Notes on diseases in Turkey ; and Memoir on the remittent fever of the Levant.

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NOTES

ON

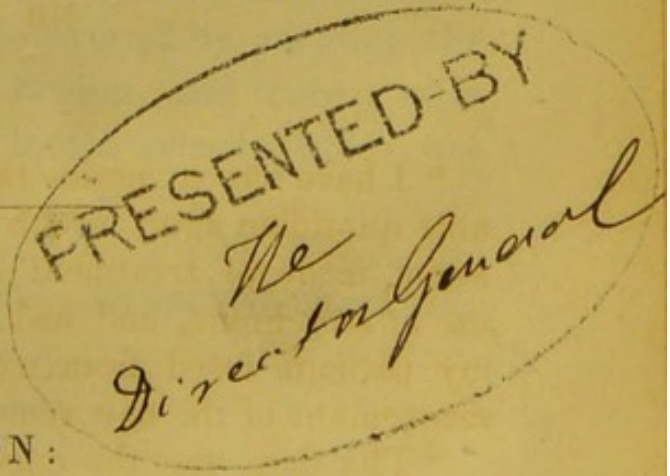
DISEASES IN TURKEY,

AND

MEMOIR

ON THE

REMITTENT FEVER OF THE LEVANT.



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1854.

DEPARTMENT MEMORANDUM.

THE following observations by Drs. Schulhof and Bryce will doubtless prove most acceptable and useful to the medical officers of the army in Turkey, to whose attention they are specially recommended.

When a desire was expressed to possess the results of their experience, in reference to some of the diseases of Turkey, both gentlemen responded with the greatest possible alacrity; therefore, I feel assured the officers of the department generally will join with me in thanking them for their generous and able services in the cause of humanity.

The extracts from the reports of Dr. Bryson and Mr. Drummond, Deputy-Inspectors-General of hospitals and fleets, are deserving of special attention, as there is reason to believe periodic fevers may be averted by adopting the practice recommended by Dr. Bryson, and cured, after having resisted other medicines, by the remedy which was resorted to by Mr. Drummond.

AND. SMITH, M.D., DIRECTOR-GENERAL.

Army and Ordnance Medical Department,
June 15th, 1854.

NOTES

ON

DISEASES IN TURKEY,

IN REFERENCE TO EUROPEAN TROOPS.

BY

MAURICE SCHLUMBOF, M.D.,

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, FELLOW OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY, MEMBER OF THE IMPERIAL AND ROYAL SOCIETY OF PHYSICIANS AT VIENNA, ETC., ETC.

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BY

MAURICE SCHULHOF, M.D.,

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The following pages, which have been written at the request of the Director-General of the Army and Ordnance Medical Department, have not for their object an elaborate discussion on the Ætiology, Prophylaxis, and treatment of the diseases which prevail in and near the Danubian provinces, but are intended simply as a brief and practical outline of my professional experience as to some important differences existing between those countries and England in a medical point of view.

Taking the point where the Danube emerges from the Austrian territory as the apex of a somewhat irregular triangle, divided by that river into halves to the right and left, the portion of the Euxine which lies between Odessa and Bourgas may be considered as its basis, whilst the right side will be flanked by the high mountains of the Balkan from Servia to where they terminate below Varna, and the left by the less elevated branches of the Carpathians, which, running in a semicircular direction through Lesser Wallachia and Moldavia, taper away into the hills of

North Bessarabia. Greater Wallachia, South Moldavia, and South Bessarabia, which compose the left half of the triangle, present an immense plain unrelieved by a single hill. Being unprotected on three sides, this tract lies open to the S.E. wind, and also to the blasts from the N., N.E., and E., which, in the absence of any obstacle, sweep across and over the country on the right side of the river, until they are arrested by the lofty crags of the Balkan. The right half of our triangle is formed entirely by the province of Bulgaria, and bordered on the south by the Balkan. On the other side of this mountainous chain stretches the plateau of Roumelia southwards to the Dardanelles, the Sea of Marmora, and the Bosphorus, and eastwards to the Euxine between Bourgas and Constantinople. Partially open to the N.E. wind, it is chiefly exposed to the E., S.E., S., and S.W.

The Danube, after having broken through the rocky barrier at the apex into a flat country, henceforth flows through a wider channel, which is studded with innumerable islands of a clayey soil covered with brushwood, reed grass, and other water plants, and swarming with musquitos.

After heavy rain, but still more in spring when the snow melts away, the river overflows the islands and shallow banks, turning some parts of the country into swamps many miles in extent, which exhale a very pernicious malaria. Though neither bank is safe from this poison, yet, the left shore being so much lower and flatter, it acts with more intensity there, and renders such places as Kalafat, Rast, Jslasz, Turnul, Simnitza, Giurgevo, Kiernadsy, Cshokaniest, Kallarash, Futestie, &c., very unhealthy during that season. But most dangerous in its effect is the malaria around Cszernawoda, Hirsova, Baba-Dagh, Matschin, Tultscha, and other places in the Dobruzia, at the eastern extremity of

Bulgaria; the same is the case at Brahilou, Galatz, and throughout the Delta formed by the embouchures of the Danube. Nor is the generation of the miasma confined to the Danubian valley, for it is likewise bred by the "Limans" of South Bessarabia; along the shores of the Aluta and the Shyl in Wallachia; in the marshes south-west of Varna; those on either side of the Maritza near Adrianople; not to speak of others of lesser dimensions, and the numerous muddy brooks so frequently to be met with in Bulgaria and Roumelia, which emit a peculiar and offensive smell during the hot season, when they are constantly visited by buffaloes, which wallow in the mire with their muzzles alone above water.

Independently of marshes and swamps, I believe that the alluvial soil of Bulgaria and Roumelia, which, by proper cultivation, might be rendered as salubrious as it is fertile, contains within itself the elements of malaria, which, during the excessive heat, escapes constantly, to the surface through the innumerable cracks formed in the parched meadow land. The changes of the temperature and the seasons are rapid and sudden. The country between Jassy, in Moldavia, and Constantinople, lies between the 43rd and 46th degree north latitude, and yet the temperature ranges from the most excessive heat in summer to 39 degrees below freezing point in winter, and this, too, without the gradual transitions observable elsewhere. The spring, which is very short, is suddenly ushered in by warm breezes, which melt the snow and ice in very little time; the vegetable kingdom, which appeared extinct for many months, begins to germinate and blossom in a few days, and with the end of April every feature of the vernal season is nearly gone. During the summer months, again, there is daily a rapid fall of the thermometer towards the evening, by 15 to 19 degrees Fahr.

Ibrahim Bey, the accomplished son of his late Excellency Zaduc Effendi, with whom I made frequent and distant excursions, told me that in Roumelia the difference was sometimes greater still. The autumnal season begins towards the end of September with thick fogs and tremendous showers, which continue until the N. and N. E. winds, which blow hard in November, clear the sky, and make the atmosphere piercingly cold. I can myself furnish an amusing and instructive instance of these sudden changes, which occurred on the 4th November 1846. After four days' confinement in the quarantine at Giurgevo, the weather having been remarkably fine and cold all the time, I received an early morning visit from the inspecting physician, who came to announce my freedom. No sooner had he glanced at my toilette, which was somewhat more careful than usual, in prospect of some complimentary calls in the town, than he asked—"Are you sufficiently provided with boots, my friend?" I pointed to a few French boots, replying—"That I hated carrying much luggage." "You call this a boot?" shouted he, roaring with laughter, and, taking one of them between his fingers, he led me through the hall, where he had left a pair of overboots of extraordinary size, and opened the entrance door. To my amazement, I found that during the night the snow had already fallen many feet deep. Removal by means of a vehicle was out of the question, and I had to be carried on the shoulders of a powerful porter to the doctor's house, and wait five days before the journey to Bucharest could be attempted. The greater frequency and intensity with which some diseases occur in these provinces must naturally depend upon each and all of the circumstances which have been mentioned, as well as upon the natural productions, diet, occupations, and general mode of living of the population, which shall be referred to in their proper places.

