occurred, but the characteristic bodies could be distinguished in all stages of development, the young forms being numerous, the large capsule forms uncommon. Sections of the incubated pieces also showed the various forms to great advantage. A number of rabbits were inoculated from those "cultures" which were not contaminated, but the results appear to have been unimportant.

Professor Schüller looks upon the parasite he describes as belonging to a class about which little is as yet known, but which he thinks includes the forms which he has described as characteristic of carcinoma and sarcoma. He considers that they are so characteristically related to the initial lesion, and so constantly present in later stages of the disease that they must be considered causatively related to it. His papers are accompanied by numerous drawings of the described parasites, and of sections illustrating their mode of invading the tissues. It will be remembered that Professor Schüller's researches on carcinoma were freely criticized; some of the criticisms he has successfully answered—for example, that which maintained that some of the "parasites" were cork cells accidentally present in the reagents used; other criticisms still hold their ground. The question is more likely to be forwarded by attempts at culture either similar to those he has carried out or otherwise devised, than by discussion based on histological examination of the lesions alone; the long-drawn-out discussion on the "cell inclusions" of carcinoma illustrates the comparative futility of the latter.

[1] *Centralbl. f. Bakt.*, Nos. 5, 6, 7, 8, and 9, Bd. XXXII, 1902.

THE COPYRIGHT OF THE JOURNAL.

As the medical press is recognized to exist mainly for the diffusion of medical and scientific knowledge it has been the custom to permit greater latitude in the republication of original articles than is usually allowed in other forms of periodical literature, etiquette only requiring that the source from which such articles are taken should be acknowledged. Of late years, however, a practice appears to have grown up of reproducing for the purposes of trade advertisement articles which have appeared in the medical press, this being often done without the consent either of the writer or of the journal in which such articles originally appeared being obtained. In order to prevent abuse and to keep control over all matter appearing in the British Medical Journal, the Council some years ago copyrighted the Journal, and consequently nothing can be reprinted therefrom without incurring the risk of penalties under the Copyright Acts. It is desirable that this fact of the Journal being thus protected should be better known. Dr. Edridge-Green recently had to complain of the republication without his permission or the consent of the Council of his article on the Essentials of a Test for Colour Blindness in the *Optician and Photographic Trades Review*. To the article as thus republished was appended a footnote to the effect that it had been read before the British Medical Association, and the editor of the *Review* appeared to think that this was sufficient acknowledgement, whereas it really aggravated the offence against the author by implying that a paper which had been read at a meeting of the Association had been sent by him for publication in a trade journal. The editor of the *Review* has, however, been brought to a due sense of his responsibilities, and has, in a recent issue of his paper, published an acknowledgement

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2. Legislative measures.

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Guide to insertion of Charts.

C. D. Acts were then in force, in London, in 1430. Beckett also says that regulations were laid down in that year for the surveillance of houses of ill fame in London. By these it was enjoined that the prostitutes as well as the men who consorted with them, should be

† L'Agneau's Work on "La maladie Vénérienne", Paris, 1812.

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Paris, 1812

2. Legislative measures.

of prostitutes. The Emperors Constantine, Justinian, and the two Theodosius, however, attempted to suppress prostitution by severe laws. Prostitution was prohibited and prostitutes were punished by whipping, banishment, and confiscation of property. Charlemagne also dealt with the evil with great severity but after his time all measures were abandoned and the four centuries which followed were characterised on the Continent by unrestrained immorality. St. Louis, King of France, after his return from the Crusades again attempted to revive the old prohibitory laws but in the end found it necessary to recognise prostitution and from his time date measures which regulated prostitution by permitting it to be carried on in special neighbourhoods in the large cities such as Paris, Avignon, and Toulouse. A similar ordinance appears to have existed in London. We read, "Il existe d'anciens réglemens et statuts relatifs à la discipline d'un hôtel de débauche à Londres, et d'un autre à Avignon, lesquels datent des années 1347 et 1430; ils contiennent des articles où il est ordonné de visiter souvent les courtisanes, et de renfermer celles qui sont infectées, pour les empêcher de communiquer du mal aux jeunes gens." †
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frequently examined and those persons "attaints d' écoulemens par le serge ou le vagin" were to be isolated until they were perfectly cured.† The regulations were evidently directed against gonorrhœa. The great epidemic of venereal diseases in the 15th Century led to renewed efforts at legislative prevention and isolation of sufferers became the law of the period. The rich were segregated in their own homes the poor driven away from their fellows on pain of death. Even the physicians at one time considered it infra dig. to treat the disease. At Strasburg in 1495, and Paris in 1496, the measures were particularly rigorous when directed against any foreigners affected with the disease. In 1497, in Scotland, James IV and his council issued a proclamation, dated 11th Dec., commanding that "whoever found himself afflicted with that strange "and loathsome disease, lately come amongst them, "called the grand gore (the venereal disorder) should "immediately repair to the Sands of Leith, where "boats should be ready to transport them to the island "of Inchkeith, or some distant corner over the Forth, "there to remain till God should send them relief; "which, if they did not, they were to be burnt on "the cheek with a hot iron, and banished the "city for 3 years."‡ In Scotland generally its worst

† Philosophical Transactions, London, vol. XXX, No. 357.

