Verrollot (M. P.)

Jackson (S. H.)

1865

THE NEW-YORK

JOURNAL OF MEDICINE.

FOR JANUARY, 1849.

PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*On the Progress of the Asiatic Cholera during the Years* 1844–45–46–47–48. *With Remarks by* S. H. DICKSON, M. D., Professor of the Theory and Practice of Medicine in the University of New-York. (With a Map.)

WE have received from a friend at Constantinople, an interesting series of papers, published in the Echo de l'Orient, by Dr. Verrollot, Physician to the French Embassy near the Sublime Porte, accompanied by a map, curious for its minute details, geographical and chronological. They contain the only history extant, so far as we know, of the march and progress of the epidemic cholera which now ravages Asia, has invaded Europe, and threatens for a second time to devastate the entire surface of the globe.

The Delta of the Ganges, it is well known, constitutes the original focus of this terrible pestilence. It has existed there without interval certainly for the last thirty years, within which period it has twice sent forth its pestiferous waves on every side, from that centre. From the end of the year 1837, we have heard little or nothing of it within the domains of civilization—it seemed to confine itself to its ancient domicile on the plains of Hindostan.

In 1844, it is known to have made an encroachment upon Afghanistan, where its ravages were considerable. In May, 1845, it was at Kandanar, carrying off 300 victims a-day; in June, at Kaboul; in July, at Herat. "It is said that some pilgrims, returning home, contracted the disease in the last named city, and introduced it into Samarkhand in September." From Samarkhand it passed, in November, to Bokhara, where it wintered, penetrating, in February, 1846, to Meched. From Meched it traversed Khorassan from east to west, following the great roads, reaching Asterabad in May, 1846, and Teheran in June, (1846,) carrying off 7000 persons in 70 days—one-twentieth of the population. It broke out in Bagdad early in September, 1846; its victims in three weeks amounting to 4,300 souls—nearly one-seventh of the population.

Towards the end of November, (1846,) it showed itself in Medina and Mecca. At Mecca its victims amounted to 15,000, in a transient population of 100,000. "Is it true," asks Dr. Verrollot, an impartial historian, but evidently unwilling to admit the contagiousness of this disease, "is it true, as has been supposed, that cholera was imported into Mecca by the caravan from Bagdad?" "It is curious that in 1846, as in 1831, cholera appeared in these places at the precise moment when the Hadgis flocked thither from all sides."

At the same time the pestilence spread in two other directions from Teheran, following the western coast of the Caspian sea, and penetrating into the ancient Media, the modern province of Adhubidjan. We trace it to Kasbin, Tebriz, Ourmiah. In November, 1846, it invaded the Russian provinces of Talieh and Chirwan. Just as in 1823, it passed on by Lenkoran, Saliani, and Bakou, reaching, on one hand, Chamakhi, at the southern extremity of Caucasus, and on the other, the defile of Derbend, at the 42d degree of latitude.

Here it stopped at the end of that year, (1846,) and took up, so to speak, its winter quarters upon the frontiers of Europe. During two months nothing was heard of it; there was, indeed, a moment of hope that it had disappeared entirely. But this illusion did not last. At the end of March, 1847, this modern hydra started from its short sleep, and raised, more terrible than ever, its thousand hungry heads. It reäppeared in the lower valleys of Daghestan and Chirwan, in the midst of the marshes which fringe on this shore the Caspian sea. This region, fruitful in intermittent fevers of grave character, seems equally propitious to the production of cholera-morbus. The fatal coincidence which exists in many places between the epidemic we are describing and intermittent fever, has been often remarked. The analogy of these maladies is even so striking that many physicians have gone so far as to consider them fundamentally identical, and determined by the same morbific principle. Be this as it may, it was here that cholera raged with its most cruel intensity, and from hence it resumed its westward march, a moment interrupted. Its course was twofold; on one side invading Georgia and Turkey, on the other penetrating the mountains, where it met the armies of Russia, and inflicted upon them a loss greater than that of three years' war. In May, 1847, it arrived at Kizliar, at the embouchure of the Terek, not only raging in the city, but attacking the stanitzas of Kossacks in its environs. In June and July, nine of these military villages were invaded, and many squadrons, seeing its approach, shunned it by abandoning their stations and retiring into the Steppe, where it did not follow them. From the delta formed by the numerous mouths of the Terek, the cholera radiated towards Astrachan on the north, to the northwest, in the Steppe of Kouma, where it reached four "Oulouss" of Kalmucks, who had not yet abandoned their summer encampment, and westwardly to Stariopol, chief town of the province of Caucasus. On the same day, July 4th, 1847, the epidemic broke out at each of these extreme points, traversing in 41 days the different distances of 35, 68, and 96 leagues.

