An account of the epidemical catarrhal fever, commonly called the influenza, as it appeared at Bath in the winter and spring of the year 1803 / [William Falconer].

AN

ACCOUNT

OF THE

EPIDEMICAL CATARRHAL FEVER,

COMMONLY CALLED THE

INFLUENZA,

As it appeared at BATH in the Winter and Spring of the Year 1803.

BY

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The Medical Society are desired
to accept this Account of the
Influenza as containing the
fullest answers to the questions
which they have proposed upon
this subject, that can be given by
the Authors

AN ACCOUNT

OF

THE INFLUENZA, &c.

THE first appearance of the Influenza, in such a form as to admit of no doubt respecting its nature, took place, as far as I can learn, about the middle of February 1803.

The access of this Epidemic was not, I believe, distinguished by any symptoms essentially different from those that usually mark the coming on of feverish complaints, especially those which incline to an inflammatory diathesis. Chilliness, shivering, a sensation resembling that of cold water running down the spine of the back, and often considerable pain in that part, together with a sensation of weariness and stiffness in the limbs, were, in general, the first symptoms. In some the approach of these was gradual; but in many they came on with such suddenness, as to be almost instantaneous; and were in general more vehement than those of a similar kind,

which mark the approach of the usual catarrhal complaints of the season.

The above symptoms were soon followed by feverish heat, head-ach, cough, and difficulty of respiration; together with an acrid distillation from the nose, great pain and throbbing of the temples, and great desire to spit, or throw off, by efforts of that kind, the mucus which collected in an inordinate quantity on the bronchial glands, and those of the fauces. The cough was in some subjects slight and inconsiderable, in others loud and oppressive; and nevertheless ofteu ineffectual to produce relief by the expectoration of mucus. The skin was at this period, in general, hot and dry; though in some persons, sweats came on early in the complaint. In some bad cases, the peripneumonic symptoms increased to a great degree, the pulse rose to 100, 120, and 150, and were scarcely to be kept under by the most powerful remedies. Such cases, however, though not of extraordinary occurrence, were not, I believe, very frequent: Out of more than 100 patients at the Bath Hospital, who were seized with the Influenza, only six were attended with peripneumonic symptoms to any considerable degree. I must however own, that, in my private practice, the proportion of severe peripneumonic cases exceeded considerably what appeared in the Bath Hospital; pro-

bably because the advice of a physician was seldom asked in this disease, except in cases that were attended with some anxiety respecting the event.

Vertigo, and that to a considerable degree, was in some persons one of the first signs of the disease, and in several instances very alarming and distressful. I saw a lady affected to such a degree as not to be able to raise her head from the pillow without losing all sense, and to whom all objects appeared thrice multiplied; and these uncouth symptoms continued four days, in their full extent. I observed in several persons, that where the vertigo was most troublesome, and appeared early in the disease, the peripneumonic symptoms were but slight, and *vice versa*. Two of the worst cases of the peripneumonic kind that I saw, were not attended with any symptoms of vertigo. Those who were affected with vertigo, even to a less degree than in the case above described, were nevertheless unable to read a letter, or a few lines in a book; and in several a degree of delirium took place during the night, but not, as I saw, to any violent degree.*

The expectoration, in ordinary cases, differed little from what is spit up in a common catarrh; but in those instances where the peripneumonic symptoms

* Dr. HAYGARTH has since informed me, that he saw one case attended with strong delirium.

were much aggravated, it was very large, of a yellow colour, and scarcely to be distinguished from simple pus: it was, however, thrown up with difficulty in several persons, and their inability to cough it up completely was one of the most alarming symptoms, and what I saw in some instances prove fatal. The breath was frequently much oppressed, and a great source of uneasiness; I counted it, in several instances, to be more than forty-five respirations in a minute.

Several persons, at the beginning of the disease, complained of soreness of the throat; but no particular appearance in the fauces was observable, and in a few days it either went off altogether, or became so inconsiderable as to be nearly disregarded among so many other distressful symptoms. The catarrh or defluxion was, towards the beginning of the disease, thin and acrimonious; but in a few days disappeared, especially in such cases as were combined with peripneumony, being probably carried off by the expectoration.

Pains of the limbs, especially about the joints, occurred to a considerable degree in some instances in which the other symptoms were moderate, but generally went off in a few days. In one instance, however, they continued, in a very troublesome degree, severa weeks after the symptoms of the ori-

ginal disease had ceased. The body was, in those instances I had an opportunity of observing, inclined to be costive during the course of the disease; and I find that to have been the case with the patients at the Bath Hospital. I have, however, been informed, that a purging came on in some persons early in the complaint; nothing, however, remarkable was observed in the appearance of this evacuation.

The urine was in quantity nearly as in health; but generally of a dark reddish colour, clear, and depositing no sediment. As the disease declined, it became tinged with a pink or whitish sediment, and paler in colour. In some cases, the amendment was marked merely by the increase of quantity and change of colour in the urine to a pale amber hue, without any sediment being deposited.

The tongue was, at the beginning of the disease, hot and dry, and of a deep red hue. It soon, however, became moist, and of a whitish brown colour, and in some covered with a foul thick crust. In some instances, and those not the most favourable, the tongue was little affected, which I have often observed to be the case, even where the symptoms were very pressing, in cases accompanied with large expectoration.

The skin was at first hot and dry, but this soon gave way to gentle perspiration, which took place

pretty universally over the body as the disease abated. The appetite was, in the cases I saw, almost entirely destroyed, and the thirst pretty considerable. Acid juices of fruits were to some particularly agreeable; but after a few days' use, seemed to create disgust. Iced creams, moderately taken, were highly acceptable, and served to cool the mouth and fauces; the heat and dryness of which were among the most uneasy symptoms.

The pulse was variable, in some very quick, even to 150 in a minute; in others, not exceeding 80 or 90. Out of upwards of 100 persons afflicted with this complaint at the Hospital, the pulse in no instance exceeded 100 beats in a minute.