‡ Quoted from Monro's "Decine of Solvis," 2nd Ed., 1780. Creighton also mentions this proclamation.

appear that at this time "Sufferers from grand gore (Syphilis), beggars, and lepers" were excluded from the towns for we read that James IV, when visiting a place, mercifully went to "the town-end" and gave money to these classes of his subjects. Leprosy was, in Mediæval England confounded with any form of Chronic Skin disease and I have no doubt, after a study of the authorities, that severe syphilitic eruptions were often written down as leprosy. In an Ordinance of Edward III, in 1346, lepers were excluded from London and it was mentioned that the ordinance was necessary owing to the spread of the disease through immoral intercourse. For the care of these "leper or lazar houses" were provided. In Southwark at this time was a lazar house known as "the Loke", the original Loke or Lock Hospital. Creighton, says "By this "time (Early Tudor period) leprosy had ceased to be heard of "in England, but another disease, syphilis had become "very common" and it is known that these Spittals "were used for the poorer victims of that disease."

Prostitutes were first subjected to sanitary visitation by Voyer d'Argenson, the notorious Chief of Police in Paris in 1714. In France, in 1762, it was required that keepers of brothels should be responsible for the sanitary condition of the inmates of their houses and that these women should be subjected to frequent visits by the police surgeon. Towards the end of the Century it was urged that special hospitals should be provided for the treatment of those cases suffering from venereal disease

In 1778 Lenoir, the chief of Police in Paris issued the celebrated order which may still be legally enforced in France when necessary. In spite of its severity little benefit followed it. In 1802, 1811, Health dispensaries, to which persons and prostitutes affected with venereal disease were required to come for inspection and if necessary detention, were established in Paris. This system is said to have been followed by benefit. L'Agneau, Diday, Davila, Ratier, Mare, Acton, and Lancereaux have advocated that the men also should be periodically examined. This was first done in Belgium. In that country prostitutes and suspected servant women and waiters were required to be examined twice a week. No soldier was allowed to be treated for venereal in barracks and he was obliged to point out the woman who had infected him. The carrying out of these regulations was entrusted to a special controlling inspector. As a result, in Belgium, only one soldier in 140 was diseased, whereas in Strasburg in France, 1 in 33, and in Lyons 1 in 40 were the ratios. The glass blowers in Lyons and in many large manufactories in Germany periodical venereal inspections of the employés are carried out at the initiative of the men themselves. In Hamburg the keepers of brothels are required to inspect men frequenting their houses. Good results have followed. In later years many writers in England have insisted that if it is necessary to inspect the woman it is equally necessary to examine the man.† I think there can be no doubt that such action is desirable but at the same time it is a procedure infinitely more difficult to carry out than it

† See discussion on the subject at the British Medical Assoc: in 1899.

would be in the case of prostitutes. The legislative measures adopted in France of registration of prostitutes, their periodical medical examination, and removal if diseased to hospital, were soon adopted in other countries. In Sweden, the law was very strict, it required medical examination of nearly the whole adult population. Examination included all market women, postboys, visitors at inns and fairs, domestic servants, wet nurses, babies put out to nurse, all fishermen on their return to harbour, sailors on their return home, and all troops weekly. As a result venereal disease is said to have decreased by one half. The chief differences between the legislative measures adopted pretty generally on the Continent consists in the frequency of the medical examinations and the thoroughness of these examinations. In Hamburg and Brussels the speculum is always used twice a week, in Paris the speculum is only used once a month, in Bordeaux Rheims and Marseilles the speculum is only used in exceptional cases.

I have elsewhere described the various legislative measures adopted at different times in the United Kingdom, our Colonies, and in India. and have expressed my opinion that legislation in this direction is not called for at present in England or in some of our Colonies. The Contagious Diseases Act, East India, of 1897, is in force in India & should lead to good results. It might with advantage be extended to some of our Colonies in the East, such as Ceylon and Hong

Clandestine Prostitution.