As soon as it showed itself among the Kalmucks, they struck their tents and moved away. But it seemed that the new places to which they retired were equally favorable to the development of cholera, for they

were not as fortunate as the Kossacks of whom we spoke above. The epidemic continued, and spread itself among other "Oulouss," without exhibiting, however, any great degree of rigor; for in 32 days no more than 181 individuals were seized, of whom 90 succumbed.

Dr. V. considers these Kalmucks as "the type of physical man, of man in good health," subjects therefore in whom cholera would show itself, "with all its proper characteristics," and concludes that in the most natural and favorable conditions, the law of average mortality would be for cholera, 50 per cent.

The quarantine establishment of Astrachan, is situated at 18 leagues distance from it to the south, on the small island Biroutchaia-Kossa. It appeared there on the 3d July, we know not how introduced; on the next day it passed to the city. Its three earliest victims, died in less than 24 hours. At first its progress was slow, but from the 13th July, 1847, it extended with great rapidity and malignity, the weather being very hot and the air exceedingly moist from the falling of the waters of the Volga. In less than three months the deaths reached 1413, in a population of about 50,000, being at a ratio of 57.55 per cent. of the sick.

Of the various classes inhabiting Astrachan, the Russians suffered most. The Mussulmans are more cleanly, dress more warmly even in summer, and live soberly and temperately.

From this point, the pestilence spread itself in every direction over the neighboring country, and along the banks of the Volga. But there was one remarkable exception, upon which Dr. V. dwells with a reasonable enthusiasm, and which deserves, indeed very special notice. There is a small Moravian colony, called Sarepta situated in a bend of the river, in the midst of the Kalmuck hordes, eulogized by all travellers for its remarkable industry and minute cleanliness, and all other laudable and fortunate features of character. The cholera itself seemed to respect this sacred spot; passing by, both in 1830 and in 1847, without inflicting upon it the least evil.*

In the government of Astrachan, cholera reigned 13 weeks. Official reports state the number of those attacked at 7,132, the deaths being 3,772, a fraction more than half. At Saratov, a town of 45,000 souls, it appeared on the 11th of August, lasted 32 days, carrying off 2,240 victims, the deaths being to the number attacked in the appalling proportion of 76 per cent., more than three fourths! One is surprised after this statement, to meet with the remark, that "the observations made by the physicians of Saratov, tend to prove that the present epidemic is less malignant than the former one." This remark is repeated in reference to the city of Kazan, where we find the cholera on the 5th of September, at the distance of 110 leagues in a straight line, this great distance having been traversed as it were "at a bound," in 19 days. Here, however, it seems to be better founded, the deaths being about the average proportion 49 per cent., amounting to 1208 out of 2467 sick, in a population of 58,000.

At the same time when it spread itself throughout the government of Kasan, we find the epidemic extending towards Orenbourg, eastwardly.

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* A writer quoted by Copland, (Dict. No. XI., p. 115,) ascribes the immunity of Sarepta to its rigid quarantine.

It penetrated into the government of Nijni Novogorod on the 8th of September. Here it prevailed with comparative mildness. On the other hand in the government of Voroneje, on the south and west, it offered a character of malignity much more pronounced. In the province of Caucasus, it is observed that the disease showed itself more intense in the valleys and in defiles inaccessible to the winds, where the heat is great and that it attacked the Russian troops and residents in preference to the Mussulmans. The mountaineers were less exposed. But generally, the epidemic had here a strongly malignant character, and affected the whole population in various degrees. The Tscherkess, on the left bank of the river Kouban, suffered particularly. It is not known whether the epidemic penetrated farther into the valleys of Caucasus.

At Taganrog on the sea of Azof, it appeared on the 21st July; in a population of about 16,000, it attacked, during 56 days of prevalence, 501 persons, of whom 215 died; a proportion of near 43 per cent. Hence it made a traverse of 23 leagues, in 22 days, to Manoupol, and from Manoupol to Bediansk, 13 leagues in 41 days. To Perekop, it made "a bound" of 65 leagues; from that point to Kherson, a town at the mouth of the Dneiper, it took 49 days to make 21 leagues. Southwardly in the Crimea, it moved much more rapidly, projecting its fatal rays in the space of a single month to a distance of nearly 200 leagues.