In one of the worst cases I saw, the pulse never exceeded 72 beats in a minute, which was the usual number in health. Yet the patient at that time had every other symptom of peripneumonic fever, great heat, thirst, and cough, with expectoration so difficult, that I apprehended suffocation would speedily take place; and when, to relieve these urgent symptoms, she was bled, as she was, twice in one day, to fourteen ounces, the blood drawn was so tenacious as to bear being lifted entire with a pin out of the cup by the crust, without affording more than a few drops of serum.

The debility that followed this complaint, marked it very strongly. Few persons recovered their strength in less than three weeks, and several persons were so reduced as to be sensible of its weakening effects for a longer time, after the fever had entirely ceased. In some a dimness of vision continued sometime after the strength was pretty well recovered.

I have not had an opportunity of personally inspecting the body of any one who died of this disease, which was opened; but the following account, authenticated by several medical persons of respectable character, was communicated to me by a gentleman, who was an eye-witness, and whose accuracy and judgment may safely be trusted. I shall therefore make no scruple of giving the detail of the case in his own words.

Dr. Broderip's *Account of a Case of Influenza, and what was observed on opening the Body.*

"I was desired to visit M. Ditcher, a young woman, in the 21st year of her age, who was indisposed with the prevailing epidemic disease; it was on the ninth day of her indisposition, and I found her in imminent danger. Upon inquiry into the origin of her complaint, and the symptoms which attended the incipient state of it: she informed me, that she

was first seized with cold shivering over the whole body, drowsiness, and frequent chills, passing in the direction of the vertebræ; this was succeeded by feverish heat, a violent pain in her head, principally across her forehead, and immediately above the eyes; throbbing at the temples, an acrid discharge from the nostrils, troublesome cough, and difficulty of breathing. The following day she was troubled with an internal pain, which she described as directly underneath the left mamma; her respiration was more hurried, and she became more thirsty; her urine was very high coloured, and after standing a short time, threw down a considerable lateritious sediment; her tongue was much furred; and the phlegm which she attempted to expectorate, was so tenacious, that she could not loosen it from the fauces. With remissions in the day, but returning with more violence towards evening, the train of the chief symptoms continued to the day of my seeing her.

"When I called, she was sitting in her bed, gasping for breath, and apprehensive of syncope. Her cough was incessant, and of a peculiar kind; she expectorated a small quantity of mucus tinged with blood, her pulse was at 140, low, small, and tremulous. Her tongue was foul, but not dry; the coating different from what is usual in febrile affections, and more resembling the appearance which we generally

find in cases of croup. She complained of unusual pain; but particularly at the back part of the head, and across her chest; in short, her situation presented one of those distressing cases which result from inflammation, protracted from the omission of timely bleeding, &c. Immediately on leaving the room, I expressed my concern that she had not applied earlier to the medical gentleman who was then attending her; and submitted to him my opinion of the morbid state in which the thoracic viscera would probably be found, upon dissection, after death.

"Soothing, and such medicines as appeared to me the best calculated to relieve the pressure of the various symptoms, were administered till the 13th day, when she was suddenly seized with general spasm, and expired. The following day the body was opened by Mr. CAM, in the presence of Dr. DAVIS. When the contents of the thorax were exposed to view, the anterior part presented nothing remarkable; but in attempting to take up the long lobe of the left lung, we found that adhesive inflammation had taken place over the whole posterior surface of that lobe. The adhesive exudation was considerable, and had attached that part of the lungs to the corresponding costal pleura, though the pleura itself was not inflamed; but the connecting medium, being newly formed, readily gave way to the pressure of

the hand, and enabled us to examine the posterior part of the lobe, which we found in a condition highly morbid. That part of the pleura, which is reflected over the lungs for its external membrane, peeled off in the same manner as the cuticle of a fœtus does, which has been some time dead in the uterus; the substance of the lung was of a dark livid colour, and appeared in a gangrenous state; some vessels had given way in the diseased part, and about three ounces of extravasated serum, and some coagula, were found in the depending part of the thorax. Upon cutting into the lungs, we found a a good deal of extravasated coagulable lymph in its substance, and a very extraordinary quantity of blood was congealed in the vessels. The ramifications of the bronchia were loaded with puriform matter; and upon removing and dividing a portion of the trachea, just above the beginning of the bronchia, we found its inner lining in a high state of inflammation; the whole surface of the membrane putting on the appearance of what is usually termed, 'great vesicularity.' Or, could we associate the idea of beauty with a destructive morbid action, I should say, that it looked like a beautiful preparation of a membrane, where the vessels designed to carry lymph had been filled with a vermillion injection. On viewing the inner membrane of the trachea with

a magnifying glass, ulcers were clearly perceived at the edges of the small holes which supply the trachea with mucus, to defend it from the acrimony of the air.

" Upon dividing the pericardium, the heart appeared natural; but on the posterior or lower side, the coronary veins were remarkably turgid with blood. The water in the pericardium was more than usual, but not exceeding what is sometimes met with in subjects unconnected with disease.

" We were not permitted to extend our examination to the other viscera; a circumstance which would have been a cause of much regret, had not the morbid state of the thoracic viscera so clearly evinced the nature and principal seat of the disease.

" It may be proper to remark, that the costal pleura not being inflamed, accounts, in some measure, for the little relief afforded by blisters; and it may not be undeserving of notice, that the patient's description of the seat of pain is deceptive; for notwithstanding the disease was at the posterior part of the lungs, the sensation of pain was uniformly described as immediately beneath the anterior part of the chest."

' We have perused the above accurate description, and find it perfectly conformable to the appearances presented by the dissection.

' J. F. Davis, M. D.
' Thos. C. Cam, Surgeon.'