Rheumatism prevails during and after the rainy season among the inhabitants of Bulgaria, nearest to the Danube, and more especially throughout Wallachia, where it assumes a serious character. It occurs also in spring, but with lesser intensity. In the latter country, where, in furtherance of some special object, my friend, Dr. Chevalier de Mayer, physician-in-chief of the Wallachian militia, gave me every facility of inspecting the military hospitals—free access to the civic hospitals being a matter of course—I saw a larger proportion of rheumatic diseases than I ever did before, or since. London comes only next. I had nothing like it at Rustschuck. To avoid repetition, I may state here, once for all, that this is not the only instance of the disproportionate occurrence of certain diseases in these provinces, separated only by a river. The cases which I thus examined, and those which I treated in Bulgaria, were generally those of acute and chronic rheumatism of the joints, frontal rheumatism, facial rheumatism, often affecting one side alone and very painful, and lumbago rheumatica. The class of individuals mostly affected were boatmen, sentinels, travellers, who had the north wind against them, or who rode on horseback during intense cold, and persons exposed to the rain for hours. Occasionally a Turk would send for me, after he had enjoyed a bath. Strangers ought to profit by the example of the inhabitants, who dress much warmer than we do here, and keep the head well covered. Besides the other well-known remedies, I found digitalis, the oxysulphuret of antimony, infusion of juniper berries, and application of tow, fumigated with those berries, of great use in some cases. In the Bosphorus and the Dardanelles, rheumatism frequently occurs in the spring, when the S. E. wind suddenly veers round to N. E., as it sometimes happens in Scutari.

Pleurisy will occur during the autumn, and also in the

winter, when the weather is very cold and dry. In spring a great many persons are attacked by it, in localities which are equally accessible to warm and cold winds, and which, by their situation, are favourable to a sudden change of the former into the latter, viz., Varna, Scutari, &c. The reason why the same cause, as before stated, will produce in one individual rheumatism, and pleurisy in another, must be familiar to every medical reader. However, I entertain some doubts as to the reported frequency of the latter disease at Scutari. It is more than likely that many cases of intercostal rheumatism, occurring in highly sensitive subjects, have been put down and rigorously treated for pleurisy, when a simple camphor liniment would have met the case. A fine "friction sound" is very soon heard, when the mind is already made up to find it. At Rustschuck I noticed cases of pleurisy in summer, among boatmen who returned late in the evening; and young persons who had lingered in the vineyards, and exposed themselves to the chilly night dews. They soon yielded to proper treatment.

The physicians of Constantinople, I am afraid, in such cases, use the lancet very freely. Independently of my objection to that practice in general, I sincerely believe that in Turkey it is fraught with mischief, as there is less to be feared from the synochal, than from the tendency to the torpid, character of the disease.

Inflammations of the *uropoetic* system, with their train of symptomatic, or residuary dropsical diseases; also idiopatic anasarca, ascites, and œdematous swelling of the lower extremities, are of great frequency along the Danube, more especially on the Turkish side of the river. Exposure to the heavy rain in autumn, sleeping in the fields, marching in the swamps, sudden check of the perspiration, &c., will cause these disorders.

I wish, moreover, to draw attention to the nephritic and cystic irritations caused by a great many vegetables of an acrid and pungent nature, of which the inhabitants of Bulgaria and Roumelia partake freely, and the acrid principle of which passes through the kidneys. Strangers ought to be cautious, until they get used to them by degrees. The cases are by no means very obstinate; and a judicious selection, according to the nature and cause of the disorder, from among diuretics, hydragogues, diaphoretic drinks, the tartrate of antimony, Dover's powder, hyoscyamus, conium, and dry warmth, will soon restore the normal state. The tiny hot-air bath apparatus, which we use in London, and with which I was not acquainted when in Turkey, would form a most valuable addition to those therapeutical means. Of course dropsies arising from enlargement of the liver or spleen, which are so frequent in marshy districts, and which are the usual sequelæ of ague, must be treated with due regard to their immediate cause. For these enlargements themselves, I generally found an ointment of the iodide of potash, and the internal use of quina, and more especially the decoction of taraxacum, of great service, nor have I had any reason to change this practice to the present day.

I take this opportunity to point out the advantage of avoiding, in that climate, the use of drastics, in dropsical or any other cases, wherever it is practicable to do so. There are already in the Turkish provinces too many agencies abroad, which affect the colon and rectum, to render the increase of their number by one of so powerful a nature a matter of small importance. To cure an evil, without laying the foundation for another, has ever been the prerogative and special province of true medical science.

Rheumatic Iritis, but still more rheumatic and catarrhal ophthalmia, are very common. Amongst other causes, I

chiefly noticed: the frequent rheumatic affections of the face and head; long exposure to the light reflected from the snow; the glare of the sun in districts where trees are scarce; the dust of neglected roads; sudden changes of temperature in the summer evenings; and, among villagers, the constant smoke arising from open fire-places, the burning of wood not sufficiently dry, and miserable chimneys. Strangers, from their head-covering, derive some protection, which the fez, the turban, and the high caps without brim, cannot afford. Many of the cases for which I was consulted had already become serious, through the applications of quack and amateur doctors of both sexes, whose existence there, to avoid giving offence at home, I will regard as one of the signs of the progress of Turkish civilization.

Concerning the treatment, I have nothing to say wherein it ought to differ from that adopted in other countries, unless it be that more than usual care must be taken in the purulent stage of the disorder. With the exception of purulent ophthalmia, in which I consider the use of mercury injurious, I invariably ordered a mild mercurial ointment to be rubbed morning and evening around the boundary of the orbit, some distance from the base of the eyelids. In violent nocturnal pain of sclerotitis, I added a few grains of opium to it. Moreover, in the earliest stage of rheumatic ophthalmia and iritis, a strong emetic was given to empty the blood vessels by muscular pressure. The benefit arising from these accessories to the rest of the treatment, and which were recommended to me by high authorities many years since, I consider to be very great. I have seen some cases of purulent ophthalmia in the hospitals of Bucharest, and treated a few in Turkey myself. I cannot too strongly recommend the application of argenti nitras, as suggested by the distinguished oculists of London

and Edinburgh. I only wish I had been in possession of the facts coming from such quarters when I was at Rustschuck. The few successful instances which came to my knowledge were not enough to silence my scruples, so great was my fear of injuring the eye. Only once I attempted just to touch slightly the ulcerated edge of the eye of a "faithful believer," but at his first shriek I felt as if I had committed murder. However, in Turkey this remedial agent will be found of great value in more than one respect. I stated before that purulent ophthalmia will require special care in that country. This is too important a point to be passed over slightly. That inflammation of the conjunctiva will appear more frequently, and with greater severity, among troops constantly exposed to some of the above causes; and that for this very reason even a slighter catarrhal affection of the eye will soon assume the puriform character, is self-evident; moreover, that, in any stage of the disease, an additional aggravation will arise from the crowded state of hospitals in a hot country needs no prophetic voice to foretell. But the evil does not stop there; certainly not in that climate. I believe there is not a medical man, whatever be his opinion about the contagious character of purulent ophthalmia, who will doubt the possibility, nay the strong probability, that under the excessive heat of the provinces on either side of the Balkan, the purulent discharge from the eye will acquire great infecting power, even granting that originally it did not possess it. And if such be the case, where is the safety of hundreds, not to mention larger numbers, unless the strictest precautionary measures are adopted? We have of course no control over wind, dust, and so forth; yet something can be done for the healthy, and with proper care the disease limited to the individuals who suffer under it. I should recommend the

soldiers not to use each other's towels when in barracks. This would go a long way; at all events one medium of communication would be stopped both in this and a kindred affection of the eye, arising from a cause which is the same in Western Europe, as it is in Turkey and all the world over. It is also desirable not to wash the face suddenly with cold water, when it is flushed with heat after great fatigue or long exposure to the sun. Even slighter cases of pain or inconvenience in the eye should be attended to without delay; and, if there be no special ward for diseases of the eye, an arrangement than which there could be nothing more desirable, those patients who are under treatment for conjunctivitis in its earlier stage, ought to be put into the least crowded wards, and where there are no cases of disease of a catching character, foul ulcers, or gangrene, whereby the supervention of the purulent stage could be accelerated. However, upon the first appearance of purulent discharge from the eye, the patient ought to be removed at once to a separate ward; or better still to a separate house, destined solely for cases of purulent ophthalmia. The nurses of such a ward or house ought not to wait upon other patients or healthy persons, until they have changed their over dress and thoroughly washed their hands; but the safest plan is, not to permit it under any circumstances. That such a ward ought to have its separate linen, instruments, &c., is clear enough; and also that visitors, if at all admitted, are to be cautioned not to touch the beds.