Many writers who are opposed to the C. D. Act in any shape or form, some Sanitary Commissioners, Medical Officers and others have stated that réglementation leads to clandestine prostitution. Is this so? If so, why should this be the case? In support of this opinion, which is not capable of any really definite proof for C.D. Acts or no C.D. Acts Clandestine prostitution will always occur, is the fact that women dislike examination and registration. For one thing it stamps them as members of a degraded class. On the other hand if there was no demand for prostitution there would be no prostitutes. The laws of supply and demand come in here as in other branches of Social and political economy. Where réglementation is in force we do not find the number of registered prostitutes diminish year by year, in other words the demand and supply are fairly constant and we may suspect that where clandestine prostitution is concerned the same law holds good. Nor is it clandestine prostitution which keeps venereal prevalence high, for Fournier's statistics show the tendency to be the other way. There is probably no more venereal disease contracted from clandestine prostitutes in proportion to their numbers than from public ones. We should not therefore allow any fear of clandestine prostitution to prevent us from enforcing legislative measures against prostitution in any place where they appear to be necessary.

Prophylactic Measures.

Isolation.

Isolation of those suffering from venereal disease.—

"From the point of view of preventive measures, in diseases like rabies, or syphilis, or small pox, or leprosy, where infection can be found in the patient alone, precautions of isolation taken with regard to the sick, and their closest surroundings, must affect directly the prevalence and propagation of the disease." Such are Professor Haffkine's views as stated at the Royal Society and I think we must all agree with him. Infection can only be derived directly or indirectly from an infected person. The germ of the disease is incapable of existence outside the human organism. We should therefore, whenever possible, isolate those infected with venereal disease. It has been well said that if every person suffering from venereal disease could at the one time be isolated and kept segregated until cured, venereal disease would disappear entirely.

Circumcision.

Circumcision

At the Vienna Medical Congress in 1874, it was recommended that, as a means of preventing venereal contagion, all male children should be circumcised. Erichsen† after saying that all cases of congenital phimosis should be circumcised, goes on to say that "even those who, without having phimosis have an abnormally long and lax prepuce, would be improved greatly in cleanliness, health, and morals by being subjected to

† Surgery, 9th Edition.

the same operation." He points out that phimosis (and tendency thereto) gives rise to local irritation and excitation and favours the development of the habit of masturbation and other immoral practices. Jonathan Hutchinson, Junr. (in Lancet, June 2nd, 1900) says- "You know it is generally believed that Syphilis is comparatively rare in the Jews. We do not know that they are, as a race, more moral than Christians, but the fact is undoubtedly true that Jews do not contract primary chancres in nearly as high a proportion as Christians. And you can understand the reason, for with the prepuce done away with and the skin, glands, and furrow harder than in normal cases, the risk of syphilitic infection is diminished. My experience, both at the Lock Hospital and at the London Hospital, where one sees a great number of Jews in the out patient department, is that while they very often contract Gonorrhoea, Syphilis is a comparatively rare event with them." Such is also the experience of those who have attended upon Mahomedans. In the old days the British Soldier had great faith in Circumcision as a protective measure, and medical officers, under the Regimental System, held strong opinions in favour of its efficacy as a protective against Syphilis. One, formerly Medical Officer to the Cameron Highlanders in India, and a Second, formerly a Royal Artillery Medical officer, have told me that large numbers of the men were circumcised

formerly and that venereal disease, except gonorrhoea, was less frequent as a result. In India, in 1897, 59 men out of a strength of 64,531, were circumcised so we can scarcely say that it is tried to any extent as a protective measure now-a-days. Circumcision then, is a protective measure of some value, and, we should endeavour to circumcise the soldier whenever an opportunity occurs. Many might with advantage be operated upon, without loss of their services, during the voyage to India. I have lately taken advantage of men being in hospital with other complaints to circumcise them and have had many men ask to be done.

The Question of destruction of the Primary lesion.

Destruction of Primary Sore.

Numerous experiments have demonstrated that the discharge, either serous or purulent, of the primary sore is contagious. A question of great interest is, when can we say that the disease has become constitutional? Pellizzari's experiment in 1860, when he inoculated Dr Bargioni with blood taken from a woman in the Secondary stage of Syphilis, the result being the appearance at the site of inoculation of a papule in 25 days, a typical "hard one" in 44 days, and a roseolar rash on the trunk on the 65th Day; shows that, as one would expect, the blood in constitutional Syphilis contains the contagium. Now, at what period after inoculation does the blood become infective? Is it before or after the the appearance of the hard sore?