But notwithstanding this formidable detail of symptoms, the mortality that followed was not so great as might be apprehended, though greater than was commonly imagined. At the General Hospital in this city, where upwards of 100 persons had the disease, not one died, though several suffered severely. Four persons of those I attended, died, and all of them peripneumonic; but one of them had been subject to pulmonary complaints, and in a valetudinary state for the last six months; another was in the decline of life, and debilitated by repeated gouty attacks, and had his end hastened by a suppression of urine, which, though relieved by the catheter, introduced without much trouble by an able Surgeon, produced so much distress as to contribute in no small degree to his death. All whose cases terminated unfortunately were considerably past the meridian of life.

What proportion of people in society were attacked with this disease, I am unable to say. A large number were certainly affected; and it appeared to make no distinction in age, sex, habit of body, or state of health. The General Hospital, which contained at the time when the disease made it appearance about 125 patients, had upwards of 100, or about 4 out of 5, seized with this complaint.

It will now be asked, by what marks or symptoms is this Epidemic distinguished, at or near its first appearance, from the usual complaints of the winter season, which it is acknowledged much to resemble? I wish I could answer this question satisfactorily; but I really know of no positive distinction, except in those cases wherein vertigo was among the first symptoms; which, though often occurring, was by no means a constant attendant on this disease.* The suddenness of the attack, indeed, afforded a pretty strong presumption; but the epidemic spreading of the complaint afforded the strongest indication. All the symptoms, the vertigo excepted, which rarely occurs in catarrhs, and never, I believe, at their first coming on, are common to those complaints that accompany an inclement season of the year; and it is more from the frequent appearance of the malady, and its aggravation of symptoms beyond a catarrh of the season, than from any specific diagnostic, that our judgment must be formed.

It is a matter of doubt with some, if this epidemic catarrh be a contagious disorder; or propagated from one person to another by infection, as the small-pox or measles; or whether it be owing to a general cause, as a particular disposition, or, as it was for-

* Dr. HAYGARTH observed to me, that the prostration of strength was much greater than in a common catarrh; but I did not myself observe this to be the case at its first coming on.

merly called, constitution of air; affecting a large number of persons at the same time, which is the correct sense in which the word *epidemical* is used.

I have no doubt myself that it is contagious, in the strictest sense of the word. It has scarcely ever appeared without spreading to a vast extent; and has affected equally countries in the greatest variety, both in point of climate, and in the manners, diet, and habits of life, of the inhabitants. But still there has always been a perceptible and indeed sufficiently marked interval between its appearance in one country and another; and it has never appeared in all parts at once; as it would have done, had it been produced in each individual by some generally operating cause.

I proceed now to speak of the signs of amendment, or the contrary, that attend this disease.

The peripneumony has appeared to me by far the most threatening symptom of any. The abatement therefore of the cough, and some relief of the breath, are primary objects; and except these can be attained, all other marks of amendment, even such are as drawn from the diminution of the numbers of the pulse, are fallacious, as I have experienced. A free and plentiful expectoration, if accompanied with the abatement of the difficulty of respiration, is a primary circumstance; and next in

importance to that, is an increased urinary discharge, which I have seen accompanying the other, and prove, as it should seem, particularly serviceable. It is long before any appetite for solid food returns; but some inclination for liquid nourishment is among the first marks of amendment.

On the other hand, when the difficulty and frequency of respiration both concur, in spite of the remedies used, the danger is increased; notwithstanding, as I have just before observed, the number of the beats of the pulse be diminished.*

I have not noticed any bad consequences that seemed connected with the vertigo, which, though threatening generally, went off in a few days. I shall now speak, as briefly as I can, of the practice which appeared to me most conducive to the cure.

And here I must freely own, that there appeared, in several instances, a strong necessity for active operations. The peripneumonic symptoms were so urgent as to supersede all general cautions respecting bleeding, and admitted of no alternative. Nor

* I found in this disease the remarks of an excellent Physician and accurate observer of nature fully verified:—

"Pulsum in pleuritide minus celerem aut fortem, febre tamen acuta in summo vigore nihilominus subsistente, sæpius notavi pulsus igitur celeritas atque magnitudo, non semper cum febre inflammatoria sociantur. Quæ in pleuritide aut pulmonum inflammationibus pulsui nimium fidunt, decipiuntur."—O'Connel *Morborum acutor, et chronicorum quorundam observationes.* Dublin, 1746.

have I observed, that the persons on whom this operation was practised, even to a considerable extent, suffered from any consequences that might be supposed to attend the excess of this evacuation. On the contrary, I found that those persons who were bled to such a degree as effectually to relieve, not merely to palliate, the more urgent symptoms, sooner recovered strength, than those on whom this operation had been most sparingly practised.* In short, my decided opinion is, that, when it appears in a threatening peripneumonic form, it must be treated in the same manner as is found effectual in that disease, without regard to any speculative opinions that may be entertained respecting its specific nature or character.

I freely own, that at the first appearance of this Epidemic I was somewhat deceived by the general opinion; and indeed by some recollection of the same complaint in 1782, when bleeding appeared in some instances rather to aggravate, than relieve the symptoms. The weakness, too, which this Epidemic almost universally left behind, undoubtedly ought to suggest caution in the use of this evacuation. But, on the other hand, the urgency of the symptoms, the nature of the parts affected, and their immediate importance to life, superseded these considerations;

* Cleghorn makes nearly the same remark.—Diseases of Minorca, p. 261, 262.

and my observation of the relief which bleeding afforded, encouraged me to apply this remedy; and I have the satisfaction to reflect, with the success I hoped for.

The application of leeches, in cases where the symptoms were pressing, I found inadequate to the purpose. They indeed, when put on in considerable numbers, (as to eight or ten) seemed to afford a present alleviation of the symptoms; but the relief was transitory only; and bleeding by the arm was found to be the only means of imparting effectual assistance. It should, however, be considered, that it is only in cases where the symptoms threaten life, that bleeding by the arm is necessary. In common cases,* where the breath is little affected, other remedies supersede its use, or at least render the application of leeches sufficient.