Though I am of opinion, that infection can only take place upon immediate contact of the purulent matter with a mucous surface, a sore, or wound, yet, and be it spoken in all kindness to both parties, so little reliance do I place, from long observation in various countries, on the discretion of either patients or nurses, that nothing short of the strictest regulations can

satisfy my mind on that score. Moreover, as the virulence and power of propagation of a contagious principle increases in proportion to the number of the patients, and their proximity to each other, only a small number of individuals affected with this purulent secretion ought to be kept in the same ward or house. Both immediate separation and division are required, to stop the further progress of the disease. The difficulty in carrying out this plan, whenever a large proportion of individuals are simultaneously affected, is far from being a valid ground for objection; inasmuch as that circumstance would be the very reason for making every effort to *dilute* the disease in the way suggested. No language I might employ can be too strong or emphatic to urge upon those in authority the necessity of using every means in their power, and not sparing any expense, to avert from the army an evil of such magnitude as the spread of purulent ophthalmia. These views are neither my own nor new, but the importance of the occasion will serve, I trust, as a sufficient excuse for the reiteration. This dangerous disease has so often broken out in military hospitals, since the return of the troops from Egypt under Abercromby, that every medical man is familiar with its treatment; and I would say nothing farther, excepting that, from personal experience, I prefer the lotion of nitrate of silver to an ointment of the same, and also that, whether there be chemosis or not, I should give a very mild ointment of iodide of potassium, instead of that of mercury, referred to above, to be used in the same way and for the same object, viz., to produce absorption of the effusion in the arëolar tissue. I have of late years tried cod-liver oil to the eyelids when glued together, and have had reason to be satisfied with the experiment. It is soothing, and, I suppose, less liable to decomposition than salves; if the latter supposition be correct, it

would be of some importance in a hot country. I would, at all events, recommend it to my honoured colleagues as worth a trial, and shall feel happy to hear of their approval of my suggestion. In convalescence, I prefer giving bark first, and after a few days, small doses of quina, with ferr. sulph. The rheumatic affections of the eye prevail, I believe, in the left half of the triangle, and catarrhal ophthalmia on the Turkish side; moreover, along the Danube and near the banks of the Maritza, and a few other places similarly situated, swelling of the eyelids, and even inflammation of the eye, are produced by the bites of musquitos, which swarm about at night and disturb the sleep. For these bites honey is used with advantage. I am happy to learn that the Director General, at whose request I write, has honoured me by adopting my suggestion, and has sent to the East some thousand yards of muslin for night covers and bed-curtains. They will be found useful in various ways.

Coup de soleil will more frequently happen with an army of occupation, than with a quiet population, who smoke away the hotter hours of the day beneath the cooling shelter of a kaffaneh. The scarcity of trees in South Bessarabia, Bulgaria, and Roumelia, and the great distance of halting places, towns, and villages, will considerably increase the chances of an attack. The woody neighbourhoods on either side of the Balkan, cooled by the vicinity of high mountains, form an exception. Two individuals, who came under my care, met with a sun-stroke on their way up the Danube in an open boat. I treated the milder case with the cold douche on the head, the rest of the body being well wrapped up: it was a lingering case. The second, which manifested all the symptoms of acute encephalitis, was bled to syncope, and recovered in much shorter time.

An interesting and analogous instance, not of stroke by

the sun, but by fire, when encephalitis and ophthalmia were caused in an individual, who had remained too long in a burning house, occurred to me in Bucharest. As it was impracticable to open a vein, I applied at once forty leeches, some distance from the head, and kept up the bleeding until faintness ensued. The effect was marked and surprising. I am far from being an advocate of blood-letting, rather the reverse; but I am certain that, in cases like this and the preceding, blood must be taken in large quantity in *one* bleeding, and without delay. Life hangs upon a moment. Repeated instances of sun-stroke have been communicated to me by other practitioners in Turkey, so that a good supply of tents for a division on its march would be of service, and, at all events, protect against other inconveniences produced by sultry heat. That it is desirable to give such patients acidulated potations, clear the bowels by an enema, and empty the bladder by means of the catheter, hardly needs mentioning.

Boils occur oftener on the right than on the left side of the triangle, making allowance for the Wallachian hospitals. In time of war they will, of course, break out more frequently, especially among individuals of delicate skin like the English. Involving no danger, and of daily occurrence in this country, I should not have taken notice of the disorder in this pamphlet, but for a desire of expressing my opinion, that in their treatment, poulticing and cutting the tumour, however large, might be entirely dispensed with—an advantage which ought ever to be borne in mind in Turkish hospital practice when it can be obtained. I always found, that passing solid lunar caustic, made previously wet, round the furuncle, will soon cause it to die within the artificial boundary, and that tracing a cross over the surface of the boil will hasten its decay. Whenever the boil breaks open, it is quite

sufficient to dip the caustic into the hole once, and carry it round the edge of the abscess. This plan, supported by the usual internal treatment, will succeed with boils of the largest size, even when sloughing has already taken place. I regret I did not pay earlier attention at Rustschuck to the connection which I think exists between boils and the consumption of swine's flesh. I had ample opportunities for such an investigation by virtue of my appointment as physician to the four corporations of the Greeks, Armenians, Jews, and Turks, the latter two of whom abstain entirely from that food. However, when I first became interested in the question, it was too late to gather sufficient data to come to a satisfactory conclusion on the matter.

Pneumonia and *Bronchitis* do not offer, according to my opinion, any striking characteristics of difference, either as regards their proximate causes, or the course of their symptoms, from what we daily observe in this country—hence it would be quite out of the scope of this tract to say more about them than that, of the two, Pneumonia prevails in the left half of the triangle, especially with the wind from the N. E., as may be easily imagined; whilst bronchitis is more frequent in the right half, particularly in summer time, owing to the damp and chilly evenings after the excessive heat during daytime. The smoking of narcotic plants by means of the narghilé (water-pipe) in distressing bronchitical and asthmatic cough, will be considered by our medical men an improvement upon the narcotic inhalations proposed by some practitioners here.

Ague is a Turkish disease, *par excellence;* in England it is now-a-days quite a rarity; and unless one pays a visit to the neighbourhoods of Snaith or Horncastle, or some of the fens of Essex or Norfolk, there is very little chance of meeting with it. In this country the temperature is not sufficiently

high, and the land too well cultivated, to favour the development of that kind of malaria which is the chief source of intermittent fever. In the Danubian provinces, on the contrary, which are comprised in the triangle, as well as in Roumelia, there exist all the atmospheric and topographical conditions for malaria, and all the predisposing and exciting causes, which facilitate the appearance of the disease, such as excessive heat, a long summer, sudden succession of the seasons without preparatory transition, great fall of the temperature in summer evenings, night dews, damp air and fogs, rapid melting of large masses of snow containing vegetable matter, heavy showers, frequent inundations and formation of swamps, shallowness of the banks of the Danube and other rivers, an extensive delta, brackish water near the sea, especially on the southern coast of Roumelia, clayey soil in one province, alluvial in a second, volcanic in a third (*e. g.* near Philipopolis), a great number of water plants, rank vegetation, want of drainage and of cultivation in general, abundance of acidulous fruits and vegetables containing a large proportion of aqueous principles, and again others of an acrid nature, which none but natives can digest. This great variety of external influences, many of which co-exist in one locality, brings them necessarily into contact with almost all the important organs, which, standing in close connection with the nervous and the ganglionic centres in particular, form the channels through which these centres become pre-disposed to the action of the proximate cause of ague, *viz.* malaria. The chances of affection by, or escape from the disease, will therefore primarily stand in proportion to the more or less vigorous resistance which the mediatorial organs can offer to those external influences. Hence whenever, from want of caution, force of circumstances, or a naturally weak condition of any of these organs, their re-

sisting power is impaired, or, technically speaking, their receptivity increased, the liability to an attack becomes so much greater; for this reason fatigue of the muscles by over exertion, of the nerves by anxiety and fear, exposure of the skin to vicissitudes of heat and chill, &c., will, in an especial manner, expose those organs, and through them the nervous centres, to the influence of external causes, thus rendering the latter particularly liable to be affected by the malaria poison. From this it is evident, that, of all men, a soldier in time of war will be most exposed to attacks of ague. Excitement, sleepless nights, long and fatiguing marches, irregular meals, fasting, improper food, encampment in the open field, slight indisposition, &c., will be so many items against him. But though we cannot protect him against a shower, or shelter him from the burning sun, many expedients may be suggested whereby much may be avoided, or the unavoidable better borne. But to this we shall refer in its proper place.

