

A letter addressed to His Excellency the Right Honorable General the Earl of Chatham, Governor of Gibraltar &c.;, relative to the febrile distempers of that garrison / by W.W. Fraser.

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A
LETTER,

ADDRESSED TO

His Excellency the Right Honorable

GENERAL

THE EARL OF CHATHAM, K. G.

GOVERNOR OF GIBRALTAR,

&c. &c. &c.

RELATIVE TO

THE FEBRILE DISTEMPERS

OF

THAT GARRISON.

BY

W. W. FRASER, ESQ.

INSPECTOR OF HOSPITALS,

AND

MEDICAL SUPERINTENDANT OF QUARANTINE AT GIBRALTAR.

LONDON:

CALLOW AND WILSON,

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1826.

LETTER

A LETTER

TO THE

MEMBERS

OF THE

ASSOCIATION

OF

THE

ROYAL SOCIETY

OF

THE

W. W. HARRIS, ESQ.

SECRETARY

OF THE

ASSOCIATION

OF

THE

1851

R35748

A LETTER,

&c. &c.

Gibraltar,
24th of August, 1822.

My LORD,

ON assuming the command of this Fortress, there are few matters which could more seriously demand your Excellency's attention, than such as concern the health of the troops and inhabitants, whether considered as referring to individual points of government, or as involved in the general interests of humanity.

The subject is extensive, and full of difficulty, and possibly so much has been already written regarding it, that I ought not to trespass on your Excellency's time; especially as a system, which has been attended with beneficial effects for many years, is still upheld by your countenance and authority. It may nevertheless be deemed a part of my duty, to submit for your Excellency's consideration, a general outline of those circumstances which led to the measures now adopted; a duty rendered more indispensable, as a work has been lately published by Doctor Robert Jackson, purporting to be an account of the Epidemic Fevers of Andalusia, in which the health regulations of this Garrison are noticed.

No one could feel more inclined than myself, to appreciate favourably the Doctor's speculations, provided he had had sufficient opportunities of investigating the phenomena attendant on the diseases of Andalusia, both in healthy and in unhealthy seasons; but as this was not the case, the learned Doctor's deductions cannot be received with that weight which attaches to his name; neither does the general tenor of his work appear as the legitimate issue of those facts which his own investigations had recorded.

Whilst refusing my acquiescence to many of the Doctor's inferences, I hope that the circumstance of having hitherto

abstained from entering into controversy on the subjects connected with epidemic visitation, will be received as some proof, that I have no individual desire of entering into or discussing the Doctor's assertions, beyond those limits which are marked by official situation.

Doctor Jackson arrived in Gibraltar in January 1820, apparently on an accredited mission from our Government, to investigate the nature and causes of those Epidemics, which infest the northern shores of the Mediterranean;— and a person of higher talent, or one more accustomed to write on disputed points of fever, could scarcely have been selected from the department.

The Doctor presented his reports to the Earl Bathurst; and subsequently, laid a more leisurely and extensive compilation before the public.

Actual experience in Gibraltar, having, in many points, led me to conclusions totally at variance with this publication, I feel inclined to lay before your Lordship a few brief notes concerning the appearance of epidemic disorder in this Garrison since it became a British possession, and following Doctor Jackson's official reports, to notice—

First, The question of the communicable properties of the malady, *id est*, whether contagious or not, in the general acceptance of the term.

Secondly, Some of its peculiarities: especially that of the exemption afforded from second attack.

Thirdly, To present the result of the reports made by the most recent and most able practitioners, in regard to blood-letting in the cure of the distemper.

Fourthly, To add a cursory view of the most remarkable diseases which have occurred amongst the troops in this Garrison since 1814, and to submit what appear the most notable points for observation, or precaution, in conducting the health department of this command.

In soliciting your Lordship's consideration of these matters, I may premise that I have witnessed the febrile disorders of Gibraltar, both previously and subsequently to the epidemics of 1813 and 1814, as well as in those years, whilst epidemics in point of mortality, scarcely surpassed in history, have for the last eight years surrounded this station;—and although I was not a personal observer of the last of these dreadful calamities, yet, from the vicinity of the occurrences, from an official access to the most certain reports, and hearing these discussed at the time and almost upon the spot, I have had as good an opportunity of appreciating facts as may have fallen to the lot of others. At the same time, I beg to state, that I by no means intend here to proffer a formal detail of the epidemic visitations of Gibraltar, and still less, of those which have devastated surrounding provinces or kingdoms.

For a century after Gibraltar became a British possession, we find little notice taken of it in regard to health. We are told by Munro, that Fevers and Fluxes occasionally prevailed. Scurvy at one time ravaged the Garrison, and official records shew that newly raised troops occasionally suffered much from residence in this climate.

In 1804, when it may be confidently asserted the knowledge of this fever was in a more imperfect state than at present, a most alarming malady appeared.

It was at first looked upon as a more severe grade of the ordinary inflammatory fever of the station; but running a course of unprecedented attack and mortality, and when every Civilian in the place, except twenty-eight individuals, out of a population of about nine thousand, had been subjected to this scourge, when nearly one half of this population had been buried, and when every family was clad in mourning and filled with dismay—the disease was, at length, acknowledged to have been “malignant and treacherous.”

These designations were tardily used by those who had maintained this Epidemic to have been only an extension of the inflammatory fevers of the Garrison; and they seem to have been forced upon them by the mortal issue of the fever, and their own individual circumstances.

The treacherous nature of the malady is indeed characteristic; and accordingly we find Doctor Jackson speedily applying this term to the Epidemic on his visit to Cadiz in

1820—and I may remark, it is one which I never heard applied to the common inflammatory fevers of the Garrison.

I cannot, however, better report this character of the Epidemic than in Doctor Jackson's words:—

“The yellow fever of Andalusia, in so far as I have seen, is not a disease of the same violence as the yellow fever of the West Indies: it is more treacherous, and without vigilance, promptitude, and decision, on the part of those who undertake the cure of it, the mortality will be ordinarily great;”—and again “the disease is dangerous because it is insidious, the danger often comes by surprise.”

In the year 1804, easterly winds, drought, burning lime kilns, undue proportion of carbonic acid gas in the atmosphere, &c. presented themselves among the lucubrations of the faculty, as the baneful agents; and their disquisitions were of little more avail than the fanciful flights of a member of an august assembly, who assumed as the actual cause of this direful calamity, the damming up of the beds of the Andalusian streams with slime, conveyed in submarine courses from the rivers of South America, to the complete poisoning of the Spanish waters. Mr. D——l's remedy was natural; he proposed supplying the Garrison with the pure element of the Thames; and his proposition was less noxious than the actual ordinances of the time, viz. the lighting of bonfires, and what may be deemed somewhat of a military remedy, the firing of many hundred pieces of heavy artillery, &c.

The magazines were not blown up as was proposed, probably for military reasons.

The etiology of the disease was little forwarded;—on the one hand it was deemed a *nova pestis*;—a *morbis sui generis*, a specific contagion:—and on the other, a mere increase in the number and severity of the common autumnal disorders, produced or exasperated by a multitude of exciting or predisposing causes.

Amidst these discussions practice advanced but slowly; bleeding was resorted to and abandoned;—emetics, in conformity to the home treatment of the day, were given, and finally rejected as highly injurious;—the Physician General, when applied to for his opinion, recommended “Sultan's Punch”—a sherbet made with æther.

It appeared that in subjects where the bowels could

be readily moved, a perspirable state of the skin induced, free ventilation afforded, and a strictly antiphlogistic diet maintained, recoveries indeed took place; but these only in such limited numbers, as to lead to the melancholy conclusion, that there was no remedy for this formidable malady; regarding which, there then seemed to be one unanimous opinion,—that it was the most destructive form of fever ever witnessed.

It remained “lamented for years, that no one would or could give” an account of this direful Epidemic; and it was the recurrence of its ravages, rather than any other instigation, which, at length, promoted the investigation of its character.

This unwonted silence on the part of those who had actually witnessed the Epidemic in Gibraltar yielded the literary arena to distant theorists; whilst the singularity of the visitation afforded these but the scanty resources which comparison or analogy might supply, in an instance where original data were, almost, in toto withheld.

In 1810, towards the latter end of October, a malady, stated to be similar in its nature to that of 1804, again appeared in this Garrison. Its features were sufficiently marked to obtain a decided recognition: still, conflicting opinions occurred amongst the Medical Officers of the Garrison at the time, as a prelude to subsequent disputes between those who had, and those who had not, witnessed the Epidemic disorder in Gibraltar.

This distemper was but of short duration, and one party decided for the profession, that the ordinary course of the seasons had produced the salutary relief; and the other, that the prompt application of measures of separation, or of quarantine, which had been resorted to, had proved effective. One party, it is believed, never witnessed the Epidemic treated of,—the other had served amid its most aggravated manifestations.

Of the questions agitated regarding the Epidemics of 1804 and 1810, that of importation, or the introduction of the first germ of the disease into Gibraltar, has materially occupied the ingenuity of the contending theorists; and it has been remarked, that the rancour of the dispute has obscured the fair view of the subject. The ardour and science of the disputants may, it is hoped, prove ultimately beneficial: facts have been exposed; formal details have been elicited;

and the ground cleared, in many places, for future observers.

In the years 1813 and 1814, Gibraltar again became the melancholy seat of epidemic malady; and the distemper was, too generally, characterized by those misfortunes which had marked previous visitations.

Medical opinion again divided: the elaborate and insinuating expositions of the extent and power of marsh effluvia, and the general progress and application of antiphlogistic treatment in acute disease throughout the army, materially influenced, in many, a belief of the endemic origin of the disorder, and of powerful depletion being the only method of cure:—whilst others maintained the disease to be of a contagious nature, more closely resembling Scarlatina than any other form of fever, incapable of affecting the frame a second time, distinctly and essentially differing from marsh disorders, and requiring a different mode of treatment.

Several authors, about this time, relying on the alleged power and universality of marsh poison, ventured to assure the public, that the question was settled, or “set at rest.” How unjustifiably this assertion was made, is proved by the still continued agitation of the several most material points. Even Dr. Jackson reports to Lord Bathurst, dated 17th of September, 1820—

“Some doubt, notwithstanding all I have heard and seen, still remains in my mind as to the manner in which it spreads and propagates, viz.—whether by epidemic influence stimulating endemic causes to extra activity, or epidemic influences stimulating the seeds of personal contagion to rapid evolution and diffusion; I cannot say, positively, that it is contagious: but, if contagious, it has more analogy with Scarlatine contagion than any other.”

Many other important topics still remain in the balance, supported by seemingly discordant phenomena, which fully apologize for the division of opinions which has arisen.

Such marks as bubo or exanthematous eruption do not aid the primary diagnosis; but a rapid transition from general or popular good health, to a sick list filled with patients, whose symptoms do not accord with those observable in ordinary endemic fevers; an early and marked disproportion in the number of deaths to those attacked; the early occurrence of general typhoid symptoms amongst the sick; many suddenly expiring, as if from gastric poison, or apoplectic

seizure; and many of the sick dying, although the fatal termination was totally unexpected by the attentive physician; nay, some without complaint;—these are sufficient causes of alarm: yet, where is the diagnostic, which, as in Plague, Small Pox, or Scarlatina, might enable the most careless to predict the approaching devastation?

Yellow skin, though still giving name to the distemper, is universally acknowledged to be fallacious. Black vomit occurs in other diseases, in other climes, in England; but when this last mentioned diagnostic manifests itself with the concomitants above mentioned, and in patients who have not had the Epidemic of this latitude, it may be considered the most unequivocal indication of future evil.

The tact acquired by the long continued habit of viewing patients labouring under fever, gives a degree of certainty to the prognosis, formed from the appearance of the countenance. The effect produced on the mind is a comparative reflection, which may truly be said to be indescribable, as it varies in the degrees of impression, and in the faculty of perception.

Farther, a variety of striking symptoms occur in the course of the epidemic malady, rarely observable in the ordinary fevers of the season:—such as tremors and nervous agitations; hiccough; an unexampled range of hemorrhagies; extraordinary mental aberrations, quick and perfect recoveries from violent attacks of the disease; with little or rather no risk of relapse; a peculiar odour perceptible on entering the chamber, or on approaching the bodies of the sick, and the inhaling of this odour being presumed, by many, to be the act by which the infection is received.

The urinary organs are particularly affected; vomiting becomes seemingly vicarious of urinary discharge; which latter, being suppressed, always proves a mortal symptom.

Amidst such occurrences, it might be apprehended that the decision of medical men would still be found vacillating; but even this would be of little consequence, if undue pertinacity did not pervade; a maintainable line of conduct appears nevertheless to have resulted from professional exertions and enquiries.

In August and September 1813, symptoms occurring similar to those last noted, as premonitory of epidemic visitation, or more correctly speaking, as marking its actual

existence, excited the attention of the community, and of the Government of Gibraltar.