If after the appearance of the sore, how long after? and is it before or after the induration appears? These data appear to me to be important and I do not know that they have ever been definitely demonstrated. If we can fix the period at which the blood becomes affected we shall be in a position to state whether excision or destruction of the sore in its different stages, (as a papule, or as a sore, soft or indurated,) is likely to prevent the further incidence of the ~~disease~~ symptoms. Hutchinson and others say it will. Erichsen says no, certainly not after induration has appeared. Jonathan Hutchinson says the question is doubtful. Berkeley Hill says destruction of the sore is useless. Lancereaux sees in the chancre "the external and primary manifestation of a general condition already attained." Excision, if this is so, will be of no avail. Hunter, Ricord, and many others think the primary sore a local lesion which only infects the general economy afterwards. Ricord used invariably to destroy the primary lesion by means of the Cautery. In many diseases destruction of the primary lesion prevents the further spread of the disease. In vaccination and in inoculation with glanders destruction of the site of inoculation must follow very rapidly after inoculation if the further incidence of ~~syphilis~~ symptoms is to be arrested. In 1897 a well known bacteriologist showed me a sore on his penis which we both from its history & appearances considered to be a primary syphilitic ulcer. The patient excised the sore

and some of the surrounding skin and applied some corrosive sublimate to the wound. In July, 1900, he told me that he had had no further symptoms of syphilis and that he had not taken mercury. One cannot argue from one case that excision certainly prevents further symptoms but I am inclined to think that in many instances it does. Destruction of soft sores is also good practice.

Private Hygiene.

Prophylaxis by attention to private hygiene.

Personal hygiene as a means of protection from venereal disease has occupied the attention of legislators and physicians from the earliest times. Celsus is said to speak of it at great length, but the oldest book I have seen which refers to the point is Lanfranko's Chirurgia†, which dates from 1290 A.D., It recommends washing the penis with vinegar and water as a method of prophylaxis against disease contracted from dirty or diseased women. Different writers have at different times advocated many diverse substances for use in this way. These substances may be divided into three classes. The first class consists of astringent and alcoholic lotions which act by preventing absorption by hardening the tissues or by modifying the circulation in the part. The second class act mechanically and prevent absorption by means of a protecting coating over

†Published by the Early English Text Society.

over the part. The third class are remedies which aim at destruction of the venereal virus in situ and consist of caustic and antiseptic substances. In the first class are lemon juice, recommended by Fracastor, (who first called Syphilis by that name in a poem) and others, vinegar, urine, wine and oil, aromatic alcoholic decoctions, wine and turpentine (Ettmuller, 1690), Tannin and Alum (Mehon), Sulphates of Zinc and Lead (Rivord), Astringent ointments followed by washings with alkaline substances (Warren, Hunter, Fordyce, &c). In the Second Class are oils, ointments, Vaseline, and fats of different kinds. In the third class may be included the alcoholic preparations, Turpentine, and aromatic substances also included in the first class. Alkalies (Rivord, Langlebert, Luna de Calderon, Hunter, Fordyce) Acids (Rivord), Caustics and antiseptics such as nitrate of Silver, perchloride of iron, chromic acid, Hydrochloric acid, Corrosive Sublimate (Waddomme), Chlorine and its preparations (Rivord, Coster, &c), Permanganate of potash, Iodal, Creolin &c.

These substances which prevent the poison being absorbed are indicated for use before the act, the acids, alkalies, and alcoholic solutions may be used at any time, and the more powerful substances such as Corrosive Sublimate, Creolin, &c, should be applied if any breach of surface be observed. The value of this class depends largely upon

the rapidity with which they are applied after exposure to infection. These means of local hygiene are by no means certain preventatives of disease, but they do, to a great extent, diminish the risk of infection, and I think a knowledge of the fact that simple washing and the use of some of the simpler substances mentioned above, if present must venereal disease, could with advantage be extended to the private Soldier. The great majority of medical witnesses before the Venereal Commission, in 1864, declared that simple washing after coition certainly would prevent a large amount of disease. Health lectures & the men giving this information would be conducive to a diminution of venereal disease amongst them. The man who thoroughly washes himself after sexual intercourse is less likely to contract venereal disease than one who neglects this precaution. Where the prepuce is big any contagion from the woman is likely to be retained beneath it and thus give rise to gonorrhoea, balanitis, or to sores, if there be any scratch or breach of surface there. Many 'men about town', in London, carry about with them tablets of corrosive sublimate or of potassium permanganate with which to prepare solutions for washing purposes after sexual congress.

Ablution Room & taps in barracks.

I am informed by a Major of the Royal Artillery that, from a few years ago, the Commanding officer, R.A., at Aden rented a room in the bazaar.

where means of ablution with antiseptic substances were provided for the use of the men. (The men were also encouraged to write on a slate, hanging in this room, the name of any women known to be diseased. This was for the information of the other men.) As a result venereal disease became very rare amongst the Royal Artillery at Aden. A new Commanding Officer, however, on his arrival closed the room, and the coming into the Station of a Battery from Delhi, brought an increase of venereal disease in the Station. Venereal disease then became more prevalent than ever. I think this idea of an ablution room, properly looked after, outside barracks, a good one, and there are doubtless many stations where it could be advantageously adopted.