In books the ague appears in spring and autumn, in Turkey all the year round, though by far more frequently at those seasons. I mention this solely as a warning against imprudence to those non-professional readers, who do not despise a well meant hint; and to medical men, that they may not relax in their treatment of the convalescent because the autumnal season is over; for a relapse is as likely in winter time as in spring or summer, and relapse from ague in Turkey is certain, if the treatment terminate too soon. Nobody of course will literally accept the theory, which places the quartan ague in the autumn, the quotidian and tertian in spring. In Turkey a large margin must be left for exceptions, at least I have observed all these types at either season, though I must admit that I have seen a larger proportion of quartan fever in autumn than in

spring. I cannot say the same of the quotidian and tertian ague. I am inclined to think that the season has not quite so much to do with the period of intermission, and that the latter is greatly regulated by the constitution of the individual, which *cæteris paribus* modifies the rhythmical return of the paroxysm, and makes it a quartan or a tertian. I come to this conclusion from the circumstance that all quartan agues which I had to treat, whether vernal or autumnal, had a decided tendency to torpor, and the quotidian to an inflammatory character independently of the season. This I can only explain upon constitutional grounds, and consider it, therefore, fair reasoning that if the constitution has an influence upon the tendency, it most probably has a share in the formation of the type of the ague. The same assumption furnished the reason why quartan agues appear in spring at all, and *vice versâ*. This, however, is merely a private impression, which can be of practical value only as far as it may perhaps indicate the kind of treatment which ought to be entered upon.

By paying attention to the premonitory symptoms of ague, it is quite possible to quell the disorder in its birth. Whenever there is headache, giddiness, oppression over the stomach, feeling of sickness, lassitude, stretching of limbs, yawning, it is well to inquire after the immediate cause, and act accordingly. An emetic of ipecac., if the symptoms occur soon after a heavy meal, or eating melons, cucumbers, &c.; rubbing the limbs with hot flannel, and camphor powder if after great exertion; friction with flannel, foot bath, Dover's powder, potations of tepid water flavoured with lemon juice, if the symptoms have been caused by rain, or a chill, were the means I generally adopted, together with a mild aperient of rheum, or rheum and senna, and two grains of quina four times in the day. The latter I continued three or

four days. Such and similar means will generally suffice to prevent a paroxysm of ague. The stages of Turkish ague are generally well marked. It is of the highest importance for speedy recovery, and especially in the quartan ague, because of its tendency to typhus, to shorten the cold stage; next to this, the hot stage of the quotidian and double tertian deserve greatest attention. I generally pursued the following plan:—In the cold stage the body was rubbed with warm flannels, and bottles with hot water or sand put in the bed (the hot-air bath instrument would again be of excellent service); internally, frequent potations of warm infusion of orange peel, warm lemonade, warm toast-water; in quartan ague, a few drops of the solution of acetate of ammonia occasionally, in a cup of a weak infusion of camomilla—mustard poultices to the lower extremities. I have seen the warm douche applied with good results. I should also think that chloroform given internally, in small quantity, would considerably shorten that stage. In the hot stage, if moderate, the patient was left quiet. In exorbitant heat, with flushed face and headache, a waterproof bag with cold water was applied to the head; internally, tepid lemonade and toast-water, and in very severe attacks an opiate. In the sweating stage the scanty perspiration was promoted by Dover's powder and warm drinks, otherwise the patient was left undisturbed. Great caution was enjoined with the change of linen. During the intermission the patient took twenty-four grains of quina within the day, beginning with the fourth hour from the termination of the paroxysm. If it disagreed, a lesser quantity was given, and supported by the following powder:—Pulveris corticis salicis albæ ℈ i. Pulveris corticis aurant. Pulveris radicis acori āa ℈ ss. Sumatur omni quarta hora. The bowels were kept freely open by rheum and senna. In irritable stomach, an occa-

sional enema. Light diet of pulpy and fluid consistence. Now and then an infusion of camomile, or radix acori. The latter I found extremely useful in quartan ague, with weakness of digestion. The acorus and the cortex salicis albæ are to be met with everywhere in Turkey, and are excellent remedies in ague. The trifolium fibrinum stands likewise in good reputation; I have not tried it more than twice. By this treatment the paroxysms became invariably milder, and generally soon left altogether, when the above powder, with gradually diminished doses of quina, were persevered in for a month or two. I never tried arsenic in intermittens, but I consider the plan which I adopted quite sufficient, especially if care be taken to regulate the dose of quina by the receptivity of the stomach; inasmuch as doses, which are not well borne, are rather hurtful than otherwise. That the patient must be particularly warned against errors in diet, exposure to draught, rain, heat, &c., is a matter of course. I have some objection to the use of buffalo milk for convalescents. I am quite certain that with a great many it did not agree. It is extremely rich in oleagineous principles, and if poured out of a cup, the latter will be found coated by an oily, sticky liquid. The inhabitants use a variety of things for the ague, amongst which pepper with brandy is the most in repute. These stimulating medicines are altogether objectionable. Various means have been proposed to prevent the ague. In Turkey they use amulets; Hahnemann recommends the billionth part of a grain of bark, others again advise repeated small doses of quina, and there are some who suggest quina bags, to be worn near the skin. Considering all circumstances, I must give the prize to the amulet.

The true prophylaxis of ague can only consist in the avoidance of deleterious influences; and whatever I may say on this subject, applies to the remittent and so-called con-

tinued fever of the Dobruzia with double force. The following, I believe, comprehends all that is required :—The dress ought to be warm and easy. Flannel is indispensable; even the inured natives wear it. Those who can afford the luxury of a silk shirt, will find it an excellent absorbent of the moisture of the skin. Exposure to the air during the early part of the morning, or the evening, is injurious; if unavoidable, the body ought to be wrapped in a large cloak, covering the face; neither is it prudent to sit or lie down on the grass, though it be dry, without spreading something underneath the body and feet. In the evening, and during the night, even that protection will be insufficient. Sitting in a draught, or at the open window, sleeping with open doors or windows, throwing off the bed-cover at night-time, putting the naked foot on the ground, unbuttoning the waistcoat, or taking off the coat or hat whilst walking, or the dress, immediately after returning from a march, are highly objectionable.