Between the 4th and 10th of September, 1813, the fatal evidences multiplied, and too truly certified approaching mortality.

The Board of Health, which had been assembled in May, now recommended the adoption of measures, as if a contagious malady existed in the town. The opinions* of the Medical Officers were recorded, and they proved, as on other occasions, at variance.

The Epidemic of 1813 had indeed made considerable progress, previous to the elicitation of the formal statements of the Medical Officers, given to the Board; and it is certain that the professional jury was sufficiently divided, to place every testimony on the disputed topics in the most illustrative position.

The separation of the sick, and the dispersion of the population, were obvious measures; but either the impossibility, or the inefficiency of barricading those habitations or streets in the town of Gibraltar, in which the Epidemic appeared, soon became manifest.

The effects of exposure of the troops to deadly emanations, from the bodies of the sick, or from terrestrial vapours, speedily indicated that a centuple Garrison of troops who had not passed the disorder, could not effect what is expected from a full plague police.

As a proof, therefore, of the inutility of cordon and barriers, the experience on this occasion may not, by some, be considered perfect, because the means were inefficient.

Popular expectation, or rather presentiment, did not receive, nor could it be soothed with any consolatory reflection as to the possible progress of events. The horrors of 1804 occurred in every inquiry:—but next to those interrogations, which were suggested by avarice, or by immediate anxiety regarding personal safety, it must be recollected that the exposition of the real difference betwixt the presumed Epidemic and the fevers common at the season, (*estacionales*),

* The opinion of Mr. Gardiner, Surgeon to the Naval Hospital, not having been correctly given to the public, I am sure he will feel obliged by my recording his distinct sentiments in his own words, viz.

“ The cases of Fever I have seen appear to me Typhus of a very serious nature, and from what I have this day heard excite strong grounds for apprehension, fully justify every measure of precaution now adopting, and most particularly that of immediate separation,”

Gibraltar,
17th Sept. 1813.

(Signed) “ JOHN GARDINER,
“ Surgeon Royal Navy.”

together with the possible communicability of the nascent distemper, were the paramount topics of apprehension and argument.

It was known that a superabundant population infested Gibraltar; and under every view of the probable ravages of epidemic malady, it was determined, as far as possible, to diminish the number of those persons most likely to become victims: not that even this regulation was entirely palatable, nor theoretically accepted. The approaching distemper was deemed by many an every day affair, (seasonal). Commerce and the means of living would be greatly impeded by the proposed measures; friends did not choose to part; and many unhappily risked their lives upon the chance of what was, in those days, erroneously termed "Medical outcry," proving false.

Nevertheless, nearly 10,000 souls were, at quickly succeeding periods, moved from the Rock of Gibraltar to the Isthmus. The sensation produced by such an act must have been impressive on the individuals; yet, there does not exist a single proof of its having been more than inconvenient to them. The movement was expensive to Government, and extraneous cases were subsequently relieved by the charitable interference of individuals. But apprehension, and the supposed predisposition to fever, induced by mental affection, (or "fear," as it is vulgarly termed,) in those persons selected from the lowest orders, and from those most exposed to endemial or contagious emanations, proved a perfect non-entity in the production or propagation of farther disease; neither did the departure of thousands to the Isthmus exhilarate or depress those who remained, nor, in fact, in any apparent degree, affect the progress of the distemper towards its acmè, except by reducing the number of those liable to attack.

The creation of unnecessary apprehension has been universally deprecated as one great productive cause of disease and of mortality in epidemic seasons; and at the moment now alluded to, greater terror and alarm existed in Gibraltar, than during the whole course of the sickness; yet no extraordinary consequences were observable. That appalling dismay, which induces so much despondency and danger in individual cases, is not produced by medical or popular "outcry;" it is the impression gradually wrought upon the mind of the sufferer, from viewing the dejecting scenes which hourly occur during these dreadful epochs; the loss of friends and

acquaintance ; the interment of numbers ; and the desolate appearance of the place, work this effect : all eloquence is trivial compared to these silent monitors, which incessantly present the most forcible appeals to the imagination.

Notwithstanding the salutary effects of the arrangement for the dispersion of our low population, it did not seem to be yet understood, that the prevention or relief of individual malady is the sole source of general preservation. Anxiously searching into every question regarding the Epidemic, this assertion presents itself as incontrovertible.

The features of the Epidemic in Gibraltar, in 1813 ; its course through families, the early and almost universal seizure of the Medical Officers, of the Clergy and Rabbies, and of those immediately employed about the sick, both friends and attendants, if not emancipated by previous attack ;—the sickening of washerwomen ;—the good effects of seclusion, especially the remarkable escape of a few individuals who took particular precautions ;—such occurrences as these, led to, and finally confirmed, the belief of the infectious nature of the malady.

It is surprising that, of the number of medical authors who deny the contagious properties of the disease in their closet, many yield to the ineffable impression made by the immediate view of epidemic calamity, and acknowledge its communicability, both by words and deeds ;—by their personal manners ; their care of those dear to them ; the placing of their patients under observation, and the adoption of other means, which could solely originate in a latent belief of contagion.

Dr. Jackson gives his opinion, that there is an influence in the presence of those who are ill of the yellow fever, which is more or less allied with an infection which obtains the name of contagion.

The Doctor's words are, " The instances of persons who
 " have lived in apparent good health in simple epidemic
 " atmospheres, and who have yielded to indisposition soon
 " after they have entered into the apartments of the sick,
 " are numerous ; and they are so marked, even within my
 " own experience, that, contrary as the fact is, at first sight,
 " to the opinion in which I believe, I cannot 'abstain from
 " stating it, and even from adding to it, that there exists an
 " influence in the presence of those who are ill of the yellow
 " fever, which is more or less allied with an infection, that

“ usually obtains the name of contagion. I do not pretend
 “ to define the limit to which this infectious influence alluded
 “ to extends, it is not very narrow, it is even not improbable
 “ that it is conveyed by the intercourse of the eye. The act
 “ has the appearance of being produced by what may be
 “ called sympathy or irritation; in such case, the intercourse
 “ of the eye is presumptively the medium, as it is supposed
 “ to be in the irritative dysenteries, gangrenous ulcers, &c.
 “ which sometimes make their appearance in the wards of
 “ Military Hospitals, after the introduction of one or more
 “ patients, who are conspicuously afflicted with dysentery or
 “ gangrenous ulcers.”

The close alliance of this disease in many respects with typhus fever, may be adduced as analogical corroboration of part of Doctor Jackson's idea, touching the communicability of the distemper. It is said, however, that typhus cannot exist in warm climates; an assertion which may be combated by positive declarations of its having actually appeared there.

Again, the effects of seclusion in this Garrison are not to be disregarded, when considering the contagious nature of the disease. The notorious circumstances of 1804 have been in part published in Sir J. Fellowes' authentic work. Some of those in 1813 are stated in my friend Mr. Pym's book, taken from paragraphs of my correspondence with him, viz.

“ The labourers belonging to the naval works having been
 “ kept in strict quarantine in the Dock Yard (very near the
 “ spot where the disease shewed itself in 1810) and if there
 “ is a situation in Gibraltar favourable to the generation of
 “ Marsh Miasmata, it is this; and in 1804 it shared the fate
 “ of the other parts of the Garrison: yet the above men-
 “ tioned persons have, this year, continued healthy, as well
 “ as another party of inhabitants, who established themselves
 “ in Camp Bay, and cut off all communication with the
 “ infected.”

This is a fact nearly similar to one quoted from Arejula by Doctor Jackson (page 28). “ The fact, as stated in Arejula's
 “ book (says Dr. J.) is imposing, and if the truth of it were
 “ authenticated officially by the signature of the officer who
 “ commanded, it could go far to decide the question under
 “ discussion.”*

* But to proceed to a detail of facts: a Regiment of Dragoons quartered, according to Doctor Arejula, in the centre of infected places in 1800, continued in uninterrupted good health during the whole time of the continuance of the Epidemic; presumptively guarded from its dangers by the good sense and vigilance of the commanding officer, who formed a cordon from the corps itself for the protection of its own quarter.—Dr. Robt. Jackson on Fevers of Andalusia, page 29.

The fact which is noticed relative to seclusion in the dock yard of Gibraltar, it is contended, is equally conclusive with that quoted from Arejula; it is notorious, and has official authenticity. It is proper here to notice, that in several publications the names of Messrs. Keeling, Linblad, and Pringle have been made use of, either carelessly, or from incorrect authority. The published paragraphs are in direct contradiction to the written statements, with which those gentlemen favoured me, as soon as they were informed that their names had been misapplied, relative to the effects produced in their establishments by seclusion, and by their departing from that measure.

Now, it really appears to me, notwithstanding all the endeavours which have been made to render nugatory facts similar to those above quoted, and duly appreciating the statements of those, who have written at the beds of the sick—accepting, at the same time, Doctor Jackson's opinion of an influence in the presence of the sick in various situations; his admission of the higher degrees of infection existing in sick wards; and considering the good effects of seclusion in Gibraltar; we can be warranted in drawing no other conclusion than that the malady is infectious;—and most probably, in the degree of typhus fever, because, independently of other properties which tend to assimilate these disorders, the communicability of the epidemic, like typhus fever, is dissipated by pure air. I cannot however assent to Doctor Jackson's opinion as to influence by the radiance of the organ of vision; because, had the eye been the conducting medium, the disorder would have spread in our camps on the Isthmus, where the sick often passed within eye-shot of their comrades. I also object to giving weight to the histories of persons having escaped when exposed to the influence of the sick, as by any means comparable to the general instances of direct communication which have been cited. It would be yielding to negative evidence, in opposition to proof as positive as can be adduced in regard to intangible matter.

The escape of the buriers at Xeres, noted by Doctor Jackson, (five only of whom, by the way, were susceptible), it is submitted, could only prove, that a few persons who had previously, some of them perhaps unconsciously, as in childhood or youth, passed the Epidemic, were especially chosen for this office, agreeably to the Spanish custom; or that persons were employed in this horrid service, whose happy hardihood of constitution alike defied specific con-

tagion, terrestrial vapors, and the emanations in the dwellings, or from the bodies of the sick, in their most loathsome congregation.

It is hypothetically alleged, that an occult "aura," or a terrestrial vapour pervades those districts, which are the seats of epidemic malady. An epidemic influence, it is imagined, may give the frightful vigour to the ordinary distempers, and even render individuals susceptible of the same disease, when exposed near to persons sick of it: at least, this is what I understand by the malady being infectious in an epidemic atmosphere.

Unfortunately, this epidemic influence uniformly accompanies the form of fever we are considering; therefore, admitting the hypothesis, it becomes perfectly immaterial, in point of practice, whether we fancy that this "aura" gives to the emanations from the sick a reproductive power, or that the communicable power is inherent in the peculiar type of disease apparent amongst the sick.

The laws observed by typhus amidst a crowded population have long since met the consideration of the faculty, and seem, in our present imperfect state of knowledge, more simply to account for the phenomena.

So the means that are practically adopted when typhus fever reigns, appear to be those best calculated to oppose this dreadful scourge.

These considerations relative to the communicability of the distemper, lead to the question of importation, and they appear to me to render it, at least, more popularly intelligible.

We cannot ascertain how typhus or measles are generated; we, for the most part, observe them spreading from one individual to another, in a manner we term infectious. Season affects their course, and probably there are many other inscrutable hinderances to the extension of epidemics; but not knowing what is the direct preservative, it is believed few would venture to assert that, persons ill with a disorder typified as the Epidemic of Cadiz or Gibraltar, could be introduced amongst the low population of a city, similarly circumstanced, or predisposed, without manifest risk. For instance, would it be safe to try the experiment between the two places just mentioned? Assuredly there are grounds to believe, that those labouring under typhoid fever, or hospital gangrene, cannot be introduced into predisposed districts or places, without the danger of communicating an

identical distemper, although we cannot ascertain the "modus operandi" of the poison.

Again, the manner in which the epidemic fever consecutively attacks the maritime cities in the south of Spain, substantiates the hypothesis of either an alteration in the circumstances of these places, which human intelligence cannot account for;—or the introduction of a fomes, which is not yet clearly established in regard to the epidemic Fever of that climate, any more than it is in respect to Typhus, Scarlatina, Measles, and other contagious disorders. Each hypothesis has its warm supporters; but we must admit that farther satisfactory proof is still most desirable.

When treating of Epidemics, and especially when investigating the question of foreign introduction, we have been recommended to divest ourselves of all proclivity towards analogical reasoning, and barely to examine facts; but physical facts are not at all times easily attained and verified; and where the argument relates to the operations of an invisible and an intangible agent, we have often no resource left, except comparison or analogy.

It has been observed by a recent author, that the casual arrivals of vessels cargoed with pestiferated subjects, upon whose approach pestilence has seemed to develop itself and spread, have supported the believers in importation exclusively; whilst casual instances of identical cases are asserted to have taken place, without the possibility of any connection with the exotic stock.