In some stations in England, and in the Guards' barracks in London, taps were formerly provided in the urinals for the purpose of local ablution. It was expected that these would be used by the men and lead to a decrease in venereal disease. The taps were not, I believe, found to answer the purpose intended; perhaps the men considered their position too public, and they fell into disuse. When I was in the Home District some years ago, it was suggested that the arrangement of taps should be revived in the Guards' barracks, but I am unable

to state if the suggestion was carried out. There should be no difficulty in supplying a quantity of antiseptic solution to the ablution rooms in barracks. These rooms are, at night, deserted and a man would be sure of privacy there on his return to barracks at night and could carry out his ablutions without exposing himself to the "chaff" of his comrades.

Venereal prophylaxis by means of Mechanical preventatives.

At Colaba, Bombay, in 1897, the Middlesex Regiment adopted a system of sale of mechanical preventatives. These "Letters" were sold by the Colour sergeants of Companies. A diminution in the regimental prevalence of venereal disease resulted. Later on, at the same station, venereal disease became very prevalent in the Norfolk Regiment and appeared to be increasing in severity of type – the phagedenic sore was very common. In June, "French Letters" were first issued on payment from the Soda Water factory. I was in charge of the Norfolk sick during the whole of the year and noticed no decrease in the amount of venereal disease, but on the other hand enquiry elicited the fact that not a single ~~case~~ man in hospital with venereal disease had made use of these preventatives. One man gave this explanation "Well, sir, it is like this

when you get the girl, you generally find you have forgotten the letter." The difference between the two regiments is probably due to the fact that the Middlesex Regiment men are chiefly Londoners, the Norfolk Regiment men are country lads, and not so well acquainted with the use of or need of preventatives. The sale by Colour Sergeants is a better idea than sale in a soda water factory. The Colour sergeant can take the opportunity of selling & explain the advantages of the use of these preventatives and he knows the men who are most careless and most likely to need them. No doubt many people would be shocked to learn of the sale and recommendation of such articles in the Army. I know of one Major in the R. A. M. C. who was reported to the general for recommending their use to the men in a 'Health Lecture.' We are, however, not dealing here with sentiment but with facts. The sale of these articles need not be openly advertised and no scandal need arise because they are sold regimentally.

Pocket Money and Venereal Diseases.

Question of Pocket Money

Dr Luscombe, surgeon to the 34th Regt., in 1870, stated that he noted an increase in the number of sick after the men had received any accumulation of back pay. He says the command of money led to

intemperance and debauchery amongst the men. As a means of preventing this he advocated the establishment of Regimental Savings Banks, not then in existence. It may be noted that many Army medical officers of the present day hold the same belief that excess of pocket money leads to increased immorality and disease. This is one of the explanations given for the alleged excessive amount of venereal disease amongst the teetotallers in the Army. It is argued that, the temperance men, not needing to spend money on beer, has more money to spend on women.

Under the recent new messing regulations the soldier is paid 3d. a day for extra messing in lieu of defered pay. One result is, that when he goes to hospital, he loses this messing money as well as his hospital stoppages of 7 d. a day, (that is he now loses 10 d. a day when in hospital instead of 7 d. as heretofore). This has in one regiment, to my certain knowledge, led to concealment of disease. In 1895, the Medical officer at Calcutt, stated in his annual report, that the new messing regulations "whereby men come to possess a lump sum of hard cash, encouraged venery, and therefore increased disease." We must therefore regard measures tending to encourage Thrift and the habit of saving money amongst the men to be, amongst others, the means of preventing immorality and the diseases incident

Thrift.

thereto.

Intemperance and Venereal Disease.

Temperance should be encouraged.

Until recently it was practically regarded as an axiom by all writers on venereal diseases that these diseases were more common amongst the intemperate than amongst those temperate in the use of alcohol. In addition to the lowering of the moral sense which long continued excess in alcohol induces, other factors come into play. Thus, the drunken man, with his mental perceptions blunted by alcohol is more likely to associate with dirty women or low class prostitutes and, since he spends most of his spare money on drink, he is only able to spend small sums on the votaries of Venus, and this fact also obliges him to associate with lower class prostitutes. A drunken man also is unlikely to take any hygienic precautions after sexual congress and is, in this way, more liable to contract disease. In addition, the alcoholic subject is more liable to suffer severely with venereal disease once he has contracted it. Gonorrhoea is always aggravated by drink. Boerhaave points out the bad effect of Alcohol on syphilitic subjects. Lancereaux and other French Writers consider that Secondary (and tertiary) syphilis is more precocious and severe amongst alcoholics than other people. Ricord says chancres of all kinds are more severe and show the greatest tendency to low inflammatory action, edema, and phagedaena, amongst those addicted to the abuse of spirituous liquors, and that this tendency is most marked in warm seasons and climates. In India

the soldier is less drunken than his predecessors and yet suffers more from venereal disease. This need not prevent us however from advocating temperance amongst the men as a means calculated to increase the soldiers powers of self control and indirectly tending to lessen the amount of venereal disease of severe type in the army.