In the latter case it is expedient, when circumstances allow, to walk about in the room for a while, undressing by and by, and rubbing the skin dry with a flannel. Wet boots and clothes, however, ought to be changed without delay. In districts which are notorious for malaria, it is advisable to give a good shake to every article of dress, especially woollens, before putting them on. It is not wise to hang them out for an airing over night; daytime is preferable. Every change of linen is to be well aired. The practice by the natives of going to the well in the yard for a wash is certainly not to be imitated. Sudden transitions are as much as possible to be avoided, such as sitting down immediately after strong exercise, taking cold drink, or going at once to a cool place whilst the skin is perspiring or very hot. Simplicity in diet, and avoidance of strong

alcoholic liquors, are of highest importance. Regular hours for meals, if practicable, taking food in moderate quantity at a time and masticating it well, avoiding the habit of taking pastry, tea, &c., whilst hot, will greatly assist in keeping the digestive organs in good order, which is one of the safest amulets. To go out in the morning without breakfast, or in the evening many hours after a meal, is certainly prejudicial. During the first two months no kind of vegetable ought to be taken in a raw state. Vegetables containing mucilage will agree well with a little pepper added to them; those of an acrid nature and cucumbers are better not taken at all; neither can I speak well of baked kukuruz, which causes a great deal of flatulence. Pork in Bulgaria and Roumelia is not wholesome, and the meat of buffaloes is very tough, and requires a strong stomach. Goat and mutton is light and agreeable, and very good for a change. Game is excellent, and so is fish, especially a species of pilchard caught near Varna and along that shore. It is at all times advisable to take fruit with great moderation; the better class of the inhabitants follow this rule. Melons and plums ought not to be taken by strangers for a long time; pears and apples are less objectionable, but grapes are better still. A slice of a peach with a little pepper over it, or soaked in wine, may pass; dried figs, of which there is a great abundance, act as a mild aperient on the bowels, and are very suitable after dinner; nor is there any objection to the dulciazza, a kind of marmalade, especially if made of orange-peel, and taken in the morning with a cup of tea. Nuts lie heavy on the stomach, but a few almonds will do, and one bitter almond after a meal will be found as good a protective against ague as quina taken internally, or worn in a bag. In Wallachia less restriction in diet is necessary. The meat and vegetables are of first-rate description, and

the wine is excellent; fish is rather rich, and ought never to be taken freely.

There are very few individuals with whom the water of a foreign country agrees at first; such is the case with Turkey; and inasmuch as anything that disagrees predisposes for ague, it deserves consideration. In the swampish districts of the Dobruzia and the Delta the water is generally bad; however it must not be understood that there are no good wells in the villages and towns; but they are not sufficient for a large supply, especially upon a sudden increase of water drinkers, such as an invading army. On the south of the Dobruzia, towards the Trajan wall, and on the west of it towards Silistria, the water is good again. The water close upon the southern shore of Roumelia, *e. g.* at Gallipolis, or Enos Bay, is brackish; but a little higher up, sometimes only a quarter of a mile distance, it is sweet. As for the rest of Turkey, as far as my information goes, I believe there is not a place which has not good wells, and in some of the towns on the right bank of the Danube, such as Nicopolis, Sistova, Rustschuck, Silistria, which stand upon lime ground, the water is excellent. Again, on the roads which cross the country, wells are to be found every few miles distance; I tasted it myself on my excursions with the Pasha on the roads leading to Schumla, Tirnova, and other places, and found it very palatable. Between the rice districts in the north of Bulgaria and the Balkan, the water is likewise good. The bad water of some wells becomes only so by neglect, when they are left uncovered, and all sorts of animal and vegetable matter accumulate in them. I am sure, that where this is the case, it would not give more than a few hours trouble to clean them and keep them sweet, if soldiers should be located in such a place. There is, therefore, no necessity for filtering. I think that

in the bad districts they use stone filters found in the country; however, I cannot vouch for the correctness of my recollections on that subject. The following rules may be of some use. The first few pails of water drawn from a well in the morning ought to be poured away, before the water is used for drinking. A very few drops of brandy added to a tumbler of water will prevent any injurious effect it might have upon a foreigner. What I consider a better plan still, is to mix with the water a teaspoonful or two of the infusion of acorus, prepared either with cold or hot water, or with equal quantities of cold water and spirit of wine, or with wine alone. This infusion, especially the latter, is most agreeable and wholesome. By the addition of a little orange peel it gets a most delicious flavour. The warm infusion requires a few hours, and that with cold water or wine four days, before it is fit for use, and will keep for months. I cannot leave this subject without expressing my conviction, that those who are in the habit of taking brandy in larger quantity, a habit in itself injurious in malarious districts, may increase the injury by carrying it with them in vessels made of a substance, which allows of impregnation by fuzel, and I think that none but glass flasks will prevent that. This fuzel will impart its smell and qualities to every fresh supply of brandy, or any other beverage; and however individuals may get used to the former, they ought to be informed that there are few things in the world more calculated to undermine health, and, as far as Turkey is concerned, to predispose for ague and remittent fevers, than that very fuzel. I feel confident that the fuzel, created in the miserable bottle used by the Russian soldier, has been one chief cause of the heavy sick list in former years in that army.

Malaria, so productive of ague, is likewise the cause of

those dangerous fevers which, at the close of spring and in the early summer, absolutely reign in the Dobruzia and the Delta, and prevail to a certain extent on the banks of the Maritza. These fevers are very severe. However, there is a great deal of unnecessary apprehension about them in the mind of the medical public and elsewhere, which I deem it my duty to dissipate as far as I can by examining the grounds on which those fears rest. These fevers appear at the time when the swamps begin to dry up; the quicker this process goes on—that is to say, the hotter the weather is—the greater will be the number of persons affected, and the disease so much the more intense. Now that was exactly the case with the Russian army in 1829, which encamped in those regions just at the period of the greatest evaporization. Add to this the lamentable condition of the Russian soldier at that time, who, even according to their own accounts, is described as having been half clad, half starved, or living on the most miserable food; and the liability for attacks from malaria, according to what I have already stated, must have been at its height. Again let it be considered that the medical officers were altogether unprepared for the emergency, both as regards their store of knowledge and their medical stores, and the treatment may be easily imagined. Now, typhus and plague are very accommodating terms on occasions of such a mortality as existed then, which, although attributed to those diseases, I believe to have mainly resulted from a different cause; and however humane the feeling which induced the Emperor to shed tears over the loss of his soldiers, such sympathy might have been more beneficially expressed by supplying his army with medical men capable of forming a correct diagnosis; for I maintain that by a proper knowledge of the disease alone, not to speak of other means, the evil would never have

arrived at half its magnitude, and that the majority of cases were neither typhus nor plague, but febris remittens, the bastard child of ague, which, in its severest forms, appears as continued fever, which mostly attacked those Russian soldiers, and for which they ought to have been treated. Now, this memorable disaster of the Russian campaign has left a lasting impression, both upon people on the spot and abroad. Nor has the matter ever been fairly investigated. Medical and other travellers go by steamer from Constantinople to Galatz, and again from thence to some other distant station. They never spend a day in the Dobruzia or the Delta—a journey by land to the shores of the Maritza being quite out of the question. As the river is not navigable before spring, of course they will always arrive at the time of greater mortality, and hear it still accounted for in a manner which is tinged with those Russian recollections. It is by such reports reaching this country that the public have become alarmed; but I would ask, what analogy can exist between the Russian army of 1829 and our noble division in the East, with ample provision of every kind, commanded by officers who take care of their men, and watched by an intelligent, well-informed, and indefatigable medical staff, to justify an inference from the former case to the latter? We know that remittent fever is a severe disease, and that the intensity of the miasma in some places makes it particularly so; but we also know that the one may be cured and the other escaped. Exaggerated fear and under-estimation of a danger are equally unprofitable. During my first interview with the Director-General, when, amongst others, this point became the subject of conversation, he fully admitted that the campaign of 1829 was not a fair ground to argue from.