Cities have been devastated by maladies, seemingly traced to foreign sources, and the authorities have been deprecated.

Cities escape when rigid enforcements seem to ward, and the wisdom of regulations is then lauded; but it has been asked, who, that has considered the illimitable range, the seemingly opposing facts, and the still undiminished mortality of Epidemics, would consider himself qualified to decide, that any virtual negligence, or any specific act, could deserve a fatal "Ostracism;" or that the voice or exertions of an individual had, in excluding pestilence, ever "merited a mural crown."

It would be perfectly useless, in reply, to retrace the histories and denials of importation of epidemic fever in the sea-ports of the Mediterranean. The detail of the introduction and the history of the extension of the malady in this Garrison in 1804, seems substantiated as distinctly as it is possible to expect. The specific introduction into families

in 1813 and 1814 was often marked, and incontrovertibly proved; but this fact relates rather to the infectious nature of the malady, than to its importation from an extrinsic source.

Undoubtedly low fever may be imported, and its spread will be regulated by concurrent circumstances.

Noah Webster records its importation into Brest, and its extensive spread in that city. The proofs of the Epidemic of 1821, in Barcelona,* being exotic, as proclaimed by the French Mission, are looked for. The following extract of an official letter, dated Mahon, 9th October, 1821, marks a point, wherein disease is imported,—is seen spreading,—and where its spread was checked.

“ I beg leave to state, that the yellow fever still † rages
 “ at this Lazaretto with great violence, and there are
 “ now upwards of eighty vessels of different nations under
 “ quarantine, not one of them but has the sickness on board,
 “ and many of their crews carried off, as well as several of the
 “ health officers within the Lazaretto, which is now guarded
 “ by a strong cordon of officers and soldiers; in every other
 “ part of this island good health is enjoyed.”

This quotation marks well how concomitant circumstances operate in regulating the diffusion of fever. Fever is imported;—it spreads in the Lazaret to the health officers;—it is prevented by quarantine measures from spreading beyond the Lazaretto; and all other parts of the Island enjoy good health.

The Medico-chirurgical Society of Cadiz, in an official report to the Spanish Government, dated March last, notice, amongst those circumstances which tend to prove the transportation of the epidemic malady, the uniform appearance of that disease in Rota and Puerta de Santa Maria whenever it has appeared in Cadiz, the communication between those towns having been always open, except in the year 1810; the epidemic Fever then appeared in Cadiz; but Rota and

* These Commissioners, “ contagionists by conviction,” have proclaimed its nature in the following terms:

Le fievre anarilla de Barcelona es contagiosa en un grado cual no hemos visto en ninguna otra epidemia de la misma naturaleza.

† On board one of the vessels at this time in Mahon Lazaretto, were Jacintho Rey and his brother, together with twelve mariners and a boy. The ship had been ordered from Barcelona to a foul Lazaret, the Epidemic fever having manifested itself on board. She remained eighty-two days in quarantine, and during this period, the twelve sailors died of the malady, Jacintho Rey and his brother (noted amongst those who had the Epidemic fever of 1810 in Gibraltar,) continued on board the whole time in perfect health, thus affording proof of the identity of the Epidemic of 1810, and the immunity afforded from second attack of this form of fever.

Puerta de Santa Maria, being in the occupation of the French, and, consequently, cut off from communication with Cadiz, escaped the distemper.

“ In a pure air,” Dr. Jackson observes, “ the fatal emanations will be dispersed ;—in a city where fever exists, the imported poison will add fresh vigour to the distemper, and, possibly, may give a character to the malady in a manner similar to that in which hospital sores are known to be deteriorated by the introduction of malignant or putrid cases. Again, “ Certain impressions produced indisposition in Cadiz, and Xeres ; and it was evident the atmosphere was epidemic, probably so in a higher degree in sick wards than elsewhere.” Now, as we have no test whereby we can ascertain when an epidemic atmosphere exists, and as this assumed epidemic state of the atmosphere becomes more noxious by the accumulation of the sick, it seems inconsistent to deny the utility of quarantine, which prevents the entrance or approximation of persons, whose admission or presence would add fresh vigour, and possibly give a character to the malady, or heighten the epidemic influence.

It is difficult to adhere to a fixed or limited theme, when detailing the phenomena of Epidemics ; because each branch of discussion intimately ramifies with every point of argument. It may be thought that the statement of the hypothesis regarding importation should have been delayed, until a farther and more extensive statement of facts had been constructed as the basis of the doctrine ; and it may also seem, that I have dwelt too long on the points touching importation, not having gone more at length into the formal relation of what may be considered positive matter.

It has been observed, that at the moment of watching the actual approach and development of Epidemic malady, this point, viz. Importation, has appeared as a disputed macula, which was soon obscured in the closer questions touching mortality, and which became again an argued topic, when the fatal scenes had passed away.

Indubitably the first interrogation ought to be, is the identity betwixt the ordinary fevers of Gibraltar, and the epidemic malady which has occasionally devastated the fortress, perfect?—and this not affirmatively proved,—the next question would be, what is the distinction, or the lines and shades of character, which uphold the belief in the existence of decided difference betwixt the two distempers?

In the first place, much pains have been taken to ascertain any circumstances which might prove premonitory of epidemic visitation. In arranging a number of facts, which a recent author (Dr. Handcock) has deduced from the events of the years 1664, 5, and 6, twelve principal points are noted as connected with the question of the introduction or first progress of pestilence, none of which appear applicable to our Epidemics, except the total absence of other acute disorders during the progress of the distemper; and, again, as regards his more distant indications of approaching pestilence, but one accords, viz. that of sudden deaths without obvious causes.

Epidemic visitation, like individual sickness, is not revealed by peculiar antecedent phenomena. Epidemic visitation announces itself as does disease: it seizes on an individual, without giving warning; when either is developed, it becomes the province of physicians to make the diagnosis.

Doctor Jackson has declared that no appreciable quality of the atmosphere seems to influence the Andalusian epidemic.

The details of flights of locusts; and birds forsaking their young; epizootics, real want, or free use of unwholesome food; extraordinary or mild epidemics and other alleged premonitory tokens or signs, must appear to those who study the phenomena of the Epidemics of Spain as a display, similar to the gothic fret-work which accompanies ancient portraiture; extraneous and uncertain embellishment, with which the modern historians of these events refuse to adorn their views, because they find them not in nature. Famine itself too often proves a destroying minister; it debilitates where it does not prove mortal, and thus predisposes to Epidemic malady in the general acceptation of the term, but it is not an indispensable or unequivocal precursor of specific pestilence. The sweeping mortality which devastated this Garrison was not foretold by scarcity, nor by any other tokens.

The presence of an Epidemic in these latitudes, is but too frequently announced to the public by the disputes of medical men, and the formal denial by the municipal authorities of the existence of any extraordinary disease.

It is at length admitted that the fevers of the season are more severe than usual, because the offices of the Clergy cannot be concealed, nor the voice of mourning restrained.

The action of the sun; the winds; the local circumstances of the station; its liability to ague, and what may be termed the peculiar predisposition of the season, indubitably influence the appearance of the invading malady. It is, therefore, not surprising that many medical men doubt the difference of diseases, especially at the commencement of an Epidemic; and even when retracing circumstances, it is possibly the most difficult part of the undertaking to contrast the disorders, or, following Doctor Jackson's hypothesis, to say when the Endemic fever becomes Epidemic, which, by his own statements, may be considered equivalent to the changing of the essential characters of the malady, and, therefore, a supposition which will by many be considered quite "gratuitous and unphilosophical."

The general disturbance of the system, denominated "Fever," is so similar, from whatever outward cause it may seem to arise, and so diversified are the shades or gradations of this disease, and of its symptoms, whether aggravated or softened down by peculiar idiosyncrasy, as necessarily to embarrass the attempts at delineation, and still more at minute distinction. Such an attempt, however, it is a duty to make in concise terms, and without repeating the symptoms of disorders, which have been so often and so well described by others, I shall state those points which appear to me to mark an obvious difference between the ordinary or general Endemic fevers of this station, and the extraordinary or occasional Epidemic malady.

ENDEMIC.

The common Endemic Fever is a disease of high arterial action, with that suffusion and turgescence of countenance, which generally accompanies pneumonic inflammation; with a general sense of fulness in the encephalon, and throbbing of the temples, but with little delirium.

It appears as pyrexia, closely connected with, if not dependent on, irregular movement, or quickened action of the arterial system.

The common Endemic, in its several forms, attacks sporadically; the cases of individuals continuing for an uncertain period, as for weeks and months, attended with remissions and paroxysms defined or subintrant.

Affections of the throat are rare.

Epigastric region sometimes tense, with occasional vomiting of bile of a dark yellow or green colour, and of a bitter taste, generally confined to the earliest periods of the disease.

Dejections are generally of a clay colour, as in jaundice.

Heat of the skin much augmented, and often acquiring a yellow hue.

The Endemic gradually proceeds with the season (Febres estacionales) as a continuation of simple fever, somewhat varying in the different months of the year.

Sometimes terminating in intermittent fever, or visceral disease.

Generally attributable to exposure, or to individual irregularity; repeatedly attacking the same person in the same or different seasons.

It is neither infectious nor contagious.

And its attacks are most frequent and most severe in the robust and the inacclimated.

On the average of a number of years, made previous to 1804, it does not appear that the number of cases of bilious remittent exceeded forty annually in Gibraltar, the deaths being very limited, and chiefly confined to the robust male adults.

The bilious remittent is common throughout the Peninsula, and agues have occurred in our immediate neighbourhood, as in the habitations now on the site of ancient Carteia, and on the Neutral Ground.

The vernal months immediately succeeding those autumns in which the bilious remittent has raged in other places, have been noted as presenting numberless sufferers from intermittent fevers and visceral obstructions.

The distressed countenances of the unfortunate victims of the latter affections proving truly characteristic of still continued disease.

In the Endemic, relapse is frequent, and second attack common; like marsh disorders of frequent recurrence, and of protracted convalescence.

The Endemic has been assimilated with marsh diseases, and these are stated to have remained dormant for months after the specific poison has been supposed to be imbibed. Thus a patient exposed to paludal emanation removes to a considerable distance, and into a pure air, but continues liable to the disease for many months, as was repeatedly proved in the army of Walcheren. Diseases of this description would most probably recur on removal to a marshy situation.

EPIDEMIC.

The Epidemic presents its first diagnostic marks in the shape of typhoid fever, with peculiar dejection of countenance, pain of the forehead and orbits, frequently attended by a peculiar delirium, similar to that of a person labouring under the effects of narcotics, and denoting gastric disease.

Its appearance may be occasionally likened to the peculiar effects of morbid poison, applied through the intervention of the nervous power to the system in general, reducing the force of sanguineous action, causing algor, tremor, sighing, singultus, and sudden death.

The Epidemic may be termed universal: but probably the majority of its attacks are mild: it assumes a defined course, similar to that of the contagious exanthemata, viz. a synochal stage of sixty hours, analogous to eruptive fever;* immediately thereafter terminating in Apyrexia, or running into what have been termed putrid and malignant symptoms, closing, for the most part, before the seventh day; remissions not observable; but a fallacious calm, similar to that which marks mortification, occurring in many fatal cases. Vespertinal exacerbations obvious.

Cynanche common, and often attended with putrid ulcers.

Pain of the epigastric region not much complained of; vomiting in almost every instance; the matter thrown up, consisting, at first, of the simple ingesta, but, if occasionally

* Rush was struck with the analogy between this fever and the malignant small pox; he says the fever in both continues three or four days without any remission; they both have a second stage in which death usually takes place, if the diseases be left to themselves.

bilious, speedily losing that character, and gradually becoming tasteless, flaky, and black, and so continuing to the last moments of life.

Dejections tar-like, as in typhus.

Heat of skin, for the most part, little increased; when hotter than usual, often communicating a pungent sensation, and very seldom assuming a yellow cast, except in fatal cases, or appearing so after death. This is a point deserving of much consideration. Derangement of the system from accident, or from symptomatic fever, will produce biliary suffusion, which has long been acknowledged as a casual, rather than a characteristic occurrence in fever.

Appears suddenly in the midst of a healthy population.

Very rarely, if ever, terminating in ague, or visceral disorders, unless occasional bulimia and dyspepsia be so termed.

Referable to some general cause not clearly ascertained: selecting solely those who have not been previously subjected to it, even in the height of Epidemic visitations; obviously infectious.

The Epidemic first appears amongst those long resident, and proves most destructive to them:—thus, 120,000 Andalusians perished about the beginning of the nineteenth century. Seville alone, in one autumn, presented above 76,000 cases; and in Gibraltar in 1804, of 9,000 persons 28 only escaped attack; and further it has appeared that the Civilians or Natives have universally suffered much more than the troops, who may be considered chiefly strangers; and of the troops, that the Veterans, the artillery who had been longest stationed in Gibraltar, the hard drinkers, and the debilitated were the most severely affected.