Emetics have, in my observation, been found particularly serviceable. If administered at the beginning of the complaint, they served to obviate the peripneumonic symptoms altogether, by throwing off with more ease the profusion of mucus, that in a good measure characterises this disease. But in the advanced state, I was sorry to find the use of emetics

* None were bled at the Hospital, except with leeches; although more than 100 persons were attacked, and all recovered.

less successful. When the breathing was greatly oppressed, it was difficult to make them operate upwards, but they were subject to run off by stool; an operation which did not afford the same relief with an emetic, and which, by diminishing the strength, without proportionably relieving the symptoms, seemed rather prejudicial than otherwise.

Diaphoretic, or rather sudorific, remedies seemed to succeed very well; and indeed this seems to be the method pointed out by nature for the cure. The *vol. sal.* draught, with the *pulv. antimon.* or the *vin. antimon.* succeeded in most instances; and in slight cases soon put an end to the complaint. With the same view I found moderate warmth, as that of a bed, highly necessary; together with the frequent administration of thin diluting liquors. I observed, however, that much heat, either of fires or of bedclothes was prejudicial, and prevented rather than encouraged the salutary evacuation. The access of cold sharp air I found essentially necessary to be guarded against, as it immediately aggravated the cough and other morbid symptoms.

In one bad case, the excitement of the urinary discharge was particularly serviceable. A small quantity of the dulcified spirit of nitre was administered with a different view, and chanced to excite this

evacuation very powerfully, and as it should seem, with great advantage to the patient.

The medicines usually called expectorants, as *lac ammoniacum* and *squills*, could not in bad cases be employed; and in the slighter attacks, there was no necessity for their use. The former was too heating and stimulant; and the latter was apt to run off by stool. I must own, that nothing which I tried with this intent, succeeded to my wishes, except the volatile alkaline, which, in the proportion of thirty or forty drops of spirits of hartshorn, taken pretty frequently in any warm vehicle, seemed to be of service. I had some expectation that the steam of warm water drawn in by the breath, by means of some of the inhalers, might have answered this purpose, but was deceived. The breath was too short to admit of its being used effectually in bad cases, and in others it was superfluous.

Purgatives taken by the mouth were not so useful as might have been expected. When given in any effectual dose, they seemed to weaken the patient more than to diminish the fever, and relieve the most distressful symptoms.

Clysters, however, were of great service in preserving a due regularity of evacuation, and also in encouraging the secretion of urine, which I before observed was of considerable service.

Blisters, were, I believe, pretty freely tried; but in the cases that fell under my observation, I cannot say that they were as serviceable as I expected. In some bad cases, they seemed to give a temporary relief to the difficulty of breathing; but in several instances, no good effect whatever was produced by them. I did not, however, find, except in one instance, that they were productive of any mischief. It should, however, be noticed, that I speak here of peripneumonic cases; for in those where vertigo was the leading symptom, blisters were of great use, and indeed I think the principal cause of its abatement, even after leeches had been tried with little advantage.

Opiates, I constantly found to be among the most necessary remedies. They were of the utmost service in abating the cough when convulsive and violent, and gave time for the expectoration to thicken into a consistence fit to be easily spit up. I never observed them to have any ill effect in checking the expectoration. Some inconvenience, indeed, accrued from the costiveness which opiates occasioned; but I saw no instance where this was not easily obviated by clysters. The black drop, called the *Asiatic Balsam*, seemed to me in some instances superior to the common *tinctura opii;* but its particular advantages were not very considerable.

Having thus concluded my own observations, I wish to speak of the French account of the disease, as it appeared in the *Moniteur* of the 10th of February 1803, rather before (I think) its shewing itself at this place. This account is published under the inspection of the *Societé de Medecine* at Paris, and signed by the President and Secretary General.

The general symptoms of the disease that they recite, are as follow; and probably meant to be understood in the order in which they usually occurred.

"General indisposition; want of appetite for some days; shiverings of longer or shorter continuance, and subject to be renewed by the slightest motion of the body, even when in bed, and alternating with a brisk heat; heavy pain in the head, in the forehead, and above the eye-brows; drowsiness; sense of weight and weakness of the body; inward heat; partial sweats; total loss of appetite; tongue white, or inclining to yellow; renewal of the fever at the coming on of the night, and sometimes after midnight; abatement of the symptoms in the morning; quick hard pulse, often very low, and becoming stronger as the disease advanced to a favourable termination, and still preserved its original nature and character. The fever continued three, five, seven, twelve, fifteen days, and sometimes longer; but then changed its character.

" It terminated either by urine, highly loaded, and depositing a compact brick-coloured sediment; or by plentiful and universal sweats; or by expectoration of something resembling matter, which continued a shorter or longer time. Or, lastly, by mucous or bilious stools; and sometimes by a combination of several of the above-mentioned evacuations.

" This disease is divided into seven varieties; each distinguished by the parts principally affected. The first is the nasal catarrh, or *rhume de cerveau*, much the same as we mean by a cold in the head. This is marked, in addition to the symptoms before-mentioned, by a stoppage of the nose; vertigo; tingling in the ears, and sharp pain in that part; swelling of the parotid glands; difficulty of breathing through the nostrils; face swelled, red, painful, and of a bloated appearance, not unlike an erysipelatous eruption; the eyes watery and red; discharge of a serous fluid more or less acrid from the eyes and nostrils, often swelling, inflaming, and even excoriating the nostrils and the lips, and sometimes a suffocating obstruction of every serous discharge whatever.