Measures more strictly applicable to the Soldier than others.

Official Deprecation of Immorality.

A study of the writings of military men and others on the prevention of venereal disease in the Army reveals an almost universal concurrence of opinion that the Authorities should be careful in no way to do anything which may lead the men to think that those above them in rank are indifferent to (or show any encouragement of) vicious practices. The Military powers that be should make it evident to every one in the Army that vice is a crime, that good moral character is one of the highest and most to be esteemed attributes of a good Soldier. In order to foster this desirable feeling amongst the soldiers I submit diffidently that the following recommendations are worthy of official consideration. Venereal disease should be made a military crime just as drunkenness is. A man's first admission to hospital with venereal disease may be the result of a momentary lapse before unusual

Disciplinary Measures.

temptation. No official notice should therefore be taken of the first admission to hospital. Admissions for secondary syphilis also should not for obvious reasons be noticed, but all admissions for primary disease after the first should bring with them, as a matter of course, the entry of the letter "V" on his Regimental Defaulter Sheet, the punishment of extra drills and perhaps an increased hospital stoppage. In addition all men who have been in hospital with venereal should be obliged to make up the number of guards and fatigues which they have missed whilst in hospital. In some regiments it is the custom to make these men do a certain number of extra drills when they come out of hospital to make up for the efficiency they have lost in hospital. This custom should be made official and universal. No "soft billets" about barracks should be given to men who have had much venereal disease. Their permanent passes should be stopped, and, in India, no shooting passes allowed them. Amongst the R.A., at Bombay, a venereal admission entails loss of the permanent pass.† The number of "V's (proposed above) on a man's defaulter sheet should be considered by his Colonel when a man's name comes forward for promotion or when a man's character is being assessed on his leaving the service. This character should mention the man's morals. At the same time the quality of mercy should ~~not~~ be considered and, if a man has had

"In the French Army an admission for † venereal entails 30 days confinement to barracks. L. Beck. Tronchin 1899.

no admission to hospital for venereal disease for an officially fixed period, say one year, thus showing to some extent moral reformation it should clear his 'sheet' of all previous admissions. When a man applies for permission to marry, permission should be refused unless three years has elapsed since his last admission for syphilis, and unless the medical officer, in addition, certifies that he is, at the date of application for permission to marry, free from symptoms of venereal disease.

When a regiment shows an annual admission rate for venereal disease in excess of the average admission rate for the whole army, it should be detained from active service until after all regiments showing less than the average rate have proceeded to the front, and such regiments should then be employed, if possible, only on the lines of Communication and at the Base of Operations. If such a regulation was in existence, ~~and~~ known to both regimental officers and their men, and rigidly enforced, it would, I am convinced, cause officers and men to set their faces against vice, and an improvement would soon ensue in the whole army. In opposition to these ~~measures~~ recommendations it will be urged that such measures will tend to induce "concealment of disease". Perhaps so, but we already have means of preventing this concealment. The weekly medical

examination of the men, if thorough, would prevent a good deal of concealment. In India, if concealment is suspected the Commanding Officer can arrange with the Medical officer to carry out a surprise 'venereal inspection' of the men. Married men and men of good character are exempted from inspection. At present soldiers have little inducement to conceal disease, but when a regiment is warned for active service, concealment is likely to occur. The Queen's Regulations direct that 'Concealment of disease' is to be dealt with under Sec. 11 of the Army Act, by Court Martial. As a matter of fact this is rarely carried out. I have never known a man to get more than 10 days confinement to barracks for concealment of disease.

Men sick with venereal disease were in the 18th century fined half a guinea but the custom was abolished "as tending to induce the Soldier to conceal his disease, or apply to quacks for a cheaper cure; both of which may be prejudicial to his Constitution" (See Dimsdale's History of the Royal Regiment of Artillery). A similar result followed the stoppage of the venereal patient's pay while in hospital, by Lord Cardwell in 1873. There is little venereal disease in the Royal Engineers and the other departmental Corps. The reason is that in these Corps the men get an addition to their pay called "working pay" or "Corps pay" and this they lose when in hospital. It might be feasible to introduce the same System in the Infantry, not Cavalry and Artillery.

It would also be a great improvement if men in hospital with ordinary diseases were not subjected to hospital stoppages. Hospital stoppages could then be confined to those admitted for venereal disease.