In the years 1804, 1813, and 1814, upwards of 15,000 persons were seized with fever, during those Epidemic seasons, and upwards of 6,000 have died in Gibraltar, the disease running through families uninfluenced by sex or age.

The Epidemic has been almost solely confined to sea-ports and large commercial cities, seldom extending beyond a few leagues from the sea coast; whilst native agues are scarcely known in Gibraltar.

In Gibraltar the Spring months of 1805, 1814, and 1815, were unusually healthy. Now, if our Epidemic disease had been merely a more severe grade of the common bilious remittent, those months ought to have proved most destructive by visceral disease, in consequence of the unhealthiness of the preceding autumns; but this was not the

case. Thus, taking the analogy of Pneumonia, we observe when that disorder proves most violent and extensive in its attacks, the greater number of cases of phthisis ensue in subsequent springs. Speedy and perfect convalescence however followed the Epidemic with but few exceptions; upwards of 1200 cases occurred in 1814, and there did not remain on the sick list, at the end of December, twenty chronic cases, including phthisis, dropsy, visceral disease, dysentery, and jaundice.

Relapses very rare: in 1804 they are scarcely noted.

In 1813, of 1728 cases amongst the Military, only 28 cases of relapse occurred, and they were uniformly attributable to exposure to cold, or intemperance, by which a different disease was in fact superinduced. In 1814 I heard of only one relapse amongst the Civilians.

Having had the disease affords immunity from second attack.

I never had reason to be apprehensive of the issue after the sixth day, unless fatal symptoms had already set in; and I had no case of relapse under my individual care.

The Epidemic is produced very speedily after exposure to the febrifacient cause, whatever it may be; generally in from two to eight days. Ten days is the longest authenticated period of which I am aware; and amongst persons who removed but a short distance to any freely ventilated atmosphere, the disorder did not appear after that period.

The Epidemic has proved uncommonly deleterious on the abrupt side of this arid rock, whilst the Neutral Ground has continued free from sickness; yet, there, all the enumerated causes of Endemic or marsh diseases existed; as vapours from the sea; evaporation from the fresh-water inundation, whose bottom was loaded with mud; the accumulation of the filth of Gibraltar, which is carried to the Isthmus; water within two feet of the surface of the earth, and standing there in pools during the winter months, with a variety of gases exhaling, and vegeto animal matter decaying on it. To this place, persons in all stages of the Epidemic disease, of convalescence therefrom, and, I might add, of predisposition, have been carried; yet the Epidemic disorder was prevented, and its farther progress, in corps, decidedly arrested; nor were the cases wherein fever was fairly formed protracted into remittent or intermittent disease, notwithstanding native agues have been known to arise on the Isthmus.

The foregoing is an attempt to distinguish between the ordinary course of the febrile maladies of Gibraltar, viz. those of regular annual occurrence, and the eccentric Epidemic visitation; the type of the distemper leads of itself to the distinction; but some of the concomitant symptoms are obviously the result of the locality or accidental circumstances, such especially as yellow skin, and probably the chronic visceral complaints, which, in some few instances, followed Epidemic attack. Such too are the causes of any occasional remittent form of fever, which may have appeared subsequent to attacks of the Epidemic, or into which the Epidemic may have passed.

In 1820 the Epidemic of Cadiz was reported to me to be of a purely continued type; and Doctor Jackson, at that time, considered the malady to resemble Scarlatina.

“The malady,” he proceeds, “now prevailing, viz. Cadiz, 17th Sept. 1820, resembles in its symptoms, in so far as I have seen, the less concentrated forms of the fever of the West Indies, such as appear among what are called acclimated subjects, especially under the occurrence of Epidemic or pestilential influences.”

“Such influences, it may be observed, arise at intervals in different parts of the earth, and in the West Indies as well as others, continue for a long time, and then disappear. The cause by which they are produced is inexplicable, as little connected with any thing that is visible to human senses; it has, however, more analogy in its proceeding with Erysipelatous, or Scarlatinal Epidemic, than any other, of which I have knowledge.” One observation seems to me to require explanation. A less concentrated form of fever is stated to have appeared at Cadiz under Epidemic influence, still causing equal or greater mortality. Wherein is the lessened concentration demonstrated?

The Doctor declines giving a name to the epidemic disorder, but thinks it impossible to come to any other conclusion, than that it is the Endemic of the place rendered Epidemic. Now, in my opinion, the Doctor's inimitable description of the Epidemic will not appear cognizable as the description of our ordinary Endemics. Neither would the rise, progress, or sequel of an increased number of cases of Endemic fever coincide with the phenomena observable in Epidemic seasons.

Gifted with the pen of a ready writer, how fortunate would it have been, if the Doctor's visits to the sick had been more than “desultory, and comparatively few.” For my own

part, I feel assured, that the more minutely he had enquired into the phases of the two distempers, the more accurately would he have ultimately distinguished the phenomena, and more forcibly have established the decided difference, which his observations are perpetually pointing out, as it were against his opinion.

In the above distinction, which I have attempted to make between the two distempers, I have dwelt upon the immunity afforded by one attack of Epidemic. It is a question of comparative observation, and the quick succession of the Epidemics in Gibraltar in 1804, 1810, 1813, and 1814, afforded the means of comparison; the years 1813, and 1814, especially fell under my immediate cognizance. This immunity as a law of nature appeared fully demonstrated, and the most positive assurance of its operation could be given by every observant person then in Gibraltar; the intentional fallacy which operated in Xeres, as related by Doctor Jackson, could not prove effective in this Garrison.

Certainly the time of all others when it is essentially requisite to discriminate between the two disorders, or to predict the nature of the invading distemper, is at the commencement; and this non-liability to second attack soon proves characteristic of the approaching malady. It also proves eminently useful, as, by its classing the subjects who can receive the Epidemic poison, remedial measures result;—physicians may cavil, and cases may be erroneously represented, but the law of nature remains incontrovertible.

Doctor Jackson states, page 49, “ that he saw or heard of “ not fewer than twenty persons under the Epidemic of 1820, “ who had certificates, and who actually believed that they “ had the malady at a former period;” but of what value does this report appear, when it is noted as the result of an inquiry where many circumstances tended to mislead. With all the anxiety which must attend research on so important a question,—about twenty persons only are either “ seen or heard of” in the course of Epidemics, which had buried nearly twenty thousand persons. If an exception confirms a rule, such an exception as this would give fullest force to the axiom. Is it not more probable that error or fraud operated to deceive, than that nature should deviate from a course, wherein her operations seemed so unerring?

The most acute physicians may fail in diagnosis; is it wonderful then, that the half-educated, or rather soi-disant

members of the profession in Spain should err? or is it in any degree wonderful that certificates should be as easily bought as indulgences? Especially when the political regulations of Spain in regard to Epidemics assume immunity from second attacks fully proved, as a fact tried and retried unhappily on too extended a scale to admit of real doubt. As such, the advantage of a certificate, particularly in trade, proves a sufficient inducement for forgery or imposition. Doctor Jackson himself (as I have noticed), relates a fruitful source of deception in this point (page 137). “ Many, “ *even a great many, were entered on the list of yellow fever “ by connivance, that is, for the sake of the allowance granted “ to that description of sick only, (viz. persons ill of Epi- “ demic fever). The diseases of those so entered were, it may “ be presumed, of less mortal character than the yellow fever; “ consequently, the real truth is disguised in such a manner, “ that the public is deceived, and the medical faculty can “ form no accurate conclusion.” This observation is applied by the Doctor to the question of comparative mortality; but a false statement calculated for intentional deceit in one instance, may equally impose in the estimate of another.*

The divine beneficence of a law, which enables the consoling friend, unhurt, to administer to the sick in the midst of a depopulating visitation, characterizes the epidemics of this station; this law moderates the horrors of the scourge; it dissipates a selfish carefulness, which ever pervades the community amidst these dreadful scenes; a dependence upon its unerring operation is of immeasurable utility in the application of salutary means in these distressing seasons; it is a law not to be impugned on trivial asseverations; its generality stands quite inaccessible amidst the jarring gusts of declamatory authors; its universality, as a law of nature, is scarcely questioned, except by those who would catch at straws, whereon to hang polemic medicine.

Many of our transatlantic brethren hold this opinion, if we may judge from the following quotation from a late No. of the Philadelphia Medical and Chirurgical Journal, viz.— “ differing as we do” says the journalist, “ from Doctor “ Hosack, in our views of the origin of yellow fever, we can “ never cease to applaud the talent, industry, and success, “ with which he has investigated the subject. To him, we “ think, is especially due the credit of establishing the fact “ of the insusceptibility of the system to a repetition of an “ attack of the disease, than which we know of none more

“ curious in pathology, or important in some of its practical tendencies.

But can there be more ample evidence required than that afforded by the progress of the Epidemic amongst the citizens of Gibraltar in 1814?

“ On the * 9th of October I had the satisfaction of reporting that six dangerous cases did not remain within the walls. This remarkable decrease of the disease, at a period of the year when Atmospheric and Endemic visitations are supposed to be peculiarly deleterious, and when, on reference to 1804 and 1813, we find that it proved the season of greatest mortality, evidently points out a characteristic feature attributable to other agencies.”

“ The fact is, that voluntary emigration and forced exclusions had, at the commencement of the Epidemic, reduced the estimated but under-rated number of civilians liable to attack, from not having passed the disorder, to about four hundred,” amongst whom the malady had nearly by this time (9th October) exhausted itself.

It has been remarked, that there is a power more effectual and universal than any that human ingenuity can devise, which checks the operation of pestilence. The law just noticed must be admitted to be most effective, and the principal and only one which seemed operative in 1814.

From this immunity is derived the safety of cities for uncertain periods; such, for instance, as the partial escape of Cadiz, whilst Xeres and other towns in its neighbourhood were affected in 1821.

The change of season indubitably affords a certain check, even when a population has not been generally attacked; and this change seems to operate especially on contagious Epidemics. Scarlet fever, typhus, and measles, seem to obey its mandates with more precision even than paludal disorders.

And, again, it is to be recollected that the Epidemic of 1814 had completely ceased in the town of Gibraltar by the 18th of October, being the day selected by Dr. M'Lean, as marked by the acme of autumnal mortality. Season was not, as I have said, operative in this instance; because the immunity from second attack had proved conservative before the agency of season could avail.

* Vide MS. Reports on the Epidemics of Gibraltar.

It is probable that the recent enquiries of the French Commission to Barcelona, may yet contribute to enlighten this question, as well as tend to the establishment of a mode of cure; notwithstanding the ill success, which is stated to have attended the attempts of these scientific and courageous commissioners.*

Much indeed might be expected from their labours, if the most experienced, those who have actually witnessed the progress and reiterated visits of this indomitable scourge, did not, when unembarrassed by theory, frankly confess, that philosophy had made but tardy steps in the developement of its laws; and that the most sanguine practitioners had been forced to acknowledge the inefficacy of the means which they adopted. Indeed the most scientific endeavours of medicine, as yet, seem but the extension of modern improvements to the regions of empiricism, when publications have guaranteed the efficacy of any fixed or determined rule of practice, equivalent to the systematic modes, which are adopted for the treatment of diseases in their ordinary forms.

Is it not melancholy to reflect, that the assertion of one of the first philosophers of our day,—of Humboldt—should be, that all plans of cure have proved equally inefficacious; and that this assertion should be supported by the undeviating mortality on every fresh appearance of Epidemic on the Peninsula, and, also, in our own West Indian Colonies. Have the keen contests in regard to the utility of venesection, or mercury, diminished mortality? † Doctor Arthur in a MS. reports the undiminished mortality at Tobago in 1818; and later reports confirm the want of success, which has attended the introduction of the most modern opinions. In other words, notwithstanding the exertions and assurances of the faculty of their increased skilfulness, the deaths continue little, if at all, abated in point of number. Whenever the Epidemic period arrives, in whatever direction we enquire, we find testimonies from all quarters re-echoing the melancholy assertion of Humboldt.

* Despues de haber dicho que la calentura de Barcelona es la verdadera fiebre amarilla de America la misma que hemos visto en las antillas y en Cadiz anaden: es un proteo que toma tantas formas distintas y ofrece tan estranas anomalias sea en la lentitud ó rapidez de su curso, sea en la combinacion, sucesion, y grados en sus fenomenos que es imposible sugetarlo á una regla fija invariable.

† Having Doctor Arthur's MS. before me, I may remark, that his observations confirm the opinion I have given relative to immunity from second attack; and the MS. serves to contradict, in unqualified terms, the assertions of some medical men, who contend that it is the universal opinion of West India practitioners, that the disease is not contagious.

The presumption that the proper period for extracting blood had been discovered, or at any rate better defined than it was some years ago, has not produced a more favourable issue in the treatment of the Epidemics, which have buried so many of the 50th, 92nd, and other regiments of late in the West Indies.