It seems that the cholera appeared about the middle of July, in the government of Voroneje, at Bytchkovskaia, near the Don, upon the Kossack frontier. This place is 73 leagues in a straight line, 77 by the post road, and 125 by the river, from Novo Tcherkask, the capital of the province of the Don, where the epidemic showed itself one day previous; if it arrived from thence, it must have cleared that great distance in a single day. But it is more probable that it was received direct from Staro Tcherkask, a stanitza of the Kossacks, the probable source whence it reached Rostov and Novo Tcherkask, equally distant, giving 10 days for its march thence. Seeing it thus clear "at a bound," this great interval, one would expect it to be developed rapidly in the environs of Bytchkovskaia. Precisely the contrary happened. It was not until a month after that it appeared at Bogoutchar, a town situated on the other side of the river, only four leagues distant, and it consumed 40 days more in reaching Pavlosk, the chief place of the neighboring district, 17 leagues away, traversed both by the river and the great road.

At Voroneje, it broke out on the 22d August. This is a city of 25,000 souls, situated on a branch of the Don and often ravaged by intermittent fevers; the climate is mild and the soil fertile. The winter coming on in December, lasts but four months. Here the cholera spread with uncommon rapidity, the proportion of those attacked to the whole population being very considerable. But the proportion of deaths among the sick was less than two-fifths, or about 40 per cent.

In the government of Kharkov the epidemic appeared on the 20th July, spreading rapidly to the northward and thus penetrating into the government of Koursk. On the 9th August it showed itself in several villages of the district of Obïane; on the 26th August at Demetriev, 22 leagues northwest; the 8th September at Timè, 15 leagues west; and on the 9th at Fatije, 13 leagues northwest; lastly, in the month of October, at Chtchigri, chief town of the district of that name.

Thus the cholera occupied six weeks in overrunning the fifteen districts

of the government of Koursk, comprising a superfices of 2,185 square leagues and about two millions of inhabitants. It found here conditions more favorable than elsewhere to its existence, and continued to rage with obstinacy. On the 31st December it still reigned in seven districts. From the day of its entrance until that period it had attacked 16,554 individuals, of whom it had carried off 6,409—about two-fifths.

Here, we regret to say, terminates our file of papers containing the precise history of cholera, from the pen of Dr. Verrollot, and in tracing its farther march we must resort to other sources of information. Meanwhile let us review the statements for which we are indebted to him, and add to what has been said of its origin and progress such facts as have been recorded tending to point out its causes and mode of propagation, and ascertain what has been done by our profession towards its prevention and cure.

First, let us observe that whatever may have been the original source of cholera in the central region, whence it has twice within the present century extended itself by a sort of radiation, its mode of extension has ever been *progressive*. It has been traced by the assiduous diligence of observers like Dr. Verrollot from point to point, seemingly incapable of finding a resting place. What centrifugal force thus discharges or projects it on every side? The impression is universal, and is conveyed in universal language. "The cholera," says every one, "is coming!" What is it that comes—the disease, or its cause? The disease alone, or a case of it, or a hundred cases, would excite no alarm in coming, if it were not for the universal belief that with the disease, with a case or cases of cholera, comes also the efficient cause of other cases, the cause of its epidemic prevalence. It would seem then to be universally agreed on that the cause is not local or indigenous; "it comes," it acts, it goes away, or subsides or becomes inert. How does it come? What is its mode of progress? Is it wafted by winds? Is it *stayed by any obstacles?*

When existing at any one point, has it ever showed itself at any remote point by a clearly proved spontaneity? It will hardly be asserted that it has ever, out of Hindostan, originated in any locality unless that place was connected by social or other intercourse with some other at which it was previously known to exist, and the uniform coincidence of such intercourse being established, we next inquire whether such intercourse is necessary to its spread, and whether it be the means of its extension. Those have to sustain, in view of this constant coincidence, a heavy burden of proof who set out to show, that nevertheless it is not transportable nor ever transported; not communicable, nor ever communicated; not contagious, nor ever conveyed by infection; that it is always of local origin, indigenous, and of spontaneous production wherever it appears; that all soils, all climates, all temperatures, all states of society, all localities, are capable of giving rise to it.

