

XV. *An Account of those malignant Fevers, that raged at Rouen, at the End of the Year 1753, and the Beginning of 1754. By Monf. Le Cat, M. D. Profeffor of Anatomy and Chirurgery at Rouen, F. R. S, Member of the Royal Academy of Sciences at Paris, and perpetual Secretary of that at Rouen.*

Read Feb. 20, and
March 6, 1755.

ABOUT the end of November 1753, a malignant distemper broke out in this city; the ravages of which continued during the subsequent months of December, January, and part of February.

I was induced, by the noise it occasioned throughout Europe, to treat of it in a particular manner.

In order to which, I shall give a history not only of this last epidemical disease, but also of that of the preceding years, to which it is nearly related.

The medical gentlemen, who have practised in this city from the beginning of the present century, have assured us, that, for the last thirty years, this country has been more subject to malignant fevers than it had ever been before; and that the greatest part of them have been accompanied with miliary eruptions. I should be tempted to fix this epocha in 1723, and 1724, because the first of these years was excessively dry, the rain at Paris amounting to no more than seven inches eight lines, (whilst the mean year comes to nineteen), and the year 1724 had only

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twelve: whilst the year 1725 produced more than seventeen inches and an half, which should cause a temperature nearly approaching to the mean quantity, which may be looked upon as the most healthy.

I observed in 1736 and 1737 certain gangrenous sore throats, which chiefly attacked children: they appeared again in 1748, in young persons of the first distinction, not only at Rouen, but also at St. Cyr, near Versailles, and at Paris. Persons of a certain age were also seized with it, not only in town, but in the country; and in some the tongue alone was the seat of the gangrenous eschar. In the same years 1737 and 1738, there was a great number of malignant peripneumonies, of that kind called pituitous. The lungs of these subjects, many of which I open'd, were become schirrous; and the patients perished for want of being able to admit air into them, as if they had been strangled. Some of them most earnestly begged of me to open their breasts, imagining that a new vent would give them breath.

In 1739 we had, at the Hôtel Dieu, continual fevers, with frequent faintings; and the patients, without any other violent symptom, died in six or seven days. I found small abscesses in the substance of their hearts, near the auricles. Nothing remarkable happened from 1739 to 1743, but that the finest, longest, and driest summer I ever knew in Normandy, produced epidemical bloody-fluxes, which grievously afflicted both this city and the whole country round about. These fluxes were preceded by great lowness of spirits, attended with violent colics, and a sharp fever: the pulse small, the mouth and tongue foul, a nasty
taste

tafte in the mouth, and frequent naufcas; and whenever a hiccup came on, death was not far off.

The principal feat of this diftemper was in the large intefines; though fometimes the fmall guts and ftomach had their fhare. In one, whofe name was Coulon, who voided pure blood a little before his death, I found a great portion of the intefestinal canal full of blood, the villous coat being much fwel'd, and greatly inflamed: and, putting it in water, one might eafily difcern, with a magnifying-glafs, a great number of red points, which appeared to be the mouths of the veffels, which poured out the blood found in the intefines.

One Le Fevre had blood difcharged even up to the ftomach; and the inner membrane of this organ, towards the pylorus, was in the fame condition with that of the great intefines of the foregoing patient. The duodenum, jejunum, and the beginning of the ileum, were found; the end of the ileum was inflamed, and the large intefines were gangrened.

In one, called Saracin, the fame intefines were all mortified; the cæcum, and half the colon, were as large as a ftomach diftended with wind. Their canals were full of a bloody matter, and their inward membrane feparated very eafily. The gangrene feemed particularly to affect this coat. The ftomach and fmall guts were found; nevertheless his death was preceded by the hiccough.

In fome others, the gangrene had feized all the coats of the intefines; and fometimes thefe canals were fo far pierced by the efchars, as to let the fæces pafs through into the cavity of the belly. And in

some the bladder itself partook of the disorders, that were observed in the great intestines.

A few bleedings at first, cooling liquors, as whey, chicken-water made into an emulsion, emollient clysters often repeated, and paregorics given properly, and in small quantities, were the most sovereign remedies for this disease. Purgatives were generally hurtful.