Doctor Rush, upwards of twenty years ago, made the same declaration which Doctor Jackson has made from Xeres and Cadiz in 1820, viz.—that blood-letting and depleting means might be used with perfect freedom in what is termed yellow fever. Both these eminent physicians have had devoted disciples, but mortality continues undiminished.

Doctor Jackson, of New York, imagined he could encounter this disease; he felt as a young giant rejoicing in his strength. The positive declarations of many, of the infallibility of the lancet and of mercury, preassured him of success; he tried their effects, and he confessed their inefficacy. This is more praiseworthy than avoiding the question; he honestly repudiated a powerful auxiliary in most febrile diseases, because it disappointed his hopes; he did not attempt to uphold its utility by untenable assertions, or analogical presumptions, as we have seen done by some who have published opinions relative to the Epidemics of this latitude.

We find the devotion to the lancet decreasing also in Xeres, in 1820; and an ardent supporter of venesection is observed embracing the forlorn and antiquated Spanish treatment by emetics; but let Doctor Jackson of New York, give his testimony in his own plain and intelligible terms.

“ The wide difference that existed between the character
 “ and treatment of the disease last summer and autumn, and
 “ the descriptions contained in some of the most popular and
 “ esteemed works that treat of it, has given rise to the pre-
 “ ceding reflections. The tone of confidence in which Doctor
 “ Rush speaks of the medicable nature of yellow fever, of its
 “ easy and speedy subjugation by the aid of rapid, early, and
 “ powerful depletion; the certainty that Chisholm ascribes
 “ to the mercurial treatment; and the late testimony of
 “ Doctor James Johnson to the curative wonders of the
 “ lancet and calomel, are calculated to inspire the most
 “ perfect reliance on their efficacy. Such was the impression
 “ which had been conveyed to my mind, that I felt a strong
 “ assurance that should my path be crossed by this most
 “ formidable of diseases, it would only be to witness the most
 “ successful efforts, and the most splendid triumphs of the

“ science of medicine ; never was disappointment more complete, or professional pride more humbled.”

“ The disease when it first appeared at Hodges’s wharf, was encountered with depletion, active purging, calomel, freely and largely administered, with a view to salivate, and blisters ; but one after another, its victims were carried off, without an impression having been made, or its fatal tendency alleviated ; the pulse in no instance was tense, or refused to yield to venesection and cathartics, but was speedily reduced by them, both in frequency and force.”

“ In several it became quite natural, and the skin cool, yet with the disappearance of the common diagnostics of fever, there was no favourable change in the general symptoms, which continued to evince an unabated malignancy ; while the disease hurried on so rapidly to its termination, that it was in vain to calculate on the specific effects of mercury. Two only recovered in this quarter, who exhibited the well defined symptoms of the disease. In one, attended by Doctor E. Barton, the mouth became sore on the third day, continued stationary for two or three days, during which, the patient was in great jeopardy, then became more affected, and the disease gave way.”

“ The other was attended by Doctor Knight, and was trusted chiefly to cathartics, which produced a speedy mitigation of the symptoms.”

Such being the evidence of Doctor Jackson, of New York, let us examine the report of our own venerable author Doctor Jackson, and it will be found that he cannot uphold venesection, either by the example in his own person, by his experience, by the experiments which he countenanced, or by referring to the practice which he inculcated or advised.

In fact, he has proved by those experiments, on which the whole of his reasoning is, or ought to be founded, that in a certain temperament the lancet is worse than useless.

Doctor Jackson (page 117) states that “ the third (or serous)” form of yellow fever, was the most common in 1820, both at Cadiz and Xeres, and, in fact, more than equal in amount to both the others ; but when this form of fever on the base of the nervous, or serous temperament, fell under practical observation, what is the report of the “ demonstrative experiments ?”—Bleeding, purgatives, fomentations, frictions with warm oils, antimonials, and blisters, were tried without effect ; at length finding all other remedies fail, recourse was had to emetics.

This is the result of those experiments, without which, Doctor Jackson "is ready to confess that his views of practical treatment would have been no more than presumptive of the truth: as it is, they are next to demonstrative."*

Thus resting our conclusions solely upon the reports made of Doctor Jackson's mission to Cadiz, in 1820, by the simple collation of those facts (upon which he has published his opinions relative to this Epidemic of Andalusia) the limited utility of the lancet is demonstrated.

The learned Doctor states, that the yellow fever manifested itself "but rarely in the sanguineous temperament."

It manifested itself "frequently" in the lymphous or "phlegmatic temperament," and the lancet is recommended in qualified terms.

But, continues Doctor Jackson, when the disease manifested itself on the base of the serous temperament "it became dominant." Now let us mark well this division or classification of patients, and following this distinction, watch the clinical prescription:—it appears, in the first place, that in the rare cases which took place in subjects of the sanguineous temperament, the disease was found of least danger, and the lancet of course was not so objectionable.

Again, it was well known, that determination to the head or lungs, pain or tension of the abdomen, especially when increased by pressure, were often, in fever, best encountered

* In considering the effects of venesection in this disease, we ought to reflect upon the nature of the circulation through the intestines. The arteries, though numerous, are small; the blood is not propelled with an impetus equal to that, which directs its transit through the lungs, or towards the encephalon; the inner surface of the canal also supplies those matters which support the system. Disease of this surface, with disarrangement of its nutritive functions, amounts, therefore, in a great degree, to the total abstraction of that nourishment which is requisite to sustain life. The circumstances which regulate the transmission of blood to the intestines, not improbably render the disorders of these organs less amenable to the curative powers of the lancet than complaints of the head, lungs, or muscular structure; and, in fact, we find the pulse in a very different state in Enteritis and in other inflammatory fevers.

The consideration, also, of the inner surface of the intestines being the organ which replenishes the blood vessels, may in some degree account for the mischief which ensues from improper or tardy bleedings in Epidemic fever. In many cases of Enteritic affection, the blood required to overcome the inflammatory disorder of the canal cannot be abstracted without endangering the general system. What have been termed subacute, or we may say chronic, inflammations of the alimentary tube appear to be the natural consequence of this organization of the sanguiferous vessels. In fact, although the lancet is as necessary in Enteritis, as in other inflammations, its use is not so plainly nor obviously indicated, nor shewn at the commencement of the malady—thus the attacks are so often, and so justly termed insidious.

by venesection and depletories; nay, individuals, encouraged by the party spirit of the times, had promulgated opinions much beyond their value in praise of bleeding in Epidemic fever. Now Doctor Jackson had all those facts and opinions to support him, notwithstanding which, these his "demonstrative experiments" expressly, and in his own terms, contradict more than two-thirds of the determined assertions of those, who had written inconsiderately in praise of bleeding. The lancet was actually disused in the serous temperament, viz—"in the dominant form of fever,"—the most general, the most destructive, and the most depopulating form.

It is perfectly unnecessary here to discuss its utility in various other diatheses, grades, or temperaments; but let us confirm these practical deductions by the relation of some occurrences in the 2nd battalion of the 11th regiment, when the epidemic fever raged in that corps, in the months of September and October, 1814.

It appears that during the six weeks immediately subsequent to the 24th of September, 1814, one hundred and sixty-six cases occurred amongst the privates of a corps of robust men, but little accustomed to the climate, and, previously, not at all to Epidemic sickness: these one hundred and sixty-six cases recovered with two exceptions, and the treatment in most consisted in free and continued purgatives, chiefly calomel, colocynth, and gamboge—a strict antiphlogistic regimen (generally speaking), great care being taken not to overcharge the stomach—at the same time, abundance of broths or diluents were at command, together with warm baths, general and topical. Wine, soda water and porter, were freely used in convalescence, and the servants induced to full attendance by every indulgence which could be afforded them, and the example of unwearied solicitude on the part of the attendant medical officer.

In fine, good nursing, the constant and apt exhibition of all those comforts so generally attainable in British military practice, were found essential to the cure; the most expensive wines were occasionally issued; and the caprices of the sick indulged; pure and cool air was indispensable; warm lavations and baths* were acceptable, but cold affusion was

* The use of the warm bath, from the known sympathy of the skin and intestines, the use of purgatives and of copious diluents, are indicated, nay, even local stimulants, as of small portions of wine and spice, flavouring arrow root, sago, &c. substances which act on the general surface of the canal, seem warranted on the same principles which direct the application of tincture of opium, and other stimulants to the eye, in certain stages of Ophthalmia.

dangerous, if not mortal, and it was uniformly dreaded by the patients.

In reports which I have had the honour to make on this subject, in 1813 and 1814, I stated, that in certain cases of little danger the lancet might be used amongst the robust and sanguineous, especially during warm weather; but in the majority of cases, and those of real danger, the lancet was perfectly inadmissible; thus closely corresponding do we find those reports which are actually made from the beds of the sick. A feeble sketch may be all that is given on the one hand, whilst the work of a master is presented on the other; still subjects truly drawn from nature cannot essentially vary.

The above report of the 11th regiment, is cited in opposition to the sounding theories of a host of names, which have been quoted, or rather trepanned, into the service of authorship; and from the example, and fair consideration of of the published experience of latter years, it can only be deduced, that in mild attacks of the malady, as happens in the young and sanguine, venesection may be adopted, but in the worst forms of the disease, the lancet opens the door to the grave. In other words we may bleed in the milder cases, but in those truly of greatest danger, most of the authors who have written in favour of venesection, would hesitate and confess their disappointment, as Doctor Jackson of New York has done.

Possibly, modifications of the same distemper may, by metastasis, strike an individual apoplectically, or they may cause painful and inflammatory determination to the several viscera during a hot season; but the attacks of the Epidemic, in general, run into a class of symptoms of very different appearance,—deadly sickness,—general coldness of the frame not excitable to re-action by the usual means,—debility and syncope, increased by slight abstractions of blood, and followed by irretrievable prostration of the vital powers, defying the most energetic stimuli.

In fine, physicians have been baffled by a train of symptoms, similar to the effects produced by certain poisons acting on the stomach, and through its medium affecting the nervous operations, so as to cause, not only a similitude of phenomena, when acting, but as sudden an attack as that, consequent to the swallowing of poison, and as quickly proving mortal, and bearing traces of similar organic

lesion. Those who have had opportunities of frequent post mortem examinations, in cases of sudden death, report the appearances in the inner coat of the stomach as little different from those observable in Epidemic fever.* I found the same, in one instance, from a dose of oxalic acid; the case is recorded in the *Edinburgh Medical and Surgical Journal*, November, 1818.

The suddenness of the action on the frame is established beyond a doubt;—the agent is indeed inscrutable;—but that it is no ordinary power which acts, seems proved by the quickness with which the disorder communicates, and with which the excretions are occasionally altered, as from nearly natural, in the course of a very short period, to matter like flaky ink and water, and this, too, even where the traces of disease in the excreting surfaces of the intestinal tube are hardly observable after death.

These, my Lord, are a few of the most remarkable occurrences, and the most prominent opinions, which have resulted from the Epidemic visitations to this territory. I am apprehensive, from the manner in which I have presented my notes, that they will prove obscure; possibly from my belief that your Lordship was acquainted with many leading circumstances;—and, again, from unavoidable technicality of language, and by raising my superstructure, at once, on what may be termed, the received theories of the profession at this day.

I have endeavoured to follow Doctor Jackson's letters to Lord Bathurst, as the latest opinion which has been submitted for official consideration. I have quoted these, and other documents, without reserve, presuming they were presented solely for the public good, and became consequently public property.

With the termination of the year 1814, ceased an Epidemic constitution, which had reigned for two autumns; and,

* In numerous dissections which I witnessed, in 1814, morbid changes in the inner surface of the stomach and intestines, were frequently not discoverable after death, certainly but very seldom to the extent which might have been expected. The Epidemic, not improbably, partaking of the nature of the contagious Exanthemata, may produce some specific action, or appearance, on the villous coat, which fades with the extinction of life; a slight blush, or a few spots, interiorly remaining, as the sequel of a general redness or efflorescence, which might have occurred during the progress of the disease; as a livid spot on the tip of the ear, or on the cheek, alone remain after death, notwithstanding congestion and turgid countenance had been remarkable during the last days or hours of life. The disorder is indeed termed, by some Spanish Physicians, *Exanthema internum contagiosum*.

although healthful seasons have been since * enjoyed, it may be proper to subjoin a few desultory remarks respecting the occurrences during this period.

In these fortunate years, the anxious desire of preventing † or mitigating calamities, similar to those experienced in 1804, 10, 13, and 14,—the disputes of authors, and the general progress of science, have displayed many facts illustrative of the nature of the febrile disorders of Gibraltar; but during this advance in observation, there has existed a proneness on the part of many able pathologists, to receive and to follow analogical presumptions, as if they were proved physical data.