" The next or second variety, is *cattarre guttural*, or *esquinancie catarrhale*, or, what I believe, we call the *angina tonsillaris*, or common sore-throat. The signs of this are a complaint of the throat, attended with shivering; swelling, and slight inflammation

of the back part of the mouth, of the *septum palati*, of the *uvula*, and of the tonsils; a painful sensation along the course of the trachea; difficulty both of swallowing and of respiration; hoarseness; difficulty of speaking; and the back part of the mouth covered with mucus, more or less thick.

"The third variety is what is called *catarre bronchial*, *rhume peripneumonie catarrhale*. This is distinguished by a sharp dry cough; difficulty of respiration; sense of oppression; a sharp pain in the side, felt principally near the false rib, and seemingly very superficial; flying pains resembling rheumatic, moving up and down through the breast and the loins; saliva difficult to be collected, and frothy, often bloody; bleeding from the nose, the lungs, or the hæmorrhoidal vessels, sometimes symptomatic of the disease, and sometimes critical, but almost always relieving the pain of the head. This kind is often difficult to be distinguished from the simple peripneumony; which can only be done by considering the severity of the symptoms, and the particular seat of the pain. This variety terminated by expectoration or by sweats; the spitting became easier to be discharged, and thicker in consistence, and of a white colour resembling matter. Sometimes the disease seemed to be translated by a kind of imperfect crisis to the limbs, where it appeared in rheumatic affections.

" The fourth variety is called *catarre suffoquant*, and was fortunately very rare. It principally attacked old people, and such as were of a bad habit of body, and was sometimes the consequence of improper regimen of living. It was apt to put an end to life at a time when danger was little apprehended. It was distinguished by a sensation of great weight about the chest, much oppression, and a wheezing sound from the bronchia; the strength decreased rapidly, the powers of nature sunk, and a sudden congestion of mucus in the lungs soon finished the tragedy by suffocation.

" The fifth variety is what they call *catarre intestinal;* which happened when the disease took a course to the bowels, and appeared there in form of a mucous or dysenteric evacuation, which quickly exhausted the patient."

The French physicians observe, that the above varieties are not all of them found distinct and separate; but are often much intermixed or combined with one another.

" Another variety or distinction is said to be drawn from the nature of the disease, and is called *catarre inflammatoire.* The symptoms were a deep-seated pleuritic pain, occupying a fixed point about the middle of the third true rib; considerable oppression of breathing; frequent hard and compressed

pulse; great difficulty of respiration; urine red; the face swelled and inflamed. It attacked young, plethoric, and vigorous subjects; and was generally owing to the admission of cold air to the body, when in a heated state.

" Another distinction is taken from the complication of the epidemic catarrh with typhus, or as it is called, *cattarre gastriqué*, *catarre compliqué de fievre putride ou adynamique*. This variety is described as common among those persons who gain their livelihood by their labour, and amongst artisans in the civil and military hospitals. It particularly attacked poor people who lived on bad food, those who were subject to excessive labour, and in want of the common resources and comforts in sickness; persons weak, exhausted, of bad habit of body, lying-in-women, &c. Its distinguishing symptoms were prostration of strength; tongue foul and bilious; derangement and confusion of the intellectual functions; low spirits; loss of appetite; flatulence; heavy paleness of the countenance; dislike of animal food; nausea; vomiting; nervous symptoms; pulse frequent and depressed; signs of worms in the alimentary canal.

" *Prognostic or judgment respecting the termination of the disease.* The fever, when simple and properly treated, ceased about the fourth, or from thence to the seventh day; though it sometimes was

protracted longer. The catarrh continued sometimes after the fever was gone. Persons so affected were very liable to relapses, and their recovery was often difficult. These circumstances are recommended to be early attended to, as the catarrh may end in a consumption. Turbid and muddy urine, more or less of a brick colour, indicated the termination of the disease, at least of the fever; and the same often took place from sweating and expectoration.

"This disease is declared not to be of itself dangerous; but liable to become so from the following circumstances:—

"1. When those who were seized with it, persevered in refusing to change their manner of life, but continued to expose themselves to the action of the same causes which gave rise to it. In such cases the irritation was increased, the inflammation of the chest shewed itself, and the catarrh became combined with a nervous or putrid fever.

"2. When those seized with it, mistaking the nature of the attack, attempted its cure by the exhibition of hot stimulating remedies, with a view to restore perspiration, which method of treatment was apt to convert a simple catarrh into a mortal peripneumony.

"3. A third source of danger is said to originate from too large bleeding, when the quantity of blood drawn was regulated by the entire cessation of the

local pleuritic pain, the relief of the breathing, and the disappearance of the inflammatory crust on the blood, which last circumstance is condemned as extremely fallacious.

" The immoderate use of syrups, and of oily lohocks or linctusses, is also condemned as prejudicial and even dangerous; as is the early and inconsiderate administration of purgatives, especially when given at a time, when nature was preparing for the crisis of the disease by another channel. The medical treatment of the disease consisted in a recommendation to avoid animal food; to keep in bed, and to preserve a moderate degree of warmth; to use pectoral drinks, either sweetened with honey or otherwise, and taken pretty warm frequently, and in small quantities at a time; to drink a decoction of bran; broths of veal with onions and turnips; to inspire the steam of hot water through the mouth and nostrils; in the evening, to take small quantities of the infusion of wild poppy, sweetened with syrup of marsh-mallows and with diacodion, provided the patient is in want of sleep; to use the pediluvium, and emollient or gently laxative clysters. As the disease goes off, gentle purgatives are recommended; and afterwards mild tonic remedies.

" Such is the general treatment, which, they assure us, in general is not less simple than efficacious to-

wards the cure. In that variety of the disease that is accompanied with sore-throat, the use of leeches to the part affected is advised, together with emollient cataplasms round the jaws. If the pulse become weak, the stomach sick, and the glands loaded with mucus, an emetic of 15 or 20 grains of ipecacuanha is recommended; and if that does not relieve the symptoms, a blister or sinapism applied round the throat, to be employed, however, as rubefacients, and removed as soon as symptoms of inflammation of the part come on.