However, ipecacoanha succeeded with some; and an English pupil of mine, Mr. George Ross, made very successful trials with boluses of vitrum antimonii ceratum.

Whenever blood was taken away in an over great quantity, the patient in three or four days fell into the agonies of death. Anodyne drops given too freely, instead of quieting, occasioned restlessness, and increased the fever and inflammation.

I was myself struck with this disease, as if with lightning, and passed, in a few hours, from a good state of health into a sinking and insensibility, which indicated a gangrene coming on, and the utmost danger. Two bleedings, close upon one another, brought me to myself; but my insensibility was succeeded by the usual colic and flux, which was the principal distemper: then one half ounce of diacodium freed me from this painful and dangerous condition, as speedily as the infected air had thrown it upon me.

In the following season, and even in the year 1744, when this distemper prevailed no longer as an epidemical one, there happened some very extraordinary circumstances.

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On the 30th of November 1743, the wife of a writing-master, being of a robust habit of body, and in perfect health, was suddenly seized with a violent colic in her stomach, and died in three hours. I found three gangrenous places at the upper orifice of the stomach. I doubt whether ever any distemper could have deserved the name of a plague more than this, if it had been epidemical.

In the course of the year 1744, we had a great number of gouty rheumatisms, with fevers. The patients were deprived of the use of their limbs; the miliary eruption often came on, and seemed to relieve them, by restoring their limbs. In some their pains went off by forming phlegmons and erysipelas upon the extremities; some of which seized the arm and fore-arm, and were considerable enough to bring on the death of the patients: others were attended with large gangrenous eschars, which likewise frequently proved fatal.

Of all the remedies, that did service in these disorders, decoctions of the bark, and the sudorific woods, as likewise that of scorfonera, were most effectual. But if a plentiful miliary eruption came on, notwithstanding the relief it seemed at first to procure, the event seldom turned out well.

The years 1745, 46, and 47, proved tolerably healthy: some disorders of the throat, becoming more common about the end of the last of these three years, were the fore-runners of the gangrenous fore throats of 1748, of which I have already made mention. In these cruel distempers the throat was in the same state with that of the larger intestines in 1743.

Great and frequent bleedings made the patients go off the sooner.

There were also this year malignant fevers, that began with rigors, fix'd pain in the head, pain about the heart, the fever in appearance very small, yet attended with delirium, and often with a miliary eruption.

Those, who died, had the villous coat of the stomach spread over with inflammatory spots, which swelled its substance, and gave it a brownish purple-colour. These spots were in greatest number about the upper orifice of the stomach.

The small guts had also some of these spots. I got drawings to be made of them.

Sometimes the glands of the mesentery were found obstructed, when the larger intestines, and other viscera, were in a sound state.

I cured, or rather stopp'd the progress of, these distempers, by giving, upon the first coming on of the rigors, a cordial and febrifuge electuary *.

When the distemper did not yield to this remedy, we had recourse to small bleedings, and gentle physic. Such as were seized naturally with a slight flux, got well with the help of diluting liquors, made a little detensive, such as limonade; but some of them lasted forty days, and above. The years 1749, 50, and 51, had the like malignant fevers, some of which were accompanied with violent colics in the begin-

* Kinkina, one ounce: Venice-treacle and rhubarb, of each half an ounce: salt of centaury and wormwood, of each one drachm: syr. of mercurialis, q. s.

ing, followed with fluxes, which it was found necessary to moderate. I succeeded with one or two bleedings, after which I gave the decoctum album *.

Some of these diseases had the appearance, at first, of a slight peripneumony, or cold, with perpetual faint sweats: then followed a drowsiness and stupor, a rambling for some moments at night, the belly puffed up, and uneasy, little or no urine, then a miliary eruption and delirium; and the patient was carried off in a few days.

The stomach in these subjects was inflamed, as also the small guts, by patches. In some there were ulcers, which almost penetrated the substance of the intestines.

Their lungs were full of blood, and in the back part, adhering to the pleura.