One of the Artillery Regimental Standing Orders, issued about 1743, by Colonel Borgard runs thus;— March 29, 1743. "That if any non-commissioned officer or gunner make himself unfit for the King's duty, either by drinking, whoring, or any other bad practice, he will send them to the Hospital at London for cure, and discharge them out of the Regiment." This was severe punishment but it might now be re-introduced with advantage in the Army where "incorrigibles" are concerned. By an incorrigible I would describe a soldier who gives himself up to indiscriminate and persistent venery; careless as to the class of woman he associates with and utterly regardless of the result of his vice. Private A. for instance enlisted in 1893, Aug. 23rd, and on Aug 23rd 1898 was in hospital with severe Syphilis. In the interval he had been 678 days — nearly two years — in hospital for gonorrhoea (7 times), Primary Syphilis, Soft Chancre, and Secondary Syphilis (5 times). Another man Pte Yp, has spent 937 days in hospital since he came to India five years ago. Neither of these men are likely to ever become efficient and such men should be discharged

the service as worthless characters. These are the men that go on active service, break down early in the Campaign, throw extra work on ambulances and hospitals, retire to the Base, are perhaps invalided to England, and rewarded in due course with a war-medal.

The Moral improvement of the Soldier.

Luscombe, in 1820, said "An improved state of the morals of our soldiery would be, however, a far more effectual means of preserving the health of the men from cases of this nature." He advocated the appointment of a Chaplain to each regiment and considered an improvement in the morals of our soldiers "could only be effected by improvement in their education and by instilling in their minds well grounded and moral and religious sentiments." Here the ministrations and instruction of a fatherly and attentive chaplain are indicated supported by the good example of the regimental officers. If the regimental officers are careless & immoral their men will be the same.

Health lectures to the Men.

At the recent Congress of Medicine, in Paris, in 1900, Surg. Major Ferrier of the French Army advocated in a discussion on the prophylaxis of Syphilis in Armies 1. lectures ~~for~~ on personal hygiene to the officers, non-commissioned officers and men, and 2, the issue to the men of a little book on hygiene. Lectures to the soldiers on the care of their health

are now frequently given by medical officers and regimental officers and they do, as I have elsewhere stated, a great deal of good. They make the men think, they give them knowledge, and they encourage them to exercise their self control. The lecturers should however be selected men & men who are attractive and telling public speakers and such lectures should not in my opinion be associated with any religious movement.

Recreation.

At the present day athletics are greatly encouraged in the Army, football, Cricket, and hockey also employ the spare time of many men. Then there are workshops and recreation rooms. All these factors are ~~doing~~ working together to prevent the men from being idle. The athletic, sport-loving man is rarely vicious and we may consider these encouragement to exercise as measures ~~of~~ which tend to reduce the amount of venereal disease in the Army.

Purity Associations.

There is an Army Health Association, I believe, but what it does, or how it does it, I have never been able to discover. An Army Purity Association has also been started at some stations. If it meets with only part of the success which

has attended the Army Temperance Association it will do great good in the Army but we want a practical association. Such an association might employ trained lecturers on health subjects, or register the names of good speakers, and arrange for periodical lectures to the soldiers. It might also advantageously publish pamphlets on these subjects and issue them to the soldiers in their libraries and institutes. Special attention should be paid to new arrivals in ~~England~~ India, they should be sought out by the association and warned against the temptations of the country. Lectures might also be given with advantage to the men on the troopships coming to India.

Conclusion.

I have described the prevalence of venereal diseases in the Army, the factors influencing that prevalence, the measures of prophylaxis which have been tried in the past, and the points in the history and natural history of these diseases which have a bearing on prophylaxis, and, finally suggested the prophylactic measures, legislative, hygienic, disciplinary, educative, and moral, I consider worthy of adoption in our Army at the present time. The great lesson learnt however in this paper is an old one— "Qui quid peccat, in eo punitur."

India.
[illegible] 6th 1900.

Appendix. — On remedial treatment towards prevention of Secondary and Tertiary Syphilis. —