Whatever may be the cause of cholera, whether a vegetable fungus, a nucleated cell, an insect or animalcule, or an emanation aerial, gaseous or chemical, there must be a *materies morbi*. It travels, doubtless; but by what modes? It is either originally inexhaustible in amount and force, a notion hardly tenable when we look over the immense extent of its prevalence, or it is reinforced by additions to its mass from time to

time and in various places. How is it thus reinforced? Whence does it derive these additions? Soil, climate, subjects, locality, are all changed, but nevertheless *the same agent* is generated and regenerated; the *same*, for the effects of its causative action are every where identical; precisely the same amidst the snows of Russia as "under the burning line." We believe that this train of thought leads philosophically and by logical necessity, to the doctrine of infection—of contagious propagation. The same causes produce the same effects. From the choleric patient is derived the supply of that agent which affected him with the disease. *He* presents the only similar contingency, in his personal condition, which can be traced when we endeavor to connect effect with cause, and ask why cholera, which in January was in Moscow, is in September at Hamburg; which, thirty years ago ravaged Hindostan, and now threatens the crowded cities of England.

We are not very anxious to indicate the specific links of the chain of events which bind together the various and successive invasions of countries, districts, and cities. We care very little whether the particular individual can be pointed out to whom the fatal importation is owing. We listen coldly to the special pleading which ingeniously disproves any alleged mode of communication, and seeks to discover an insulated case or cases any where that cannot be brought in contact with any previous case. We attended, during the last winter, 40 cases of *smallpox*, not one of which could be connected either by contact or conscious near approach with any other: nay, Haygarth says, "it never can be traced as from a centre." We are satisfied with the overwhelming force of the general views above set forth, and regard the question of the communicability of cholera, as being quite as well settled as any other point in pathology.

The non-contagionist shrinks from any speculation of a definite character concerning the cause of this terrible pestilence. He indulges in vague declamation as to the terrible inquination of the air we breathe by the foul vapors of the marsh, and the dense emanations of the river shore, and the confined atmosphere of the lanes, alleys and courts, of crowded cities. But all this does not touch the true point in dispute. The marsh, the valley, the hovel, and the damp cellar, are familiar sources of evil on which all eyes are fixed. But the same source which in 1846 eliminated intermittent or typhus, yields in 1847 a *new product*. Whence the difference?

Dr. Verrollot quotes with approbation the views of those who regard cholera as one of the products of malaria, an analogue, so to speak, of the malignant and congestive fevers which belong to hot and moist climates. But however frequently and severely it may prevail in certain situations where these fevers arise, it never shows itself spontaneously in some of *their* best known seats; nay, even when its specific cause developed itself upon our American continent, many of the localities annually ravaged by the worst malarious fevers entirely escaped; while it extended over the healthier portions of the northern and middle states, and in cities, where, according to Bancroft and Johnson, density of population gives immunity from the diseases brought on by the paludal poison.

Dr. V. tells us that "the epidemic was more intense in the towns than in the country." He informs us that at Saratov "towards the end of

the epidemic, certain other maladies, such as *intermittent fevers*, reäppeared, of which no vestiges could be perceived during the great intensity of the scourge. It was always observed however that typhoid fevers were not subject to its influence; they showed themselves frequently without any choleric symptom, while, on the other hand, the cholera often transformed itself into a typhoid fever, or complicated itself with that malady." These facts agree with observations made in our own country which go to show affinity on the part of cholera, rather with the typhoid affections of dense and wretched populations, than with the wide-spreading malaria of our southern and western country. Yet Dr. Verrollot, with his laudable exactness, soon separates it from typhoid diseases by showing that it is always, in direct contrast with them, somewhat repressed by the cold of winter, although unhappily not extinguished. Its extension rarely takes place, (if ever,) in the reign of frost; and among other facts which go to show that "the cold has really an influence upon the energy of the epidemic" he states that "it does not cross the ridges of high mountains."

As a faithful historian, though opposed to the doctrine of its contagiousness he recounts several instances apparently favorable to that mode of accounting for its progress. Its reported transportation by pilgrims into Samarkhand, Medina, and Mecca, has been already quoted. On the route to Tsaitsin, a Kalmuck village, Kalmytsky Bazar was attacked by cholera which spread itself in the environs of Astrakhan, "leaping from one point to another without regularity. The Lama was the first victim; an assistant of the priest next suffered, and afterwards several others in the service of the same person." The Kalmucks terrified, abandoned the sick and the dead, and fled into the Steppe, but in spite of their retreat they could not shun the malady to which they fell victims in the remote "Oulousses."