Those, who had a slight looseness only in the morning, which did not check the sweats, recover'd. Some of the malignant fevers, which we had at the Hôtel Dieu in 1750, were reported to be caused by infection conveyed in bales of horse-hair, to which was left some of the animals flesh, that was become putrified: and yet these fevers did not differ from others which we have already described.

Martha Renon, a girl of about twenty years of age, who died of this fever, had the mesentery filled with obstructed glands, and the intestines mortified in different places.

* Crum of bread, two ounces; hartshorn-shavings, half an ounce; root of the greater comfrey, cut in slices, one ounce; to be boiled in a quart of water for a quarter of an hour: strain; and add an ounce of diacodium.

Francis Gentil had, besides these symptoms, almost the whole mesentery mortified, and an anthrax or carbuncle at the upper and fore-part of the arm-pit, and the whole body of a livid colour. This carbuncle proves, that these malignant fevers were something pestilential.

I say nothing of the small-pox, which hardly ever leaves this climate in any season of the year, but which nevertheless is more common towards the end of summer, and in autumn, and for the most part is accompanied with the miliary eruptions, which we have already observed to be joined to all these diseases, and which seldom failed to render them mortal.

I opened several of these variolous bodies, and in the greater number found superficial ulcers upon the nervous coat of the stomach, towards its upper orifice, with livid and inflammatory spots upon the other parts of the same, as also on the intestines (though in a small number), and the glands of the mesentery enlarged, and hardened.

In the year 1752, and beginning of 53, these malignant fevers, that put on the appearance of peripneumonies, became mortal in seven days, and we discovered, that they were occasioned by a suppurative inflammation of the pericardium. Laxative medicines, quickened by an emetic, were most successful against these inflammations.

About the end of the year 1753, and beginning of 54, these malignant fevers, which had their seat in the stomach, small guts, and partly in the lungs, appeared again, and seized a great number of persons of distinction. This circumstance made them be

looked upon as a new distemper by those, who did not attend to it sooner ; and the havock they had usually made, being rendered more remarkable by the quality of those, who were the unhappy victims, gave us the reputation throughout Europe of having the plague.

These reasons redoubled the diligence of the gentlemen of the faculty. Our physicians met together, at their college, several times, to communicate their observations upon these diseases. I think they may be divided into three degrees.

The patients of the first degree felt, at the beginning, a lassitude, and pain in the joints, attended with some fevers, the fits whereof went off by sweats. They perfectly resembled those malignant, wandering, gouty rheumatisms of 1744. But these symptoms were of no long duration ; they left the patients long intervals, in which they were able to rise out of bed. There was no great danger attending ; and all that was terrible in them was this, that they were of long continuance.

The disease of the second degree had, besides the foregoing symptoms, a continual fever, with exacerbations, and a pain in the head, that increased as the fever increased.

That of the third degree began with the symptoms of the first, for four, five, and sometimes eight days : after which it passed to those of the second, and was besides accompanied, in the exacerbations, with a cough, sore throat, nausea, a dry, black, and foul tongue ; a delirium, or a tendency thereto, in the height of the fits, followed by sweats ; a remarkable stupidity in the remissions ; in some a

small oppreffion of the breaſt, with ſpitting of blood; in others a ſwell'd belly, which was flow in every evacuation, eſpecially that of urine. Afterwards there often appeared the miliary eruption: ſome had a ſmall flux, and blood was perceived in the ſtools. In a word, one might remark all the ſymptoms which we had in 1749, 50, and 51.

A great number were affected with a dejection of ſpirits, and were ſtruck with a ſort of terror, as made them tremble at the ſound of a common voice.

Theſe diſeaſes ran through a courſe of thirty or forty days, which I think may be divided into four periods.

The firſt, or firſt ſeven days, were paſſed with the ſymptoms of the firſt degree: the next ſeven days with thoſe of the ſecond degree. In the third period, which conſiſted of about the ſame number of days, the patient laboured under all the ſymptoms of the complete diſeaſe. Towards the twenty-ſiſt the miliary eruption came on, which led the patient either to death on the twenty-ſiſth, or to recovery about the thirtieth or fortieth day.