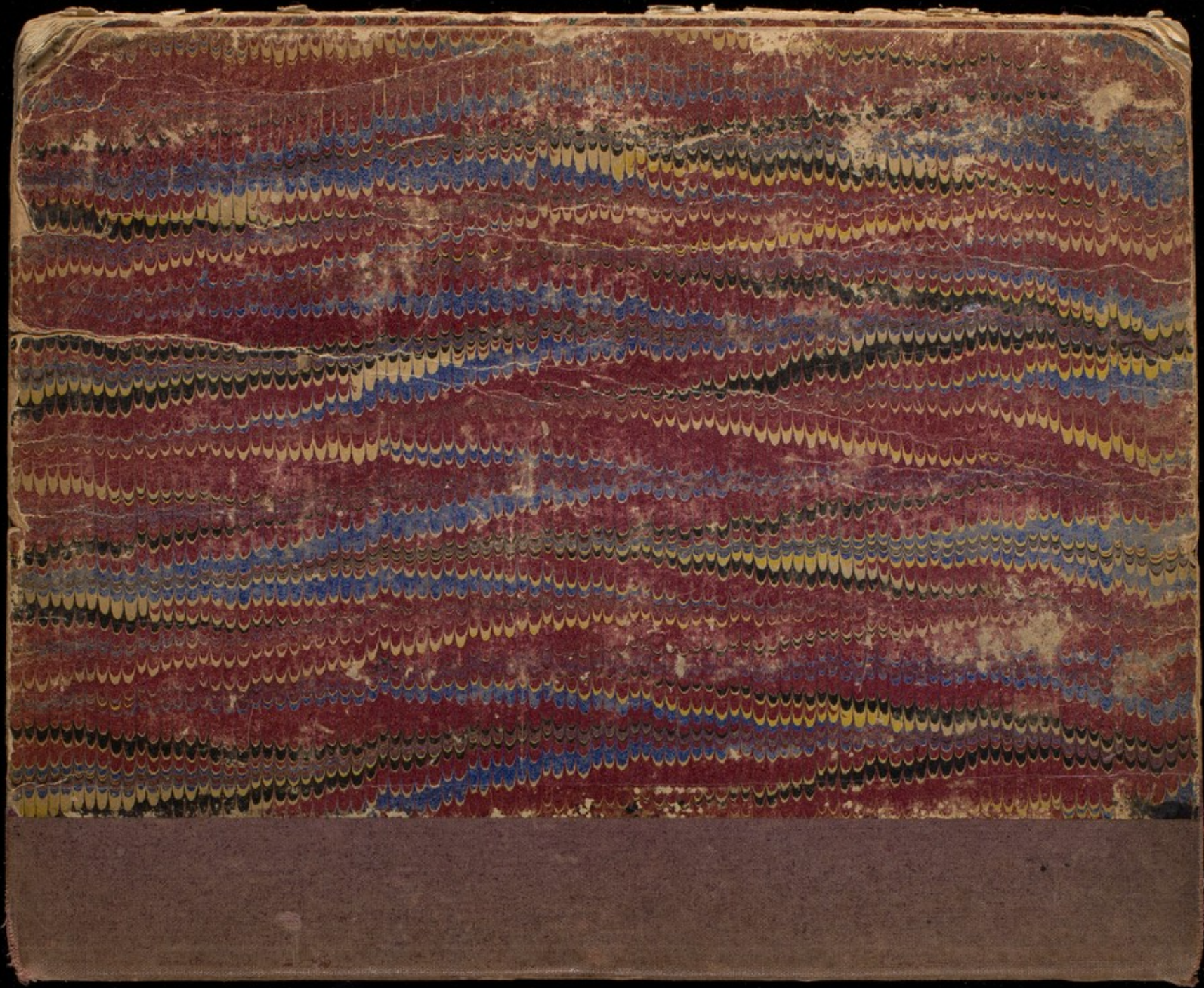
I had intended to deal rather fully with this branch of prophylaxis but am not sure that it is included in the subject of this essay.

Professor Neisser (Selected Essays, Sydenham Society, 1897) states this — "The most weighty etiological factor in the appearance of tertiary syphilides is in my opinion deficient mercurial treatment in the earliest stages of the disease." "A proof of the causal relationship between insufficient mercurial treatment in the primary stage and the manifestation of tertiary symptoms, is furnished by the enormous number of tertiary syphilides present in those cases left untreated." His figures show that out of every 100 male patients (Hospital + private) suffering from tertiary syphilis over 58.66 per cent had had no treatment or only imperfect treatment, over 19.2 per cent had had only one course of efficient treatment, 13.9 per cent 2 or 3 courses, and only 8.09 per cent had had 4 or more courses. His figures then do support his opinion.

Hutchinson expresses the opinion that mercury if given properly over a long period will entirely prevent secondaries and prevent or lessen the dangers of tertiary syphilis.

Personal opinions.

Methods of treatment. — I favour inunction methods and treatment by the mouth. No other treatment in my opinion equals it. I always give quinine with the mercury & large doses of water with the Iodides. As Neisser says, "this method is more thorough & more harmless." It is advisable to treat thoroughly at first and intermittently for 2 years. (Fournier, Hutchinson). I have tried Hypodermic hypodermatic & intra-venous, methods. The last tends to aggravate [illegible] The others are not permanent in [illegible]



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