The similarity of cases, as they appear in written detail; and the slight difference in many of the symptoms of ardent fever, whether appearing on the coasts of the Mediterranean, or in the West Indies, have supported the attempt to annul the true discrimination of febrile disorders. This occasional resemblance of all pyrexial maladies has served as the resting place of essays striving to identify the Epidemics of Gibraltar, not only with its own Endemic distempers, but with the Endemics of every hot climate. If, however, such analogies were admissible, with equal justice and force might the Epidemics of this fortress be identified with those of Great Britain. In this respect, it seems to have been forgotten that it is not during the hot season sickness occurs here, or when our thermometers range towards those degrees which mark the medium or general temperature in the Caribbean Archipelago; but it is in the moderate weeks which end September, and which continue throughout October, that this middle latitude is chiefly affected.

To return—nearly eight years have now elapsed, and the population of this Garrison has continued in full fruition of what should be termed, its ordinary and happy endowment of health. There have, indeed, been occasional times, wherein limited bodies of troops and classes of civilians have suffered from peculiar maladies, but these exceptions have only served more fully to confirm the view, which I have ventured to present, of the difference of our febrile distempers.

* July, 1826.

† On the 15th of August, 1815, the Civil Hospital was opened under the auspices of His Excellency General Sir George Don. Its objects were stated in the preamble to the regulations of the Institutions, to consist in the establishment of a triple hospital, for the separate reception of Protestants, Catholics, and Jews—to provide for the attendance and care of the sick poor within the hospital, and in their own dwellings; to form a general dispensary for the gratuitous distribution of medicine, and for vaccination; and for the promotion of philosophical pursuits.

Incidental cases of an ardent pyrexia continually occur. The 11th regiment at one time suffered from synochal fever, attended with pneumonic determination. Venesection, of course, became the sovereign remedy; but in some of these cases it failed in subduing inordinate action, even when carried to the extent of 200 ounces; in one of these, of fatal issue, no trace of visceral lesion could be discovered on dissection. This appearance of pyrexial disease in the 11th regiment, was followed by a considerable accumulation of chronic affections of the chest; and if this type of fever has not proved the cause of so great a mortality in Gibraltar, as Epidemic sickness, it has destroyed more constitutions by lingering maladies than any other, as is but too well marked in the proceedings of invaliding boards.

The 64th regiment landed in this garrison in 1818, imbued with a scorbutic taint; and this corps speedily suffered from acute dysentery, fever, and pneumonia, and subsequently, from their usual sequelæ, viz. protracted dysenteric complaints, visceral obstructions, phthisis, &c.

The 64th and 26th regiments reported a few cases wherein "stomacace universalis,"* or symptoms denoting what has been called "putrid diathesis," have manifested themselves, accompanying gangrene of the intestines, or "putrid dysentery," the stomach remaining, throughout, undisturbed. Petechiæ have been reported twice or thrice, and once in the beginning of 1815, the Physician to the forces reported "typhoid symptoms."

A few cases of remittent fever have annually occurred, and have been not unfrequently considered as actually contracted within the walls.

Yet, notwithstanding these occurrences, if any real and unbiassed observer of disease be asked, what has been the

* Stomacace is defined in Parrs Medical Dictionary (being derived from *σφομα*, the mouth, and *κακος*, evil,) an erosion of, and spontaneous hæmorrhage from the gums, with usually a fœtor of the mouth. It is a common symptom of scurvy, and is sometimes the appellation of this disease.

The occurrence of these complaints is noticed, as it serves to prove that no class or modification of fever will substantiate Epidemic malady. Symptoms which the humoral pathologists would have attributed to a dissolved state of the blood, were observable in several instances; but the other phenomena of Epidemic sickness were absent.

Neither these symptoms in individuals, nor the unhealthy season of the year at which they occurred, could produce that "influence in the presence of the sick which is allied to contagion," which propagates disease, or produces Epidemic sickness.

nature of the pyrexial diseases prevalent in Gibraltar since 1814, he will undoubtedly reply, that, although affection of the chest may have been indistinctly marked during the onset of disease, and may often be but slightly indicated throughout its progress; still, pneumonic fever, open or insidious, constitutes the true malady of this station:—A disease of high action, originating in, and modified by, casual exposure to the varying excitement of morbid agents; if neglected, or not speedily relieved, often assuming the remittent type, accompanied by yellow skin, and rarely, with dark vomiting—

A disease, remediable only by the most active depletory means—

A disease not communicable;—and producing a tendency to recurrence: immunity from future attacks of it not being obtained by one seizure.

The consideration of this last mentioned circumstance is of importance in framing the prognosis of the probable health of approaching seasons, so often required from medical officers.

Former attacks of “*Febres estacionales*” afford no security; persons having suffered from these, or from epidemic Fever, are, in ordinary years, indiscriminately seized, and whilst this type of fever (*estacional*) predominates, there need be little apprehension of any invading Epidemic. Possibly this deduction is corroborated by knowing, that even if it was conceded the Epidemic Fever could attack the same person twice, still all parties concur in the admission of the unfrequency of such an occurrence; whilst, on the other hand, no one, who has had experience in the Endemic Fevers of this latitude, can assert, that the *estacional* does not cause such visceral disorders as leave the habit peculiarly prone to relapse, and even to repeated attacks.

Yellow skin has proved, during the years of health of which I am speaking, the occasional source of error, and is even yet a cause of apprehension. In June, 1815, and again in autumn 1818, a few icteroid cases were so erroneously described, that, had there not existed amongst the Spanish authorities an implicit reliance on the candour of the Government of Gibraltar, much mischief would have ensued;—measures not only injurious to commercial interest, but even interfering with the comforts and supplies of the Garrison, would in all probability have been adopted; they were indeed in contemplation by the Spanish authorities.

Yellow suffusion, or a charged and yellow-tinged eye is, to the accurate observer, discoverable in a vast number of

acute complaints; I had almost said the majority: whether these are consequent to ordinary pyrexial irritation, or to severe (surgical) accidents. Why then is this casualty treasured as a pathognomonic mark of fever? As well might we assert, that the rigor which so frequently follows the use of a bougie substantiated intermittent fever, as suppose that yellow suffusion indicated any precise type of disease.

Physicians holding this single symptom in view, have pretended to deprecate nosological definitions, and have adopted a sort of partizan phraseology, by placing "the yellow fever in grades," according to the varying seasons of the year, "in concentrated forms;" and it has been a favourite doctrine with some, to assert that the yellow fever deteriorates as autumn advances. Nevertheless, if yellow skin, dark-coloured vomiting, and death constitute the "worst forms of yellow fever," we have witnessed it in the first months of the year in Gibraltar, and yet we have had healthy summers and autumns in immediate succession;—the yellow fever not progressively heightening, in point of number, in conformity to the evil presage of these early cases, nor increasing in severity of appearance; far less assuming a host of deadly symptoms, essentially differing from the usual course of Endemic disease.

What are termed the worst forms of yellow fever, viz. bilious remittent fevers, appear sporadically at all seasons; they proceed from the utmost severity of invasion, and unchecked by art proceed to their fatal event; still their type is well defined: it is protracted; not unfrequently attended by intense pain of head, turgid countenance, restlessness, but still with unimpaired functions of the mind; there is no succession of cases in families—no sudden filling of hospitals—no disproportionate mortality—and very seldom have the best hopes of friends, and the discerning judgment of those who are accustomed anxiously to watch such patients, been unexpectedly, or suddenly blasted.

Gastric phenomena are often absent in toto; together with dorsal pains, renal disorder, and general feelings of prostration of strength. The expressive anguish of countenance, vomiting, and the train of disorganization, which, for want of an apt definition, is still denominated putrid or malignant, and which has been sketched as prominent under epidemic influence, have either not occurred, or have appeared so rarely, during the period now under consideration, that they have not been reported as taking place in the diseases of this station; notwithstanding which, I am certain

even solitary instances have been sought for, and would have been gladly portrayed, by those who may consider all hypothesis relative to the essence of fever, and to many of its sective divisions, too obscurely delineated to admit of their adoption. The unusual symptom of black vomit has been unknown in military or in civil practice since 1814. It was, nevertheless, casually mentioned to me, that three instances occurred in 1815; two of these having survived, I confess I became sceptical; first, because I never saw a person borne down by black, flaky, glairy vomit recover; and, secondly, because the general course of disease, and the concurring testimony of other practitioners, did not announce the developement of that symptom in any other individual. But I might pass this question as some of the quoted authorities in 1814, who, with a want of observation ill suited to the occasion of their quotation, have insinuated doubts whether this symptom even then appeared.* Indeed, pursuing these and similar assertions is begging a question, as it is so fully ascertained that, since 1814, the general diathesis of disease has been free from adynamic marks; it is giving them a weight, which, in truth, they do not possess, but they are noticed lest the omission should be construed into a supposition that they were facts of importance, or such as could not be proved perfectly fallacious.

The eloquence and erudition of many authors could not fail to procure a number of disciples; and by some few of these, the tendency in all fevers to evening exacerbation and to matutinal relief, has been explained into a distinct remittent type of fever, and with equal facility have such remittent cases been referred to paludal poison; taking it for granted, that fever would not remit, unless produced by marsh miasma.

I have watched the comparative progress of remittent and continued fever. The numbers are quite disproportionate; but, as I have already remarked in regard to yellow skin, so the remittent type will supervene even in surgical cases, and, as it were, graft its character on them, as it seems occasionally to do on the Epidemic,† or will succeed to its attack, and

* Doctor Jackson states, page 101, "vomiting of black matter appears not unfrequently on the third day in the fevers of Andalusia—disappears on the fourth—re-appears on the fifth—sometimes continues throughout the sixth," &c.

† The Epidemic may, in fact, prove a predisposing cause of Endemic disorder; it leaves a debilitated frame, on which local visitations, or marsh miasmata, may act as readily as the use of ardent spirits, insolation, or exposure to cold on duty; but this second attack, it is contended, is not a relapse similar to that of agueish disorders, but a superinduced malady.

will demonstrate itself by tertian or quartan distress, by paroxysm, by obscure rigors, succeeded by pyrexial stage and profuse diaphoresis.

Whenever intermittent fever has been reported, the medical officers have been requested to ascertain whether the disease originated in this place, or was a relapse into ague engendered at another station.

The following return gives an abstract of the sick reports of this Garrison from the 25th of December, 1814, to the 20th of June, 1822, which shews the amount of the general pyrexial disorders, and the mortality therefrom. A foot-note shews the extent of native ague; and a second return demonstrates the number of men discharged from His Majesty's service in consequence of the same diseases, or their sequelæ.

In the last period of this series, some unusual occurrences presented themselves, in regard to the morbid constitution of the season, which may be here noted, as it relates to the appearance of minor Epidemics in this Garrison.

In my official report, ending the 20th of December, 1821, I had to notice a considerable deviation from the ordinary course of the weather,—on the 1st of May some showers took place, which affected the pluviometer about $\frac{3}{100}$ parts of an inch, but from that date, until 11th of October, the rain gauge did not indicate any fall of water. About the autumnal equinox there occurred a few slight showers, and heavy dews were observable; and, again, about the 21st of October, there were two slight showers; but altogether these did not affect the pluviometer; and thus occurred a season of uncommon drought, such as was not recollected by the oldest inhabitants, and which totally prevented the seasonable labours of the gardener and the farmer. The fields in the adjacent parts of Spain continued in their summer induration—they refused the plough;—agriculture was, at least, two months later than in ordinary years; and the crops of vegetables, which used to cover luxuriantly the garden-grounds in the south of Gibraltar, before this period, withered from the want of water. This drought is said to have extended to Cadiz and the neighbouring parts of Barbary; yet, at Barcelona, and along a considerable portion of the east coast of Spain, the most violent storms, with lightning, rain, &c. were experienced.

Snow was not observed on the neighbouring hills, until about the middle of December. The flights of wild fowl were rare and scanty.

The thermometer, it is true, did not demonstrate any particularly marked high grade; but the summer was oppressive

with a large proportion of easterly winds, and it terminated in a daily expectation of rains, which was disappointed for months.

Notwithstanding this atmospheric constitution, the average number of the sick of the troops, and the proportion of acute cases amongst them, were not materially different from what occurs in ordinary seasons: still the violence of individual cases has been unusual, the fatal cases more numerous, and the deaths proved more sudden, and even unexpected, than is common at this station. To these peculiarities in the phases of disease, were to be added a greater predisposition amongst the sick than general to be affected by mercury, more intense pervigilia, and a more frequent occurrence of mental aberration.

The quickness and severity with which small doses of calomel affected the system first struck me, whilst in attendance on cases of measles and scarlatina;—spontaneous ptyalism often occurred amongst my patients in these maladies, even after I had determined totally to disuse mercury in their treatment; but not only where calomel had been incautiously given, but even when prescribed in its ordinary forms and quantity by steady practitioners, I was often called to witness distressing salivation, with its accompanying inability to take sustenance—watchfulness—tedious ulcers, and fatal parotitis. This extraordinary proneness to suffer from mercury was not solely confined to children labouring under measles and scarlatina; it also extended to adults, and particularly to pulmonic patients.