Again, "Kertch is a little town of less than 6000 souls, by its maritime position, the key of the canal of Jervi Kalch, the ancient Cimmerian Bosphorus. On the 9th of August, 1847, a case of cholera occurred on board a vessel from Taganrog where the epidemic prevailed." After this he tells us the pestilence lasted 56 days and carried off 225 victims, and goes on to remark: "The contagionists will see in this fact a point in support of their theory," but he suggests, the pestilential effluvia may have been blown thither by the wind from some other quarter.

"At Taganrog the first case of cholera occurred on the 15th of July, in a citizen who arrived the day before in good health, by the steamboat from Rostov where cholera prevailed. He died in nine hours. It was only six days *after this accident* that the epidemic declared itself in the city where it reigned eight weeks.

We shall quote but one more instance of his sort. "On the 30th July, a peasant, Andre Litvinov, who had also just returned from Rostov, was taken to the hospital at Kharkov. He had felt the first symptoms of the malady the day before, on his way, at Tchougoniev nine leagues distant. It is not irrelevant to observe that the epidemic did not yet exist in this place and did not break out there until three or four days afterward. The unfortunate peasant died the next day at the hospital. Golatchev, the *infirmier*, who had bled him, was taken on the 2d August, *after having eaten cucumbers for his supper*. The fol-

lowing day the mother of Golatchev, who nursed her son, and another *infirmier* named Ivanov, who had also attended Litvinov fell sick; and all the three died on the 4th of August. From that time the malady commenced to propagate itself among the inhabitants; but it was not really until the 19th that it put on the true character of an epidemic."

The most exacting contagionist can demand nothing more clear and pointed than the above statements. Thousands of such have been collected during the two histories of cholera, which have been so abundantly written. But there is one point to which sufficient attention has not been directed. It is the interval usually, if not uniformly noted, between the occurrence of the first case in any newly-invaded locality, and the explosion of the disease as an epidemic. Why this interval? The vague and undefined negations of the non-contagionists afford not even a conjectural explanation. When cholera assails New-York, the Five Points will not be more filthy than they are to-day. When they produce one case they will be in fit condition to give existence to a thousand. But the contagionist will offer a reasonable explanation of the facts. A case occurs; from this emanates a certain amount of the infectious principle; then another and another, until the atmosphere, filled with contagion, infects all who are predisposed, or who are not guarded by some happy inaptitude to receive the impression.

We must not omit to set down here such information as we have been able to gather, concerning the treatment of the pestilence at the various places where it has been encountered by the profession.

Notice has been already taken of the idea which suggested itself early to certain physicians, and which seems to have met with some favor in the eyes of Dr. Verrollot, that cholera was identical in source and nature with malarial diseases. He alludes to Dr. Ferri, one of his predecessors, "a distinguished physician of the faculty of Paris," as having published, in 1832, a pamphlet upon cholera, which he named "a pernicious algid fever,"—"fievre pernicieuse algide." His "ingenious theory" we leave to be inferred by the reader; his practice was as follows: "After an abundant bleeding as a derivative means, he administered as soon as possible, the sulphate of quinine in large doses. This medication, he says, is infallible when timely applied; it succeeded even in desperate cases; out of 162 choleric patients thus treated, 134 were cured. His observations were made at Constantinople, in July, August, and September, 1831.

Saratov was the locality most remarkable for the large proportion of deaths from cholera, which amounted on the whole to 76 and a fraction per cent., (more than three-fourths of the sick,) 2,240 in 32 days of August and September! He may well say that "the treatment was little satisfactory. No regular or experimental method was followed. From venesection to the Elixir of Voroneje the results were almost identical, that is, negative. They even affirm that the boasted elixir was more injurious than useful. There is but one medicine from which the physicians of Saratov seemed to have derived benefit, and that was the root of ipecac., administered as an emetic in the commencement of the attack. This prescription often caused the disease to disappear as by enchantment."