Remittent fever occurs in almost every part of Turkey, as one would naturally suppose, inasmuch as it owns the same

origin as ague. Much milder in towns than in country places, it appears in its worst features during the early summer in the Delta, Dobruzia, and those parts of the country where there are large morasses. In severer cases, its intermissions are very short and indistinct, and soon cease altogether, when it is justly called a continued fever; very often the disease breaks out in the latter form at once. It is unfortunate that the term "continued fever" is also used for typhus. To prevent mistake, I wish to be understood, that in this paper the term is applied solely to a fever created by marsh-miasma, differing from remittent fever only in degree and intensity, just as the remittent fever differs from ague solely by shorter intervals, and those constitutional disturbances which arise from protracted paroxysms. Nor are there cases wanting of obstinate or neglected agues, which run into remittent, and terminate fatally with continued fever. In fact, it will depend entirely upon local circumstances, the intensity of the miasma, the constitution of the patient, the kind and duration of the exposure, whether the malaria produces the mildest or severest form of this class of disease. Nor does what we can learn, *de juvantibus et nocentibus*, contradict this supposition; for remittent fever did certainly improve upon judicious use of quina, just as ague did, nor can I imagine that much good can be done in the continued marsh fever without that remedy. For the sake of brevity, and also because in severer cases (and of such alone do I speak) there is very little difference between the remittent and continued fever, I shall speak of both under the same head. The main features of the remittent and first stage of continued fever, as far as I could ascertain from my own cases, and from trustworthy verbal communications by some Wallachian physicians, are:—Great general debility and depression; constant headache; flushed face; pulse soft, feeble,

accelerated; skin dry and hot, with occasional sweats breaking out over the upper part of the trunk; great oppression and distress over the precordial region; feeling of sickness; tongue moist, and covered with a yellowish coating; great thirst; constipation; scanty urine; a feeling as if the limbs were bruised; sometimes a look full of deep anxiety and distress, altogether peculiar; now and then a slight shiver, when the patient buries himself under the cover with a sigh — sighing is a very frequent symptom. One feature, which I well recollect, and which is quite the reverse of typhus, is, that the subjective heat, as felt by the patient, appears greater than the objective heat discovered by the exploring hand. The patient constantly seeks the coolest part of the bed, and feels gratified if anything cold is placed in his hands. In typhus, on the contrary, the medical man *feels* the "calor mordax," whilst the patient does not appear to do so. The greater affection of the sensorium in the latter disease is probably the reason of this phenomenon. However, I would caution the reader against taking this symptom as a criterion between the two diseases. Farther observations must determine whether it is of any value. During the short intermission this feeling of heat greatly subsides.

If medical aid is called in early enough, the progress of the disease may be stayed. Care must first be given to the predisposing cause, such as checked perspiration, undigested food, by applying the appropriate means; then quina every second hour, and a draught of infusion of camomile and radix acori, with three or four grains of sal ammonia twice daily, and the bowels attended to by injections. Quina is borne far better than the above symptoms would lead to suppose. Removal from the spot where infection by malaria was received, when practicable, will greatly contribute towards recovery. Application of cold to the head, diluted

tepid drinks acidulated with lemon juice or the elixir. acid. Halleri, will be agreeable to the patient, and in harmony with the imminent second stage of the disease. The crisis generally manifests itself by perspiration of the whole body, which must be supported by beef-tea and other drinks. I have seen on one occasion the disease terminate in a quotidiana with short paroxysms. But the most difficult and tedious task is to carry the patient safely through the state of convalescence, and I really believe that in hospitals these cases will do far better than they can in private practice. It is not often that the physician has the opportunity of seeing much of the first stage, as it is only of three or four days' duration, and the seizure generally takes place under circumstances which hardly permit the patient to be brought under medical care as soon as might be wished. Towards the close of that stage some nervous symptoms make their appearance, as increased debility, slight aberrations of mind, subsultus tendinum. These are the forerunners of the second stage, which is fast approaching, and indicate the necessity of some change in the treatment. Nature will do nothing in these cases by itself; if left alone, the patients invariably die. The following is an instance of the rapid progress of the disease, and likewise affords an illustration of the degree in which accompanying circumstances influence the severity of infection by malaria. At the end of June I was called to a gentleman of the Jewish persuasion, who had been below Silistria with a party of Gentile friends, to superintend the forwarding of corn to Galatz, which was stapled up near the shore. For a few nights they slept on the spot to guard their property. Nearly all of them got the ague in consequence, but my patient who, from religious scruples, had lived entirely upon bread and coffee for nearly a fortnight, was seized with violent continued fever. I saw

him forty hours after he had been taken ill, when alarming nervous symptoms had already set in. Fourteen hours later various parts of the body were covered with blackish spots, varying in size, some of them flat, and others a little raised above the surface. I could not help thinking that, had the man lived on more substantial food, he might have escaped with an ague or a milder form of fever. As soon as such nervous symptoms have become apparent, those of decomposition of the blood are not long absent, sometimes not more than eight or ten hours, as shown by the eruption of petechiæ of a dark colour, or large black spots as in the above case. These eruptions are accompanied by delirium, tympanitic abdomen, rapid sinking, gangrene; sometimes bleeding from the nose, and diarrhœa.

From these symptoms, and the locality where it occurs with greatest severity, it has been called—continued, petechial, putrid, gangrenous, or Dobruzia, fever. Though I had various remedies recommended, my confidence rests alone in *arnica montana;* but to have its full effect the flowers must be given in a decocto-infusum, with a little sesquicarb. of ammonia or sulphuric ether, for example, *R. Florum arnicæ,* ʒ j, *coque cum suff. quant. aquæ per* ¾ *horæ; cum decocto adhuc calente infunde, florum arnicæ* ʒ j *; stet in infusione per* ¼ *horæ in vase clauso. Colaturæ,* ℥ vj, *adde spir.aeth. sulph.* ♑ j. *Capiat* ℥ ss. *omni hora.* The extract of arnica is not of the slightest use. As soon as the nervous symptoms make their appearance, arnica ought to be given in some such form and persevered in, and the quina continued, though at far greater intervals, and in much smaller doses. The potations ought to contain small quantities of dilute sulph. or phosphoric acid, or elixir. acid. Halleri. If there is great diarrhœa, the radix arnicæ would be advantageously added to the infusion—gangrenescent places will often improve upon slight application of

caustic. By this mode of treatment, and support from strong nourishing beef-tea, I venture to say that the worst cases need not be despaired of, unless medical aid has been called in when it was too late, and when death will come on more or less rapidly, the whole duration of the severer forms being from five to twelve days. My opinion has been asked about the efficacy of Warburg's drops in this disease. I know that remedy by name, but certainly never heard it mentioned either in Bulgaria or Wallachia. Neither do I recollect that these drops occur in the Austrian Pharmacopœia, with which during my practice at Prague, Vienna, and Venice, I ought to have become acquainted. I have not the slightest doubt that they are good for something, as is the case with all extraordinary pills, tinctures, balms, &c.; or the distinguished physicians, of whose prescriptions they are the mystified reproduction, would not have deserved their fame. *Quæ non fecimus ipsi, vix ea* nostra *voco.* At all events I never heard of them in connection with the Dobruzia fever. I believe what has been stated concerning the proximate cause, occasional return of slight shivers, state of the tongue, and deportment of the patient, will suffice to prevent this disease being at the outset mistaken for typhus. Whoever has paid attention to the helpless and prostrate posture of a typhus patient in his bed, *trunci instar*, will at the first glance discover whether the case belong to the one or the other. To enter into farther detail of symptomatology and treatment would be mere waste of time; much must be left to the judgment of the medical man, nor can the most minute treatise ever supply this quality. In the absence of *p. m.* examinations to guide me, I preferred pointing out the most striking features that occurred to me, and shall be happy to learn that no grave omission has been made in the short outline which I have given.

Where there is ague, *dysentery* is not far off, the former predisposing for the latter by the disorders which it produces in the abdominal organs. Even a superficial perusal of the preceding pages will show that the exciting causes of this "scourge of armies," are extremely numerous: sudden fall of the temperature in summer evenings: protracted autumnal rains following great heat, &c. It will occur in spring, but chiefly in summer and autumn, in consequence of exposure in the swamps, sleeping in the fields, sitting on the grass late in the evening, or after free indulgence in cucumbers, plums, or imprudent use of drastic medicines, such as are contained in many patent pills. It appears under either form of *dysenteria mucosa* or *sanguinosa;* pain and tenesmus are considerable, and often accompanied by febrile symptoms. My chief object in referring to this disease is to draw attention to the great tendency to typhoid fevers which characterize it in Turkey; a circumstance especially important to those who are in the habit of treating it with leeches and calomel. The few severer cases which fell under my care did very well upon *pulvis Doveri*, friction of *oleum hyoscyami coctum* over the abdomen, light mucilaginous food, and keeping in an equal temperature. That the ague on one hand, and dysentery on the other, will leave behind them tokens of their visits by liver affections, every one will readily believe.