Measles and scarlatina were Epidemic for seven months. They first appeared amongst the children of the troops, viz. in the 26th regiment, quartered in the few miserable sheds that continue to disfigure our line wall; they slowly extended to the civilians, becoming most rife about the middle of September; and from thence spreading to the South—to the village on the Isthmus, and to Catalan Bay—and finally ceased about April, 1822.

Some difficulty took place in making the diagnosis betwixt these two complaints at their incidence; and I regret having to add that a serious mortality took place; amongst the children of the lower orders of the civilians, no less than 138 funerals being reported.

Much mischief occurred by not taking a more comprehensive pathological view of these distempers, than is generally done. Under the idea, that subsequent pulmonic affection was chiefly to be dreaded in measles, and with the vulgar opinion,

that cynamche depends on exposure to cold;—the ordinary means of subduing the febrile orgasm were neglected; the pyrexial catenation was, in fact, augmented—the heat of the season, and our actual latitude seemed to be forgotten, especially amongst the lower orders of the Jews; the miserable sufferers from these Epidemics were subjected to the closed apartments, and to the heating regimen, which is still resorted to in Barbary for the cure of small pox, and which renders that disease as destructive to the Moors as the plague. The simple recommendation, or the temporary enforcement of proper ventilation and a cooling treatment, proved insufficient to overcome prejudice; and the mortality, which I individually observed, was decidedly referable to the unconquered general pyrexia, and not to injury of either the throat or lungs. Affection of the head was remarkable in these fatal instances.

The ordinary sequelæ of scarlatina, dropsical accumulations, were frequent; and judging from the presence and constancy of the palpitations, dyspnœa, and lividity of countenance, with little cough, or anasarca, and sudden deaths, the pericardium might be considered as the cavity, which was most generally the seat of disease.

These collections uniformly followed attacks, in which, either from the wilfulness of children, the false indulgence of parents, or the seeming mildness of the case, free depletory means had not been, originally, employed.

The successful treatment of these secondary distempers, depended on the promptness and energy with which bleeding and cathartics were adopted. The number of leeches applied, and the largeness of the doses of drastic purgatives, as of scammony, gamboge, and even of elaterium, considerably exceeded what I had ever before seen given to children.

The necessity of avoiding calomel in these diseases, was particularly distressing, from the ease with which children can be induced to take it when they refuse all other medicines; it was, however, so uncertain and unsafe, that I was forced, for the time, to relinquish its use in these complaints.

Under the pressure of these Epidemics, we derived the greatest benefit from pursuing the system lately adopted in this command, for the immediate reception of the women and children of the troops into their respective regimental hospitals.

The several points which I have now noted, will generally be found in the catalogue of deterioration of seasons, viz.—

vast prevalence of easterly winds—excessive and long continued drought; they are with perfect justice assumed both as premonitory of, and as causing the most destructive ravages amongst a population in general; yet a full view of the accompanying returns,* already referred to, presents little more than the results of a season of health, certainly so, amongst adults. The Endemic fevers have been few;—three of the most severe of these admitted into the Civil Hospital, were attended either with yellow skin, dark-coloured vomiting, or suppressed urine. Mr. Barker puts a question: Did the removal of these persons into hospital, prevent the spread of fever? The reply must be conjectural. For my own part, as far as the general issue was concerned, I was not alarmed, and I reported my confidence in our escaping an epidemic visitation, grounding my opinion on observing the cases prolonged to the 14th and 17th days, and finding that the subjects had previously passed the epidemic fever.

The annexed return states all the febrile affections which have taken place during a space of nearly eight years, and the mortality is not equal to that of as many weeks, or even as many days, of Epidemic influence.

The small proportion of cases of native ague is there proved; yet all the presumed causes of paludal disease could not have vanished by a simple fiat; nay, notwithstanding ample exertions in lustration and purification, some morbid localities have existed, even in greater force than on former occasions:—The old burial ground was encroached upon—portions of corpses were exposed, and highly offensive effluvia were emitted.

The long deprecated sewers have remained uncovered throughout their principal ranges, to the extent of twenty or thirty yards at a time, during two successive summers and autumns, as the improving and re-constructing of them could only be perfected during these seasons; for the re-building would have been liable to interruption from rains in spring and winter.

The persons employed in this abominable service had not been inured to the fetid exhalations which they respired; nor were the inhabitants of the houses parallel and close to the open drains, accustomed to inhale these emanations from

* The half-yearly returns from the Medical Offices for the period ending 20th December, 1821.

decaying and putrid animal and vegetable matters, exposed, with moisture, to degrees of heat considerably above 80° Fahrenheit; still no bad effects resulted to those, who must have lived for a considerable portion of the year in an atmosphere highly charged with offensive gasses.

Noah Webster, possibly more diligent than most of the philosophers, who have endeavoured to trace the causes of Epidemic visitation, comes at length to this conclusion, "after all, the causes of violent and destructive Epidemic diseases may remain secret:—we see the causes of ordinary diseases in the seasons, in marshes, in stagnant waters, confined air, and the like; but it often happens, that pestilence commits the most cruel ravages in seasons apparently the most temperate, and in places, evidently the most salubrious." Again he observes, that "Intemperate seasons and exhalations of every kind, can only be admitted as secondary causes, modifying the operation of the primary one; but one uniform series of observation, from the beginning of history to this day, has driven medical writers from the defenceless ground of intemperate weather and putrid exhalations."

The quantity of vegetable production on the rock has been increased, as much as possible, since the year 1814.

The seasons have been rather those of drought, with occasional showers at uncertain periods; but Epidemic influence seems little promoted or retarded by falls of rain.

The distress which had been so extensively experienced in Europe, has been, in some degree, shared here, viz. in 1815, 16, 17, and 18. The peace, and the subsequent commercial changes, threw numbers out of employment. It is true the population of Gibraltar had diminished. This diminution, indeed, was not forced by actual want: we have had many new comers amongst the civilians, together with several new regiments. Considerable detachments of recruits, and exchanged companies of artillery, have also joined the garrison.

Epidemic influence has pervaded the coasts of the Mediterranean, from the southern provinces of Italy, the eastern coast of the Adriatic, and the Levant, along the southern shores, to the Bay of Tangier, extending to the interior of the Barbary Regencies, and to the western towns and cities of the Morocco Empire; and, in most of these places, it appears to have been known, and best designated, from its unerring symptoms and characteristic desolation, glandular Plague.

The immediate neighbourhood of Gibraltar to its very

gates, has experienced unusual sickness; probably, by an increase of those causes which operate more or less every autumn.

Remittent fevers, surely in their "worst form," for they have terminated in visceral obstructions, dropsy, and death; and intermittents, have been rife in the circumjacent villages, the Spanish lines, and the gardens and huts on the neutral ground; but Gibraltar, the alleged focus of real or factitious marsh miasmata, has not produced a single case, in my opinion, calculated to create alarm as to the general issue, or even to afford a plausible pretext, in opposition to any of those doctrines which discriminate betwixt the common Epidemic and the Epidemic Fevers.

Such facts, radiating into innumerable reasonings, continue to demonstrate, in my mind, an essential difference in the phases of these two diseases, from their minute organic affections to their general result.

The immunity of Gibraltar for seven* successive seasons, during which many other commercial parts of the Mediterranean have been, one after another, scourged by sickness, and, during which, devastating Epidemics have surrounded it, is a blessing, which, with every feeling of gratitude to a benign Providence, we still regard with the inquisitive faculty of mortality, and naturally demand in how far human means may have tended to it. Believing, as I do, in the personally communicable nature of Epidemic Fever, and in the possibility of its spreading through our population, if introduced under peculiar circumstances, still, I think, much may be, and has been done towards its prevention by means totally independant of those benefits, which, it must be admitted, are derived from the exclusion of infected persons. All those measures to which I now allude, may, in a few words, be said to be those which lessen a general predisposition, and may be readily enumerated; such as removal of nuisances, the cherishing an impoverished class of people, unwearied solicitude in the care of their sick, the due notice of the cleanliness and salubrity of dwellings, and the dispersion of a contaminated population; all these are powerful engines in the hands of an able manager; they have been for years sedulously conducted; their beneficial results have attracted public attention, and Dr. Jackson has been pleased

* Now twelve years,—1826.

to report, that, " The health regulations, which are at present in force in Gibraltar Garrison, are well digested, and well executed, both with respect to the military, and civil inhabitants; insomuch, that the influence must be of unusual concentration if it be not controled by the means prepared, provided the subjects be tractable and true to themselves."

This compliment from so good a judge as Doctor Jackson, from a person believed to be so conversant with the management of health regulations, would, indeed, be gratifying not only to those who have earned the meed, but also to those, who might imagine they assisted in the promotion of the designs of government, did not the bearing of the Doctor's late work more than insinuate that our salutary rules were not founded on sound pathological principles.

The basis of our regulations was nevertheless comprehensive; not narrowed by any hypothesis, but resulting from the experience of 1804, 1810, 13, and 14; it did not rest exclusively on the doctrine of animal effluvia propagating the malady; neither was it founded on the idea of the Epidemic originating solely in emanations from the earth.

Still, with whatever diligence these measures have been pursued, their efficacy has been most materially augmented by the absolute and continued reduction of the low and vagabond population which infested Gibraltar during the late war. Four Epidemics occurred betwixt 1804 and 1814 inclusive, when Gibraltar was the only port in the Mediterranean, where British commerce was secure, and to which the fugitives from the oppressive and overweaning tyranny of the French Government could resort. A population characterized as one of the lowest masquerade appearance, afforded pabulum for the spread of fever; many localities indubitably assisted the extension of sickness, and not impossibly some means of resisting its progress may have been omitted.

The march of events since 1814, and the efforts of humanity, have gone together to assist in the freedom of Gibraltar from the direful thraldom of disease; and possibly, measures, by a few deemed those of supererogation, may have contributed to its safety.

The independence of Spain—the opening of the French and Italian ports—the return of what may be termed the intrinsic, or rather the peaceful commerce of Gibraltar—the reduction of the number of the garrison—the encampment of bodies of troops, and of the lower orders of the civilians, and minor endeavours to free the territory from the useless

members of its community, have in all human probability gone far to absolve Gibraltar from a repetition of those miseries, to which it had so seriously been subjected.

The surveillance of sixty-six unpaid inspectors assures us, that the lower class of inhabitants are as well, if not better, lodged than in most other places; the vast decrease in the population has, in effect, promoted the lower orders from their wretched dwellings to proper habitations.

The ordinary labourer receives $7\frac{1}{2}$ reals, or $2s\ 9\frac{1}{4}d$ per diem: whilst he can buy—

1 pound of beef for 20 quarts,

1 pound of bread for $8\frac{1}{2}$ ditto,

1 bottle of wine for 24 ditto,

A plate of stewed meat, or fish for 12 ditto,

amounting to 4 reals $\frac{1}{2}$ quarts, or $1s\ 6d$; add to this, vegetables are cheap and abundant, firing is moderately priced, and seldom required, except for cooking and washing.

It will be admitted, that these circumstances must have materially contributed to the health of Gibraltar, but as they did not simultaneously or uniformly operate in 1815, 1816, and 1817, it may be conceived too wide a conclusion to insist on their sudden action after 1814; but a casual and immediate safeguard presented the immunity from second attack, which the population in general enjoyed. The Epidemics of 1813 and 1814 apparently stopped from want of subjects in the town, after having visited all its constant inhabitants.

I am conscious that this desultory and rapid glance of certain facts and opinions relative to the Epidemic fever of Gibraltar, must, in many particulars, appear imperfect. I need not, however, attempt an apology, although professional avocations might with truth be pleaded.

I have passed over the assertions of many, because I knew them to be erroneous; and because I thought time might be more profitably employed than in drawing from oblivion certain doctrines, which the original publishers of them could not ultimately defend or support; and it only remains for me to close this paper by a brief recapitulation of some of the events, which announce the existence of epidemic sickness in Gibraltar, and of the means to be pursued.

1st. An Epidemic malady will announce its approach by attacks on the lower orders: commence precautions with

them, and attend to their health as the chief preventive of the spread of fever.

2nd. Cases of black vomit will be reported.

3rd. Those who have really passed the Epidemic on a former occasion will remain healthy.

4th. This immunity constitutes the basis of precautions, as well as of diagnosis, and whosoever affects to neglect this safeguard, rejects his sheet anchor.

5th. In other respects, the precautions adopted in cities when typhus fever prevails are to be resorted to,—

6th. Hence separation of the sick from the healthy becomes a primary object.

7th. Therefore remove the sick to the best hospitals, viz. those on the regimental plan, and remove bodies of troops, or families in destitute circumstances, or supposed to be infected, to a pure atmosphere. Without theorising, as to personal contagion, or local miasmata, both suppositions render this step indispensable.