At Kazan the disease prevailed 68 days, in September, October, and November; tempered, perhaps, by the lower heat of the advancing sea-

son, and carrying off 1208 persons; a proportion of mortality of 49 per cent. "The treatment followed by the physicians of that city, consisted principally in the methodical and opportune employment of calomel, ipecacuanha, venesection, and external stimulation; calomel chiefly was employed to combat the diarrhœa which ordinarily preceded the explosion of cholera. It was given in doses of one-fourth gr. to two grs., frequently repeated until the dejections became bilious. When there was thoracic "oppression, uneasiness at the epigastrium, heavy headache, numbness of the extremities, they had recourse to an emetic of ipecac.; and it was observed that vomiting of bile was always followed by amelioration. In plethoric subjects it was found proper to practice venesection before giving the emetic, but generally speaking, sanguine emissions seemed hurtful rather than useful. If these means did not arrest the progress of the disease, the physicians, always with the purpose of restoring the biliary secretions, returned again to calomel, of which they increased the doses sometimes to 10 grs. every hour, or even oftener. Concurrently with the internal treatment, they stimulated the skin with irritating frictions, surrounded the sick man with bricks, bags of chaff or oats, or ashes strongly heated, and eulogize loudly the effect of dry heat thus applied. Towards the close of the epidemic it frequently transformed itself into a bilious intermittent fever, with hepatic irritation. In this case they again gave calomel, but in smaller doses."

It was in the Caucasian provinces that the famous Elixir of Voroneje was most employed and trusted to. "At first it was thought to owe all its properties to the naphtha which enters into its composition, but ulterior experience has overthrown the hopes that had been conceived of its efficacy." Dr. P. styles the elixir *an incendiary remedy* adapted only to constitutions like those of the lower Russians, accustomed to the immoderate use of ardent spirits. We must acknowledge that the mortality was not more considerable among the Mussulmen who treated themselves generally with spirituous frictions, with water of goudron de bouleau, (tar from the birch) and fermented mare's milk mixed with garlic and salt."

The district of Bogodoukhov was one of the most fortunate localities in regard to the proportional mortality of the epidemic; which is set down here as low as 30 per cent., occurring in August, September and October. "The medication employed was generally as follows: on the appearance of the first symptoms venesection was ordinarily practised, they then gave some drops of essence of peppermint and tincture of opium. It often happened that the cure took place after the second dose. If the disease persisted, recourse was had to the dulcified sulphuric ether, or Hoffman's liquor, of which ten drops were given from time to time on a morsel of sugar. In the meanwhile the sick man was made to drink of water as cold as possible. The vomitings were sometimes combatted by the anti-emetic potion of Riviere, (?) with or without opium. The means most employed to modify the alvine evacuations was calomel, in doses of one grain every hour. If the diarrhœa was violent, four grains of Dover's powder were administered, at the same time the skin was stimulated either with hot or vapor baths, or by frictions with the Elixir of Voroneje, which quieted the spasms and restored heat to the surface."

The special treatment of certain physicians obtained celebrity. Among

the names thus noted is that of Dr. Dobrourarov of Kiakhov, whose formula is given us:

"Essence of peppermint,	1 part, by weight.
Liquor of Hoffman,	6 " "
Ethereal tincture of valerian root,	8 " "

"It seems that a great many of the sick were cured by this remedy, even without the aid of a physician." The dose is not mentioned, though it is said of it, "One dose ordinarily sufficed; but it must be repeated whenever rejected by vomiting;" while heat and frictions were applied to bring on sweating.

The treatment of a Dr. Sledzievsk, of a hydropathic establishment at Kotchetka, is also said to have been attended with "numerous successes." At the first attack the patient was "made to drink a glass of very cold water, (4° of Reaumur) containing in solution a tablespoonful of kitchen salt; he was then wrapped in a sheet soaked in cold salt water and rubbed with the cloth for a quarter of an hour. Then he was wiped dry and rolled in a double coverlet of woollen, in which he lay several hours, during which they gave him, every five minutes, a large spoonful of salt water at the temperature of zero. An abundant and general sweat indicated the crisis. As the symptoms grew lighter the intervals of the above draughts were lengthened, and towards the end a warm drink was substituted to keep up the sweating."

We have thought it proper to be somewhat precise as to the treatment described. We fear that those who have read and thought most upon the subject of this terrible pestilence will be ever found most ready to acknowledge the failure of our art in contest with it. At any rate, all must admit that our practice is still unsettled, and that it is our imperative duty to examine on all sides and inquire with the utmost assiduity after better measures and remedies more effectual than any which have yet been devised for its subjugation.