" In the third variety, called the *catarrhal peripneumony*, they advise leeches to be put on the seat of the pleuritic pain, and these to be followed with the applications of emollient cataplasms, or bladders half filled with warm milk; and if these do not relieve, to have immediate recourse to a blister or a sinapism. If, besides the pain in the side, the tongue be foul, if the patient complains of a bad taste in the mouth, an emetic of ipecacuanha often affords relief. Opiates are also recommended, as fulfilling all the indications. If the expectoration stops, and the breathing becomes oppressed, blisters between the shoulders, and to the legs and arms, are advised.

" In the fourth variety, or *catarre suffoquant*, they recommend not to lose a moment of time. Warm inciding draughts are advised, with large

doses of oxymel scilliticum; ipecacuanha and antimonial vomits to be repeated till a discharge be obtained. Blisters are also advised as before.

" In the fifth variety, or the *catarre intestinal*, ipecacuanha is advised to be given as an emetic at the beginning of the disease, with pectoral draughts, mucilaginous clysters, gentle purgatives, bolusses with opium, ipecacuanha, or the Peruvian bark, according to circumstances.

" In the *catarre inflammatoire*, they recommend bleeding at the beginning, and to be repeated as the symptoms seem manifestly to indicate. We are cautioned, however, to attend carefully to the state of the pulse, both before and after this operation; and to keep in mind the observation, that a great prostration of strength attends the frequent repetition of bleeding in the generality of epidemical complaints.

" When the catarrh is complicated with typhus, we are advised, at the beginning of the complaint, to use ipecacuanha and tartarised antimony. To keep the body open by mild evacuants; to use pectoral drinks, rendered gently emetic; vermifuge remedies; mild antimonial preparations; oxymel of squills; camphorated juleps; sinapisms and blisters to different parts; gentle purgatives, and slight tonic preparations, which last are directed to be continued for a considerable time during the recovery of the patient."

Such is the abstract which I have given from the account of this disease, published by the Faculty of Medicine in Paris. The symptoms are much the same with those observed in this country; but I suspect, if these were as urgent as here described, that the mortality must have been greater than they seem willing to allow. The vertigo seems to have been more general and more distressful in the cases that fell under my observation, than it is represented to have been in the French accounts.

The method of cure seems to be, as far as respects the general indications, judicious and proper, but incumbered with a farrago of decoctions and pectoral drinks, which were in use in the old French practice; and which the modern practitioners, notwithstanding their pretences to lay aside old prejudices, have not yet reformed.

Probably, the greatest improvement that could be suggested, would be the more free use of emetics at the beginning of the complaint. The recommendation of this remedy, together with bleeding and blisters early in the disease, is however a proof, that they attended to its leading symptoms, and to the indications which they suggested.

The Editor of the last Edition of Mr. Sauvage's *Nosologia Methodica*, has described this disease as it appeared at Paris, A. D. 1743, under the name of

rheuma epidemicum, anni 1743,*—*la grippe*,—which is the name by which itis at present distinguished n France.

" It came on about the beginning of Lent, which appears that year to have taken place on the 5th of March, not very different from the season when the late epidemic came on in this country. Its symptoms were a dry cough, pain of the limbs, fever during the day-time and head-ach; but in young subjects, these symptoms did not continue longer than the fourth day, and were relieved by increase of spitting and expectoration. In old people, these symptoms came on with greater violence; and when accompanied with a hissing noise attending the cough, carried the patients off about the ninth or the eleventh day. On dissection, the lungs were found either gangrenous, or much charged and distended with blood. In many persons a hemorrhage from the nose had come on before death, and sometimes afterwards, notwithstanding the patient had been bled two or three times. Forty persons died daily of this disease, for some time, in the Hospital of the Invalids at Paris.

" The most successful method of treating this disease, was as follows: On the first day two bleed-

* Vol. iii. p. 255, Edit. 1795, Lipsiæ.

ings ; on the second, an emetic or purgative; on the third, bleeding again, and in the evening an opiate julep ; from the fourth day to the ninth, a medicine was given composed of three grains of Kermes mineral, with half a drachm of vitriolated tartar, and the like quantity of diaphoretic antimony. This quantity was divided into six doses, of which one was taken every three hours ; about the tenth day the recovery was perfected by the accompanying expectoration."

This practice seems in the main judicious, though some of the remedies advised are now rather out of date. By the recommendation of repeated bleeding, I am apt to suspect it resembled the late epidemic, which last certainly partook more of an inflammatory disposition than those in 1775 and 1782. That in 1788, more resembled the late Influenza in this respect; but the inflammation of the throat was in that more common and more vehement, and the peripneumonic symptoms less urgent. Bleeding, however, which, in those of 1775 and 1782, had been less necessary, was in that indispensable ; as it was in the one with which we have been lately visited.

The state of the lungs appeared on dissection, according to the account in the *Nosologia Methodica*, to resemble that above described by Dr. BRODERIP, and these circumstances argue strongly for decisive

measures towards the cure being adopted early in the complaint, should it appear again in a similar form to that of the years 1782 and 1803.

I here subjoin an extract from the registers of the funerals in this city, which will prove that this disease was by no means so insignificant as it has been represented.

PARISH OF ST. PETER AND ST. PAUL.

	Died.
From November 15, to December 15, 1802	3
December 15, to January 15, 1803.	2
January 15, to February 15	1
February 15, to March 15	1
March 15, to April 15	7—16

PARISH OF ST. JAMES.

From November 15, 1802, to December 15	12
December 15, to January 15, 1803	9
January 15, to February 15	13
February 15, to March 15	12
March 15, to April 15	21—67

PARISH OF ST. MICHAEL.

From November 15, 1802, to December 15	4
December 15, to January 15, 1803	4
January 15, to February 15	11
February 15, to March 15	9
March 15, to April 15	9—37

WALCOT PARISH.