I have already alluded to my treatment of enlarged liver. If there are liver abscesses formed after dysentery, they are better not interfered with surgically, although they may be superficially situated; they will have their own way after all. *Peritonitis*, *Enteritis*, and *Colonitis*, I solely mention to warn against mistaking rheumatic affections, which are so apt in Turkey to seize the serous covering and muscular coats of the intestinal tube, for the above inflammations, which are

constantly occurring. Where they really take place, the typhoid tendency of these inflammations must again be borne in mind. From long experience in England and abroad, I feel convinced that many such cases are the worse for over doing; and that a little patience in awaiting the effect of hot fomentations by decoction of poppies, and other most obvious means, will save much trouble, and many a life too.

Diarrhœa deserves notice chiefly on account of its frequency. Severer cases must be treated according to their proximate cause, which is very frequently some organic disorder. However, talking about treatment of alvine fluxes is dangerous ground, for even practitioners who would abhor empiricism in any other disease, patronize some "capital medicine," and will recommend it in diarrhœa, whatever be the pathology of the case. This is a professional weakness; thus we hear in cholera of opium, pepper, chalk mixture, catechu, sulphuric acid, calomel, and the brandy bottle of course, which cause nothing but confusion and uncertainty in the management of a disorder, the treatment of which I consider both simple and easy. The impaired tone of the bowels consequent upon some of the foregoing diseases, and which is so productive of diarrhœa, will greatly improve, upon the use of infusion of camomile, acorus, the extract of chelidonium, or of centaurium minus. Good and dry boots are a chief desideratum; and I also think that our gallant Highlanders will find it both useful and agreeable to imitate the native mountaineers, and take to their leggings. In fact, immunity from any of the above abdominal disorders, without due regard to those precautions which I have not spared in this paper, is impossible in that climate. The natives themselves, who are as hardy and inured as any nation in the world, are fully aware of this. In the tremendous conflagration of Bucharest, Easter Sunday, Old Style, 1847, when 10,000 and

more individuals were rendered houseless, the number of intestinal diseases caused by the want of shelter in one night was really enormous. I myself saw a great many such cases the following day. Those of my readers who may have the privilege of meeting with my much honoured friend, Robert Colquhoun, Esq., Her Majesty's Consul General, who I am sure will bear testimony to my recollections, may receive from him most valuable information, concerning the necessity of not trifling with the weather in those provinces. Self indulgence may not become a soldier, but equally unbecoming is wanton neglect of self in a true defender of his country.

I have seen two cases of sporadic *plague*, one of which occurred in Rustschuck. The particulars of this disease have been treated by some English authors in so masterly a manner, that it would be more than presumption on my part to say a single word about it. Still I would suggest to those who may happen to meet with a case, to try turpentine internally. The hitherto unsuccessful treatment of plague renders it quite consistent with my great respect for those distinguished authors, to make such a suggestion.

I should not think that *scurvy* will be very frequent among the English troops; neither do I suppose they will render themselves liable to the injurious effects of Opium.

Typhus and *typhoid fever* I notice solely on account of the foremost rank which they occupy in the annals of human disease, but not for any of those differences which alone form the subject of this paper. That the sources of these fevers abound in the Danubian provinces to an extraordinary degree is evident. The climate, after relaxing the constitution by enervating influences, not unfrequently changes to Scythian severity. By this change it may become the direct cause of such fevers, as well as produce them indirectly, by giving rise

to those serious disorders which dispose the system to the creation of typhus poison in the body. Nature, moreover, so prolific in its productive powers, uncontrolled by the care and diligence of the husbandman, exuberates in noxious weed and an ill-developed produce—thus adding to the evils of a capricious sky, where it might otherwise have mitigated them; and, lastly, as in this country the seed of the disease is fostered by misery and crime in the lower, and by the exciting and eager pursuits after wealth, distinction, and pleasure in the higher ranks, so will oppression and slavish fear, oriental indulgence, and total want of nobler aspirations, have a similar effect there. In fact, to produce typhus, the sky, the soil, and the folly of man, must contribute their quota.

The symptoms of typhus present a remarkable similarity in all countries. At least as far as my observation goes, it always exhibited the same stereotyped features, wherever I happened to treat it; the heavy showers in Turkey, the sirocco brooding over the lagunes of Venice, and the fogs and wretched courts and alleys of London, may aggravate, but they cannot alter its appearance. Though cases of typhus and typhoid fever occur frequently throughout the year, yet during autumn and the first two winter months they are greatly on the increase, both in Turkey and Wallachia. The rosy-coloured eruptions of typhoid fever appear at that season of a darker hue, as we often observe it in the mulberry-rash in the wards of the London hospitals. In the absence of autopsies I cannot but with some reserve repeat my opinion, that these fevers are not identical with the spring-fevers which I described before. At all events, the latter are caused solely by marsh-miasma, are not contagious, and yield to quinine and arnica, neither of which can be said of typhus fevers which occur at the same time or afterwards.

When in Turkey, I could not quite coincide with the treatment generally adopted. Some practitioners were even in the habit of giving tartrate of antimony in the beginning of the disease. When I passed the clinical examination for license of practice in Bucharest and Wallachia, I urged my objections to that plan; and in honour to the president and the members of the examining body, I must state, that they left me quite at liberty to follow my own views. What I observed before concerning the similarity of the essential features, applies as well to the treatment of those diseases. I cannot conceive of any difference.

The other day a medical officer proceeding to the East, asked my opinion respecting the best treatment of typhus in Turkey. I recommended him that which he considered the best in England. Whilst in marsh-fever medicinal interference alone can do good, in typhus such is not the case. No disease requires more judgment and tact on the part of the medical man, and less medicine, than typhus, whether in London or abroad; it is by many littles that he carries the patient through, and I feel satisfied, that since the search for a specific has cooled down, mortality has wonderfully decreased. I gave in Turkey, ammonia, camphor, strong beef-tea, and the best red wine I could get; and, with the exception of camphor, I have not changed this bill of fare to the present day. In one of our metropolitan hospitals brandy has been proposed. I tried it repeatedly in the Royal General Dispensary and in private, but returned to port wine, using brandy solely when symptoms of extreme faintness are coming on. In parotidal swellings I ordered warm fomentations, with bags containing powdered camomile, and camphor rubbed on the surface. Ulcerations of the tonsils, which occurred in typhus, I treated with a weak gargle of diluted sulph. acid. Both applications generally answered well. In

hospital practice, it is necessary in those provinces to allow as large a space as possible between the beds, and to avoid poulticing whenever the object can be attained by other means. It may be as well to mention, that a forced march, or a draught of cold water taken when the body is very hot, have often been followed by an attack of typhus fever.

I cannot close these remarks without an allusion to the most productive, though quite accidental, cause of typhus fevers. I refer to war. Its baneful influence in increasing these diseases was well known to earlier medical writers. Thus Huxham speaks of "Febris bellaris." The same is acknowledged by modern authors, and corroborated by the typhus epidemic raging in 1812, 1813, 1814. But whilst medical research furnishes us with the statistics of these melancholy facts, our minds are relieved from anxiety by the assurance, that the disease will carry terror and death into the ranks of a disheartened and retreating foe, but that a victorious army will have its strength recruited, and its health restored, by the laurel's verdant leaves.