We proceed to trace briefly from our other miscellaneous sources, the farther history and progress of the present epidemic invasion of cholera. Our distance from the scene of its ravages, and the paucity of our materials, will of necessity render this portion of our record desultory and imperfect; in this respect, presenting a strong and unfavorable contrast with the very minute and connected essay of Dr. Verrollot, which we trust that gentleman will be induced to bring down to the current date, and indeed carry out through the whole of its visitation, destined we fear to resemble our former experience too closely, as well in protraction as in all other respects.

On the 24th October, 1847, the first case is stated to have occurred at Constantinople; no other took place until the 31st, after which it became epidemic and raged violently. On the 26th November, it appeared at Moscow, nearly the same time of year as in 1830. In December 14th, we read of it as showing itself at Vitebsk, a place on the road from Moscow towards Prussia.

During the winter it appeared to have made little or no progress, though by no means extinguished by the low temperature. In January, 1848, we know of its existence in Moscow and Vitebsk in the north of Europe; at Orfah and Diarbekir in Asiatic Turkey; and at Constantinople in the

southeast. So little was said throughout the month of February and March, that the journals of April are found to contain many intimations of a grateful or exulting belief, that it had expended its centrifugal force and died away. But these hopes were soon put an end to. In May, the capital of the Turkish empire was a second time terrified by its revival and renewed epidemic sway. In the course of that month, it spread to Marmora and Cutalia, in Asia Minor, and added new territory to its conquest in eastern Russia and Moldavia. Not yet extinct in Moscow, it did not reach St. Petersburg until about the middle of June; in the same month it was in Cronstadt, in Bucharest and at Abo in Finland. In July it scourged severely the armies in the Caucasus, both Russians and Circassians. In the same month, it appeared at Berlin. On the 17th, we hear of it in Aleppo, Asia Minor, extending in one direction; at Cairo, in Egypt, in another; and at Riga, on the Baltic, in a third: on the 26th, it was at Alexandria. In August it was raging at Berlin, and had appeared in Konigsburg, Warsaw and Vienna. Two cases are mentioned as being observed in vessels arriving from the Clyde, from the north of Europe, and one such in a ship at Trieste, from Constantinople. In September, it existed in Hamburg, where it extended widely and delayed long, affecting all Europe with expectation of its intrusion. Rumors of its appearence in various parts of Great Britain, were published from time to time, but nothing certain was known of its presence on the shores of that island, until official notice was given of cases on board a vessel at Hull, in October. About the end of that month, it is definitely stated, that several instances occurred in London, at Sunderland and in Edinburg. We need follow its route no farther. We hear that it does not spread as yet, with any considerable degree of rapidity, and we indulge the hope, tempered by serious apprehension, that it may linger and abate, repressed either by the low temperature or some of the other contingencies of the season of winter as heretofore.

On reviewing the gloomy history of its prevalence at the various points above recited, we are struck with the general correspondence of the present with the last fatal invasion of this disease, into the several countries of the civilized portion of the globe. In mode of progression, the resemblance is striking: it affects the same places, the same classes of subjects, nay the remark more than once presents itself, that its victims of to-day are the children of the parents who died of it 18 to 20 years since. The proportional mortality may be stated at about the same ratio, generally, to the whole population and to the number attacked. New remedies have shared the same defeat as the old, and no mode of treatment whatever seems to make any decided impression, on the result. Quarantine regulations and cordon sanitaires prove in general, as formerly, mortifying failures. All the old questions arise again, and are again warmly debated, with as little hope as ever of reaching a satisfactory decision. As before, all agree that the terrible influences of the pestilence are shed in most concentrated form upon the destitute, the unsheltered, the overworked, the intemperate, the degraded. It is the scourge of our vicious social state. Yet we must not deceive ourselves; we shall not be able to prevent, but only to modify its effects by any changes we may be able to make; for in tracing its course, we have met with it under every variety of circumstance and condition. Our boards of health and sani-

tary commissions must not promise too much, lest they deceive public expectation, and suffer from a just reäction. Cholera may reign in the sparse population of country places, though it is more despotic in the courts and alleys of crowded cities. The farm laborer and the artizan, are alike liable to its attacks. It marches over the arid plains of Arabia and Egypt, as well as through the swamps that border the Caspian sea, the Volga and the Danube. Its cause is efficient upon the steppes of Russia and amid the snows of Moscow, as well as in the paved streets of London and the steaming lanes of Cairo. We meet with it in the tent of the hadji of the desert as well as in the hovel of the beggar of St. Giles. This universality is a frightful feature, belonging to no other malady known to the human race. Science and art have set limits in a certain sense to every other pestilence; have said, "thus far and no farther shalt thou go, and here shall thy dark waves be stayed;" beyond this line of causation or predisposition we shall, some of us at least, find refuge; but in regard to cholera, we fly vainly from the city to the village, from the valley to the mountain, from the sea-coast to the far inland; wherever the social intercourse of life has reached, there we may be fatally assailed.