From November 1, 1802, to December 1	31
December 1, to January 1 1803	33
January 1, to February 1	28
February 1, to March 1	30
March 1, to April 1	44
April 1, to April 14	22—186

I need make no apology for inserting the dissertation on the contagious nature of this disease by Dr. HAYGARTH, as it is a subject on which he is more competent to determine, than perhaps any other person of the profession whatsoever.

Of the manner in which the Influenza of 1775 *and* 1782, *spread by contagion in Chester and its neighbourhood. By* JOHN HAYGARTH, M.D. F.R.S.

" 1. In 1775, the first patient I saw in the Influenza, was on the 2d of November, the landlady of a principal inn; but it did not spread generally through the city till near a fortnight later. It chiefly attacked the citizens from the 15th till the 25th of that month; very few were seized so late as December. On the 18th or 20th of November, it pervaded all North-Wales, as I had authentic information from almost every town and many considerable villages. I was curious to know at what time it appeared in Llyn, the most western and remotest corner of Carnarvonshire. A medical inhabitant of that district informed me, ' that it began here about the 20th of November, was general through every part of this peninsula, and affected all classes of people: one in a family now and then escaped it, but I know no family, however small, among whom it did not make its appearance.'

" In the western part of Cheshire, and that part of Shropshire which borders on Cheshire, I observed that this epidemic began soon after the middle of November. However, I was informed by the inhabitants of several Cheshire villages, when I visited them, that the Influenza had not appeared there on the 25th of November, though it afterwards spread through them all. On the whole, the people in the country were attacked rather later than the towns which they surrounded; however, not only the inhabitants of villages, but of solitary houses, were seized with the distemper. I could not discover, that high or low, dry or moist situations, the neighbourhood of mountains, or of the sea, or any particular exposure, rendered the epidemic later or milder. I made very circumstantial inquiries to ascertain these facts.

" In the sketch of this epidemic, written by my highly-respected friend, the late Dr. FOTHERGILL, it appears to have spread in London about the beginning of November, that is, near a fortnight earlier than at Chester.

" From my very ingenious friend Dr. DOBSON, I received the following curious and instructive intelligence:—' With regard to the progress of the Influenza in 1775, I found that it prevailed at Leghorn about the 24th of September, continued to be

very general for about eighteen days, and was almost over by the beginning of November. It reached England early in November, and passed through England, Wales, Scotland, Isle of Man, and Ireland; but I could not find, after repeated inquiries, that it ever reached the West-Indies, the Continent of America, Sweden, Denmark, or the northern parts of Europe. From a general state of facts, I found that none were attacked with the epidemic while at sea; but as soon as the vessels arrived at any port in which the disease prevailed, few escaped. Those seamen, likewise, who were seized with the epidemic on land, soon recovered on going out to sea; and if they came into port where the disease was present, some relapsed.'

" 2. In 1782, a gentleman ill of the Influenza came from London to Chester on the 24th of May. A lady into whose family he came, and to whom he is since married, was seized with the distemper on the 26th of the same month. The second family which I heard of in Chester, was attacked on the 30th of May; the wife of this patient sickened on the 3d of June. Both of these families, which were nnmerous, had the distemper soon after the first seizure of each, and before I heard that any other family was attacked. About the 5th or 7th of June, it began to spread generally through the town, that

is, ten days later than the time of its first arrival. Though the distance of time between the first and last patient was six weeks, yet a large proportion of the inhabitants was attacked in a fortnight after the 5th of June.

" It may be proper to mention one remarkable fact. In the Chester Infirmary, out of between 50 and 60 in-patients, none had the Influenza except three men, all surgical patients with sore legs, and these might have only symptoms of a common catarrh.

" It will be most instructive to exhibit in one connected view the progress of the Epidemic. The facts are ascertained by medical observers in each town, whose judgment and fidelity are indisputable: their accuracy was confirmed in many instances, by my own observations on the spot.

A Table shewing the Time when the Influenza of 1782 *began and ceased in Chester and the neighbouring Towns.*

	Miles and bearings from Chester.	First Patient.	Days after Chester.	Last Patient.	Days duration.
Chester -		May 26,		July 7,	42
Tarporley -	S.E. 10,	June 6,	11,		
Holywell -	N.W. 18,	June 6,	11,	July 7,	31
Malpas -	S.E. 15,	June 7,	12,	July 25,	
Frodsham -	N.E. 10,	June 7,	12,	Aug. 5,	59
Middlewich	E. 20,	June 9,	14,		
Wrexham -	S.W. 12,	June 10,	15,	July 20,	40
Mold -	W. 12,	June 13,	18,	Aug. 1,	48
Ruthin -	W. 20,	June 14,	19,	July 12,	28
Oswestry -	S.W. 28,	June 14,	19,	July 8,	24

" Having remarked that the Influenza of 1775 began sooner in towns than in the villages near them, I inquired among my medical correspondents, what they observed as to this point in the Epidemic of 1782. The uniform testimony in regard to all the nine towns named in the table was, that it began earlier in each of them, than in the surrounding villages and the scattered houses in the country.

" As the first patient I had seen in the Influenza of 1775, was the landlady of a principal inn, and as I had observed so distinctly that the Epidemic of 1782 was brought into Chester by a patient coming from London, I stated this question to my correspondents: ' Could you discover whether the distemper was introduced into your town from any place where it had previously attacked the inhabitants.'

" My answers were, ' 1. That the first patient who had the disease in Frodsham, was seized with it as he was returning thither from Manchester.—2. That at Malpas, the first patient was the landlady of the inn and her family, a week sooner than any other patient in the town.—3. That the first person who had the distemper in Middlewich brought it from Liverpool. 4. That the first person affected with the Influenza at Mold, had been at Chester a few days before, in a family ill of that distemper.—5. That a gentleman arrived at Oswestry, ill of the Influenza before the

inhabitants were attacked.—6. That at Tarporley, the first person seized was a postillion who had driven a chaise thither from Warrington, where the distemper had previously appeared.—7. That at Wrexham, the first patient came from Chester, and the second from Shrewsbury. But my correspondents at Holywell and Ruthin did not recollect by whom it was brought into those towns.'