Some patients, who were attacked with more violence, ran through all the ſtages in ſeven days, as was remarked in 1752; and this ſhort ſpace brought ſome perſons of the moſt vigorous conſtitutions to their graves.

Many of their bodies were opened, on which we made the following obſervations:

In ſome, part of the villous coat of the ſtomach, and of the ſmall guts, was inflamed; and the reſt of theſe organs were filled with an eruption of the miliary cryſtalline kind, except that it was larger:
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and there was likewise an obstruction in the glands of the mesentery.

In others, a strong inflammation had seized the whole stomach, and a small portion of the oesophagus; but the intestines were free. These were filled with wind in those subjects, whose bellies had been swelled.

In those cases, where the delirium had continued long and violent, we found either ulceration on the stomach, or its villous coat separated, together with a great inflammation, and even some gangrenous spots on the other coats of that organ. Nothing extraordinary was ever found in the brain.

The most successful method of treating these disorders, was as follows :

A bleeding or two, at first, was directly followed by a * vomit. I have seen this remedy produce a small flux of five or six stools a day, which, with the addition of limonade, was generally sufficient to effect a cure. But when this success did not follow, the patient was bled first in the arm, then in the foot, and every two or three days there was given some cassia, quickened by an emetic, and dissolv'd in a decoction of tamarinds. We prescribed ptisans of strawberry-leaves, adding some nitre; limonades,

* It is called in the original, *l'emetique en lavage*, which signifies an emetic well diluted with water; the formula of which is, four grains of emetic tartar, dissolved in a quart of water; the fourth part of which is given at a time. After this has work'd either by vomit or stool, another fourth is taken, and so on, till the patient is supposed to have vomited or purged enough.

clarified whey, pure water by itself, a good many simple clysters; draughts of the distilled water of borage and bugloss, sweeten'd with syrups of lemons and water-lily.

Many did well with a simple julep of sugar and water, and a little wine.

There were some, who, when they were just sinking, were raised again by cordials of the warmest kind, such as Venice-treacle, given in large doses; and the preparation, called vinegar of the four thieves *, by spoonfuls, in broth. These medicines brought out a most plentiful miliarial eruption, by which they were cured.

The manner of recovery from this disease deserves a place in the history of it. There were but few, who recovered of it in the usual way, that is to say, who only wanted the restoration of their strength, exhausted as well by sickness as the medicines. Almost all of them, even those who had it in the first

* This is an infusion of several aromatic plants in vinegar. The reason of its being called *vinaigre des quatre voleurs*, is this:

When the plague raged at Marseilles, four rogues broke into the houses of the sick, and carried off what they pleased, retiring to a secret place with their booty, and returned to the same business at different times, till they had amassed great riches; but were at last apprehended, and hang'd. Being ask'd, how they durst venture into the pestilential houses? they said, they preserved themselves by drinking a glass of their vinegar twice or thrice a day, sprinkling their handkerchiefs and clothes with the same, and were not afraid. The French retain this name for it, though it is not in their dispensatories, and use it as a high cordial.

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and second degree, still felt some remains of the symptoms of the disease. Such patients, as had any critical abscesses, were saved by this tribute only; but others, who escaped the mortality of this dangerous poison, carried about with them for several months, and still feel, its terrible effects: for to the usual weakness of convalescents were joined palpitations of the heart; a little of the painful lassitude in the joints, which was a sign of the first attack of the disease; a slight pain in the head, but almost constant; an uncertain pulse; and, upon the lessening or cessation of these complaints, they were replaced by wandering pains in the hypochondriacs, swimmings in the head, melancholy, and a remarkable disposition to fear, being the remains of what constituted one of the characteristics of the disease.

XVI. *An Account of the Death of Mr. George William Richman, Professor of experimental Philosophy, a Member of the Imperial Academy of Sciences at Petersburg. Translated from the High-Dutch.*

Read March 13, 1755. **N**obody can be ignorant, who has perused the works of the Academy at Peterburgh, or even only the public papers, with what application the late Professor Richman had studied, among other branches of philosophy, that of the electricity of bodies in general, and that of thunder-