November, 1848.

ART. II.—*On Inflammation: Indications and Methodus Medendi.* By J. P. BATCHELDER, M. D. (Continued.)

OUR last paper closed with the consideration of general bleeding as a measure for the fulfilment of the first indication—the diminution of the *vis a tergo*, but experience having proved that that most efficient remedy is not admissible in all cases; and that in those in which it is proper, it cannot be carried to the necessary extent with entire safety to the patient, we are, therefore, constrained to look for other means, the most prominent of which are cathartics. Like bloodletting they act mainly as evacuants; not merely emptying the alimentary canal, but depleting the vessels. As counter irritants they are sometimes beneficial. In all these respects, their modus operandi* will be readily comprehended, as coinciding with the doctrines advanced by a recurrence to them and to the axioms on which they are founded.

As a cathartic, calomel is one of the best; if not the very best. Besides its virtues as an evacuant it possesses the quality of correcting the secretions, and is therefore eligible in most cases, and pre-eminently so in those in which the secretions are much disordered or vitiated. If the patient complains of a bitter taste, nausea, sense of weight or load at the stomach, and exhibits a tongue covered with a dark or yellow fur, an emetico-cathartic, or simple emetic, followed by cathartic medicines, may be administered with the happiest effect. In many instances in which the symptoms enumerated are present, an emetic which equalizes the circulation will be of great service. In our experience, that of Dessault, a little modified, is the best. His emetic was one grain of emetic

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* See remarks on Counter Irritants, page 27.

On progress of the Asiatic cholera during the years 1844-4
W6 P3 v.7481 box 930 no.15

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A MAP

Showing the Progress

of the

ASIATIC CHOLERA

DURING THE YEARS

1845, 1846, 1847

from the Map accompanying the Report of

Dr M.P Verrollot

Physician to the French Embassay

near the Sublime Porte

..... *Indicates the Annual divisions of the Progress of the Cholera*

" Principal Towns & Cities Invaded by " "

" " Post & Caravan Routes

" Direction of the Epidemic

ST PETERSBURG

Valdai 30 Sept

Pskov

Vitebsk

MOSCOW 18 Sept

Nijni Novogorod 26 Oct

Kazan 5 Sept

Simbirsk

Tambov 12 Sept

Demetriev 26 Aug

Time 8 Sept

Voronej 22 Aug

Saratov 26 July

Orenbourg

Vasilkov

Bogoutchar 21 Aug

Dnieper R

Don R

Volga R

Taritsin 25 July

Novo Tcherkask 18 July

Rostov 12 July

Staro Tcherkask 9 July

Kherson 27 Oct

Bedians 22 Sept

Tangarog 21 July

Azof 28 July

Astrachan 4 July

Perekop 5 Sep

Merkoupol 12 Aug

Kertch 9 Aug

Stariopol 4 July

Kizliar 24 Aug

BLACK SEA

CASPIAN SEA

ARAL SEA

Derbent Dec

CONSTANTINOPLE 24 Oct

Trebizond 9 Sep

Chamakhi Dec

Bakou Nov

Sallani 16 Nov

Samarkand Sept

Bokhara Nov

Smyrna

Van

Lenkoran Nov

Diarbekir 12 Nov

Tebriz 29 Sep

Ourmiah Oct

Meched Feb

Asterabad May

Kasbin 5 July

Teheran 12 June

Herat July

Aleppo

Euphrates R

Bagdad 10 Sept

Kaboul June

Kandanar May

MEDITERRANEAN SEA

Beyrout

Damascus

Jerusalem

Ispahan Aug

Cairo

Basra 19 Oct

Chiraz Aug

PERSIAN GULF

RED SEA

Medina Nov

Muscat

Mecca Nov

Mokha May

East from 30 Greenwich