In conclusion I beg to make the following general observations:—With the exception of Lesser Wallachia the roads throughout European Turkey are very inferior; during winter and in the beginning of spring they are often quite impracticable. In Bulgaria the main roads run between Varna, Silistria, Schumla, Trnova, Turtukai, Rustschuck, Nicopolis, Widdin, &c.; these places communicate again with smaller localities by very indifferent highways. Considering the great difficulty of transit, hospitals ought to be established in those towns only which command the easiest communication. Among these the towns on the western shore of the Euxine, such as Varna, Bourgas, &c., will be constantly accessible. Next to them come the towns just mentioned, which are comparatively healthy. The low

situation of Widdin is rather against it, but half a mile south the air is good. With the exception of Schumla and Trnova, all these places are situated on the right bank of the Danube, and have the advantage of navigation during the greater part of the year. They are much healthier than the localities on the opposite shore; but below Silistria it would not be advisable to establish hospitals at all, unless for the most cogent reasons. For a depôt-hospital, Rustschuck commands greater advantages, than any other place. It is very healthy, has a large population, and offers ample accommodation; it is, moreover, easy of access even for vessels of 500 tons burden, and lies opposite the important Wallachian town of Giurgevo, which, being in a direct line with Bucharest, renders it an important place for provisions. Rustschuck is likewise the nearest frontier town to Schumla, and draws supplies of every description from Trnova and other places which flank it to the right and left; and as it is situated on the main road of the land route between Constantinople, Adrianople, Schumla, and Bucharest, and is one of the principal stations of the steam navigation on the Turkish Danube, the facilities of transport are greater there than anywhere else. In case of need, some of the smaller localities situated on the above mentioned main roads, *e. g.* Bashardshick, might be eligible for temporary hospitals. In Roumelia, Adrianople is certainly the most convenient place for hospital purposes, By a tolerably good road it communicates with Constantinople, by another with Schumla; and the Maritza, which is navigable by small craft, connects it with Enos Bay. The Russians were encamped in 1829 some distance below the town, and there, of course, they suffered; but Adrianople itself is healthily situated, and has a good supply of water.

It is most important, that with the exception of hospitals

established on the sea coast, all arrangements should be completed before the setting in of winter. The erection of wooden hospitals for temporary use would be both cheap and easy; the Turks understand the lighter sort of carpentering very well. Mats of reed are excellent coverings for the floor, and can be got anywhere; nor is there a scarcity of rough and strong carpeting. Mattrasses can be extemporized by means of dry *kukuruz* (Indian corn) leaves. There is an ample supply of material for whitewashing, which has, in Turkey, many advantages over the process of painting. A good supply of portable iron-bedsteads will be found indispensable. Every hospital ought to have one or two very light waggons, as the roads are unfit for heavy vehicles. There are, in nearly all the larger towns, German waggoners, who are capable of constructing and fitting up these light vans. They generally understand mattrassing also; but the supply of cow or horse hair is far too small, even for the usual home consumption; on the Wallachian side, on the contrary, there is no lack of that commodity. The bread is hardly fit for hospital use; nor are there any good bakers, except at Constantinople and Bucharest. A few bakers and one or two millers might be advantageously attached to the army. There is, likewise, a great scarcity of persons who understand the washing of linen; soap is horrible, and candles not much better; and, as I am on hospital necessaries, I may state that leeches are very cheap and good. Considering the density of the population, the narrow streets, and the want of arrangements for the removal of filth in Turkish towns, the selection of a site for an hospital becomes a matter of great importance. However, there are, in most of these towns, some large buildings which could be appropriated, and by means of whitewashing and other cleansing processes, rendered at once fit for use. Where it

is necessary to erect wooden hospitals, the outskirts of towns should be preferred.

Cleanliness can nowhere be depended on, if we except the Armenians, the better and middle classes of the Jews, and the Turks. Some caution ought to be exercised respecting the condition of the cattle bought in the country for meat. In Wallachia and Bessarabia the murrain is frequent among horned cattle; other diseases again occur among the cattle on the right side of the river. In those places, where cattle for the daily supply of the garrison are to be slaughtered on the spot, Jewish slaughterers would be a great acquisition, as they are more competent than others to judge the healthy condition of an ox, sheep, or goat. I likewise conceive, that the Jewish method of salting the meat after slaughtering is, on sanitary grounds, worth consideration. I am also sure I shall not be wrong in recommending the Turkish Jews for any purposes connected with the commissariat, or in mercantile dealings generally. Some honest and intelligent men of this race, however few, are sure to be found in every town. In fact, the scanty stock of conscience and honesty existing in Turkey, may be entirely divided between the Turks and such Jews; but as the former possess no energy, I consider the latter the only individuals who combine business tact with rectitude of principle—a quality of no small importance in a country, where selfishness and deceit are at their height, and the art of dissimulation carried to perfection. In no country has the stranger greater need of energy and decision than in Turkey. The Turk, with all his good parts, is the victim of his procrastination. Suppose a medical officer should require the smallest sanitary process to be carried on, he will never see the beginning of it, unless he looks after it himself; the invariable reply, "Bacalum!" will

satisfy the Turk, and there the matter ends. To wait until a thing is *done* by him, one may wait long enough "Rusticus exspectat, dum defluat amnis." At all events, the medical officer will have the consolation that *no one* will interfere with any regulation, which he may be willing to carry out himself. But for this indolence, for some dogged prejudices which it will take half a century to break down, and occasional fits of the cruel disposition of the Osmanlis of yore, not to mention their crotchet, that every perfection of the "Giaour," whether English or French, has been created for the express use and advantage of the happy Mussulman, the Turks would be an amiable nation. I would record on this occasion the great kindness, shown me by his late Excellency Zaduc Effendi, whose physician I was, as well as by both his sons, Ibrahim Bey and Achmet Bey, the latter of whom, I am afraid, is the young hero of that name who fell last month, in an encounter with the enemy. Whoever may survive of that amiable and kind-hearted family, may rest assured that I shall ever retain the most grateful remembrance of the time which I spent under their father's roof.

Comparatively speaking, Wallachia possesses many more, though not less dirty towns than Turkey. The roads are in a better condition in summer than they are on the opposite side, but the snow in winter, and a regular quagmire in spring, greatly impedes the transit; however, the more general use of horses there, instead of bullocks as in Turkey, gives at all times a greater impulse to every kind of communication. Well arranged hospitals, of considerable size, are established in various parts, with every facility of organizing many more; and a more regular supply of medical, and the usual European, comforts can be depended upon. Although civilization may be, perhaps, one inch in advance of Turkey, yet the masses of the Wallachian population live in ignorance and

brutalizing dependence. The education of the Bojars and a few wealthy individuals, consists solely in a refinement of selfishness and ambiguity of character. To understand the latter, is to know more than the Wallachians themselves. Russian intrigue has impoverished the country, and undermined every principle. But an uncorrupted remnant breathes still the mountain air; and one day the Wallach may be himself again.

Although these few remarks, on Wallachian and Turkish nationality, do not entirely correspond with the main object of this paper, they may still be of some use to medical and other readers; moreover, I deemed it right to use my prerogative on an occasion which was not of my own choosing. The few short notes in my diary, which refer to my practice in the East, were never intended for publicity; and that period of my medical life has receded long ago into the back-ground of dim recollections before the pressure of daily duties.

In accepting, therefore, the request to dot down my experience in those provinces, far from consulting my own inclination, I followed solely what I conceived a call of duty; for, as I am probably the only English physician possessing personal knowledge of the country, I considered that this knowledge, however imperfect in itself, and however deficient my talent of conveying it, was public property, the moment it was asked for. The same consideration has entered into the plan of the whole. My remarks were made on one hand in reference to our army, composed of men in the prime of life; and hence everything applying to individuals of other age and sex, comprehending nearly three-fourths and the most instructive part of my practice, was carefully omitted, however great the temptation might have been to make use of it; on the other chiefly to medical men, who are perfectly con-

versant with every department of practice. I, therefore, have not referred to the usual methods of treatment, nor, with one exception, to the description of disease, but only to some salient points of difference between the diseases of the two countries, and to other matters, which may not be universally known. The difficulty of joining together these points and hints, varying in magnitude and importance, was greater than giving a detailed account would have been. It really became a question of arrangement and package.

Having said so much in vindication of this paper, my only duty now remains, to express my thanks to the Director-General, for the kind and courteous manner in which he received my remarks, and requested me to arrange them in this form; and, while in responding to that request, I have embraced the opportunity afforded me to do my part in promoting the well-being of our noble troops—a duty to which every high-minded citizen ought to be alive—I have performed my task under the conviction, that "*the race is not to the swift, nor the battle to the strong,*" but that safety rests with *Him* alone, who will grant success to the righteousness of our cause.

7, *Suffolk Place, Pall Mall East,*
May 1854.