8th. Employ those who have passed the fever about the sick, and in duties exposing them to the presence of the sick, or in sickly situations.

9th. Let the care of individuals be undertaken with unshackled opinions; and with liberal means of providing for the sick.

10th. Let an effective surveillance endeavour to bring every case into immediate notice.

11th. Refuse admittance into the garrison of persons coming from infected districts without an observation of more than ten days; the Epidemic has been known to lurk that time in the habit of an individual after removal to a pure atmosphere. Strangers entering an infected town are peculiarly liable to disease whether endemic or contagious. They may introduce the most severe forms of disease, or become its prey.

12th. Defer the disputes of the faculty and of the argumentative, if possible, until the cessation of the epidemic period. Let experience take precedence of theory.

13th. A numerically reduced population—good provisions—sufficiency of labour or employment—clean and freely ventilated dwellings—visits to the lower habitations by unpaid inspectors, and medical officers—the removal of nuisances from the surface of the territory—ample sewers—a plentiful supply of water—hospital accommodations for the poor, and medical attendance on those who will not go into

the hospital, are the prophylactics most worthy of attention for the Civilians.

14th. Moderate military discipline and exercise—the complete and unequivocal withdrawing of the troops from public works and duties of fatigue—warm clothing to be worn when exposed on guard, or otherwise during the night—provision of quarters under regular military inspection for married soldiers and their families—the prevention of any soldiers hiring huts—the instant removal of the sick, whether men, women, or children—the frequent visits of military officers to the hospitals—the affording of liberal assistance to the sick by numerous orderlies, and of clerks to the medical officers to preserve their documents, and to prevent duties of accounts and of the pen from interfering with more necessary professional labours; these constitute the outlines of measures likely to prove most beneficial to the garrison.

15th. Generally, removal to the Neutral Ground, viz. of the opulent to their sheds—of the troops and of the excluded portion of the inhabitants to their tents, or even to bivouac—is Safety.

It is necessary to observe, that some quarantine measures may be considered proper by the Government of Gibraltar; because the Italians, French, Spaniards, &c. rely on the efficacy of these restrictions, and if similar measures were not adopted in this port, the ships and commerce of Gibraltar would be excluded from all the European ports in the Mediterranean, and the Bay and Town of Gibraltar would in fact become a free Lazaret for all pestiferated vessels; a result, which, perhaps, was never contemplated by those who have written in opposition to the precaution of quarantine.

An unity of opinion amongst the health boards of the Mediterranean states, an entire and simultaneous change of system, in opposition to popular belief, can only in this respect absolve Gibraltar from the necessity of quarantine. As it now is, when the French council of health at Marseilles closed their ports against the Spanish Mediterranean commerce, and placed long quarantine on the southern Portuguese ports, Gibraltar was exempted; a short observation being only imposed, in consequence of the fully-acknowledged efficacy of the measures adopted here, and the success which had attended their observance for several years.

As a basis for a portion of police duty, it may be worth

consideration, in how far the population of Gibraltar can or should be restricted, or prevented from increasing beyond the number which can actually obtain healthy accommodation in the habitations now on the rock. It may appear a regulation not perfectly compatible with practice; certainly it is one which would meet opposition. Surveys being made, calculating the real healthful accommodation which could be afforded, the number of inhabitants should not be permitted (if we were governed solely by the health laws) to exceed the average estimate, especially during the latter end of summer and autumn. This point, however, as involving many other considerations, beyond that of health, is submitted with some degree of hesitation.

It now remains for me, in conclusion, to remark, that I am satisfied, as every impartial observer must be, that many of the topics on which I have dwelt are by no means settled either in medical or popular opinion. Still the minutely and frequently revolving and reconsidering them, appears the only method of eliciting the truth; and with this idea, I beg to submit these observations for your Lordship's consideration.

I have the honour to be,

My Lord,

Your Excellency's most obedient,

humble Servant,

W. W. FRASER,

Inspector of Hospitals.

in low of the population of Gibraltar, it should be restricted, it prevented from increasing beyond the number which can sustain of this healthy accommodation in the habitations on the rock. It may appear a regulation not perfectly compatible with practice, certainly it is one which would meet opposition. However by an mode, either by the local health, or by an accommodation which could be afforded, the number of inhabitants should not be permitted to exceed the amount which the health laws of the island would support, especially during the latter end of winter and spring. This point however, as involving many other considerations, beyond that of health, is submitted with some degree of hesitation.

It now remains for me, in conclusion, to thank the Hon. Board for the interest they have taken in the subject, and to assure them that I have derived great pleasure in the opportunity of presenting my opinion. Still the Ministry and the public, in viewing and reconsidering them, appears the only method of settling the truth; and with this view, I beg to submit these observations for the Ministry's consideration.

I am, Sir, your obedient servant,
 W. W. LASSER

Secretary of the Board

LIST 1928

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41	11
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47	11
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49	11
50	11

TABLE, No. 2.
RETURN OF ADMISSIONS AND DEATHS IN THE GARRISON OF GIBRALTAR.

Average Strength of the Garrison about 4,000.

Periods.	Admissions.	Deaths.	Febris Intermittent.	Febris Remittent.	Febris Cont. Com.	Febris Synochus.	Cyanache Tonsil.	Pneumonia.	Gastritis.	Enteritis.	Hepatitis Acuta.	Hepatitis Chronica.	Splenitis.	Cystitis.	Otitis.	Rheumatismus Acutus.	Rubeola.	Scarlatina.	Erysipelas.	Hemoptysis.	Phthisis Pulmonalis.	Catarhus Acutus.	Catarhus Chronicus.	Dysenteria Acuta.	Dysenteria Chronica.	Apoplexia.	Asthma.	Colica.	Cholesta Morbus.	Diarrhoea.	Anasarca.	Hydrothorax.	Ascites.	Icterus.	Alii.	Total Admissions.	Total Deaths from Diseases above specified in the column Alii.	Total Deaths from Diseases in the column Alii.	Grand Total Deaths.	
From 21st December, 1814, to 20th June, 1815.	29	3	40	..	..	4	76	..	1	..	..	..	..	..	..	60	..	..	4	3	14	126	..	15	..	1	..	18	22	..	..	..	..	3	691	1115	..	..
From 21st June, 1815, to 20th December, 1815.	43	3	78	14	72	..	7	6	..	1	23	1	2	5	77	..	78	..	1	1	2	11	65	1	3	472	966	
From 21st December, 1815, to 20th June, 1816.	10	2	168	94	..	1	5	3	8	96	..	40	..	3	2	..	19	22	1	1	1021	1500	
From 21st June, 1816, to 20th December, 1816.	37	3	243	1	122	..	2	1	59	1	..	5	2	1	39	..	109	1	..	12	63	5	771	1477
From 21st December, 1816, to 20th June, 1817.	4	..	95	1	4	184	..	1	3	..	..	..	..	..	..	33	2	1	..	2	3	66	14	45	17	..	3	1	4	35	2	..	4	5	592	1121	..	..
From 21st June, 1817, to 20th December, 1817.	3	..	119	..	..	4	115	1	3	..	3	..	..	..	..	23	..	..	1	1	7	85	8	54	8	..	1	6	6	32	..	1	1	..	360	882	..	..
From 21st December, 1817, to 20th June, 1818.	2	1	140	..	..	10	156	1	1	2	2	3	..	..	..	76	1	1	2	1	4	67	4	32	1	2	1	2	4	35	2	..	2	4	511	1090	..	..
From 21st June, 1818, to 20th December, 1818.	2	30	321	35	3	196	2	5	2	3	1	..	..	..	..	..	..	..	1	2	8	78	10	171	..	..	2	3	4	152	2	..	2	2	609	1646	..	..
From 21st December, 1818, to 20th June, 1819.	7	4	155	..	2	156	..	1	1	2	..	..	..	..	..	27	..	..	1	1	9	167	3	11	..	2	1	2	5	67	1	..	4	1	472	1102	..	..
From 21st June, 1819, to 20th December, 1819.	1	6	293	..	3	90	..	3	..	..	2	5	..	..	..	14	..	..	1	7	10	82	1	24	..	2	..	7	14	76	..	..	..	5	393	1036	..	..
From 21st December, 1819, to 20th June, 1820.	9	1	77	..	9	236	..	2	5	2	1	1	..	..	..	22	..	..	..	4	12	170	4	9	4	1	1	1	5	40	..	..	1	7	512	1136	..	..
From 21st June, 1820, to 20th December, 1820.	10	21	216	..	4	172	..	1	11	6	1	..	3	41	..	..	..	2	7	6	93	1	40	..	..	..	2	23	39	115	2	..	2	5	464	1298	..	..
From 21st December, 1820, to 20th June, 1821.	..	..	110	9	25	89	..	1	9	4	1	..	1	51	..	..	5	..	..	3	5	52	3	45	1	..	3	6	46	72	..	..	1	1	634	1177	..	..
From 21st June, 1821, to 20th December, 1821.	23	7	106	14	19	65	..	..	6	9	1	..	..	23	2	1	..	..	6	9	85	3	118	..	..	..	1	16	44	250	2	..	2	..	476	1368	..	..
From 21st December, 1821, to 20th June, 1822.	5	8	155	..	24	29	..	3	1	5	..	..	..	17	3	3	2	4	10	112	13	15	7	..	2	9	17	106	..	..	..	..	1	534	1085	..	..	
From 21st June, 1822, to 20th December, 1822.	14	94	205	..	6	60	..	..	2	8	..	..	2	24	..	..	..	..	4	11	109	5	35	..	..	1	9	49	225	..	1	..	..	540	1404	..	..	
Grand Total.	109	100	2000	69	132	1912	4	33	51	49	9	1	6	493	19	6	20	52	122	1523	69	850	38	11	23	87	291	1397	11	8	21	37	3072	19403	..	..		
	4	23	36	4	2	107	1	5	7	1	..	..	..	..	..	6	..	..	..	3	49	4	2	30	9	5	6	1	3	15	2	1	6	1	45	334	45	370

Having examined (as directed) the Reports from 21st December, 1814, to 20th December, 1822, there appear to have been 202 admissions of Intermittent Fever into the Military Hospitals, and according to a most careful examination of the Statements, not more than 21 of these can be traced to native origin :
viz. 199 Admissions, and
3 in Hospital 21st December, 1814.

(Signed) C. HOYLAND.

Total treated 292
N.B.—The Names of Diseases are those chosen and appropriated by the Regimental Surgeons on the incidence or admission of Cases into the Hospital.

Gibraltar, 4th March, 1823.

ADMISSIONS AND DEATHS IN

Year	Admissions	Deaths	Balance
1814	10	3	7
1815	13	3	10
1816	10	3	7
1817	17	1	16
1818	4	1	3
1819	11	1	10
1820	10	1	9
1821	10	1	9
1822	10	1	9
1823	10	1	9
1824	10	1	9
1825	10	1	9
1826	10	1	9
1827	10	1	9
1828	10	1	9
1829	10	1	9
1830	10	1	9

TABLE, No. 3.

Return of Men Discharged from His Majesty's Service in consequence of Disease, in the Period embraced by the preceding Returns of Admissions and Deaths, including Chronic Affections of the Chest, under the head Pulmonic.

Febris Intermittens	9
Febris Remittens	1
Hepatitis Chronica	22
Pulmonic	227
Rheumatism	86
Dysenteria	8
Paralysis	4
Epilepsia	29
Diabetes	1
Amentia and Mania	28
Dropsy	4
Hernia Humoralis	14
Stricture Urethræ	6
Schirrhus	2
Hernia	72
Fistula in Perinæo	1
Vulnus	19
Contusio	8
Ulcus	27
Fractura	6
Amputations	15
Punitus	1
Morbi Oculorum	58
Morbi Cutis	1
Hernia Inguinalis	19
Infirm and Worn-out	253
Deafness	10
Diseased Viscera	59
Organic Disease of the Hip	3
Malformations	78
Subluxatio	9
Physconia	47
Alii	55*
Total..... 1182	

* *The following Diseases are included in the column Alii, viz.*

Varix	36
Diseased Spermatic Cord	1
Injury of the Sternum	4
Ditto of Vertebræ	1
Ulcerated Tumour	3
Angina Pectoris	1
Palpitatio	4
Diseased Articulation of the Rib	1
Dysecoëa Atonica	2
Wry Neck	1
Extensive Cicatrix	1
Total..... 55	

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Total

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Total

TABLA

DE DATIS ET OBSERVATIONIBUS

ANNO DOMINI 1847

DISEASES	
101	1016
102	1017
103	1018
104	1019
105	1020
106	1021
107	1022
108	1023
109	1024
110	1025
111	1026
112	1027
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187	1102
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189	1104
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193	1108
194	1109
195	1110
196	1111
197	1112
198	1113
199	1114
200	1115