" All these facts were accurately and faithfully ascertained, in order to determine the following questions:—

" 1, 2, 3.? How far does the propagation of the Influenza, depend upon climate, weather, or season?

" 1. In 1775, the Epidemic came from the southern part of Europe and spread to the north. In 1782, it came from Russia, and spread to the south.

" 2. During the spring and summer of 1782, the weather was remarkably wet and cold, except for ten days; from the 16th till the 25th of June inclusive, it was extremely hot and dry, except some thunder-showers. The facts ascertained in the table, compared with this state of the weather, do not prove that it had any influence.

" 3. Season manifestly is not the cause of its rise or propagation, as these and similar Epidemics have appeared and spread at opposite times of the year.

" 4, 5.? Is the Influenza conveyed from one place to another by the wind? or does it spread through the atmosphere like sound, from a centre, gradually and uniformly to all the surrounding places?

" 4. Before and during the Influenza of 1775 and 1782, the wind was so variable in degree and direction, as to suggest no suspicion that it had any peculiar effect.

" 4, 5. These suppositions are fully refuted by the facts above related. For both the Influenza of 1775 and 1782 appeared in towns earlier than the villages and scattered houses which surround them, so as to refute all analogy with the course of the wind or the propagation of sound. To Chester the contagion was brought from London, yet these facts prove that it did not spread from London as a centre. If the Influenza was conveyed by the wind, it would pass through the whole extent of Great-Britain, being about 800 miles, in 27 hours, by a moderate breeze of 30 miles an hour, and in less than half that time by a brisk gale. If the Influenza travelled like sound, at near thirteen miles in a minute, it must infect the whole Island in an hour.

7.? Can it be supposed, that the first patient who comes into a town, contaminates the atmosphere of the place, so as to render it generally pestilential in regard to this distemper?

" 6. If this hypothesis were true, the general seizure must have been much more sudden than what actually took place. In the two families which were first attacked by the Influenza in 1782, the greatest part of both of them, had the distemper in a week or less after its first appearance in each. Now, if all the inhabitants of a town were infected at once, the seizure of the first and last patient could not have been at so great a distance of time as represented in the table.

" 7.? Does the Influenza spread by contagion of patients in the distemper?

" 7. Many facts above related manifestly prove the truth of this conclusion. At Chester and most of the towns which surround this city, I had the good fortune to discover the individual person who brought it into each place, previous to the general seizure of the inhabitants. The interconrse is greater from the metropolis to Chester, than to the other towns in its neighbourhood. Again, more people go from Chester to the adjacent market-towns than to the villages and scattered houses which surround them. The Influenza spread exactly in this order of time, from the metropolis to Chester, to the neighbouring towns, and lastly to the villages.

" The most obvious objection to this conclusion, which occurs to me, is the swift progress of the

Epidemic. It attacked a great proportion of the inhabitants of a large town in ten days or a fortnight, and passed through a whole kingdom in a few weeks. How different is this general seizure from the progress of another distemper, which is allowed to be propagated by contagion. The small-pox will remain in one narrow lane, entry, or court, for several months, without attacking all the inhabitants who are liable to receive it; as we had numerous proofs during the time when the Small-pox Society of Chester was established. If both distempers spread by the same cause, and according to the same law, what reason can be given why the progress of the one is so rapid and the other so slow?

"1. The small-pox is generally attended with so much fever, pain, &c. as to confine the patient at home. But if one now and then go abroad, his aspect is so distinguishable and so loathsome, as to excite horror in every beholder who is liable to infection, and apprizes him of the danger so as to avoid it. In the Influenza, the far greater number mix with society through the whole disease, without reserve. There is no caution and no fear to keep the infectious separate from those who are liable to infection.

"2. The gentleman who brought the distemper into Chester in 1782 from London, travelled with it at the rate of 182 miles in twenty-seven hours.

Such facts explain in a satisfactory manner, why it spread through the whole Island in so short a period of time.

" 3. Again, a large proportion of the inhabitants in most towns having had the small-pox, few are liable to receive and spread the infection; whereas persons who have had the Influenza, being not exempted from a future attack, a large proportion of persons are capable of receiving and propagating the distemper.

" 4. Another cause has some, though less, influence. There seems to be a shorter *latent* period between infection and the commencement of the disease in the Influenza. The lady who caught it first in 1782 from her visitor, was seized on the third day inclusive (about forty-eight hours) after the interview. In the next family, the wife was seized on the fifth day inclusive, after her husband, though, probably, he might not be infectious as soon as the disease commenced. It is well known, that the period between infection and the commencement of the small-pox is much longer."

" The substance of this Paper was communicated to the College of Physicians, in answer to their address to the Physicians of Great-Britain and Ireland, to obtain information when the Influenza of 1782 first appeared in their respective neighbourhoods, and at

what time it ceased. In a letter from my highly respected friend, the late Dr. HEBERDEN, dated the 13th November 1782, he wrote the following intelligence: 'Your Paper on the Influenza came just in time to be read with the others at the College. I looked it over, as you had desired, before I gave it in, and finding nothing which I thought required any alteration, I delivered it to Dr. R. last night. At the first reading of the papers which had been sent to the College, it was the first paper that was read. It gave, I perceived, very general satisfaction.'

"Why the publication of this disquisition should have been delayed for twenty years, and yet why it is now laid before the public, may require some explanation.

"The contagious nature of the Influenza had, I thought, been sufficiently proved by many physicians, and among others, by Dr. FALCONER, in his account of that Epidemic in 1782.

"But a contrary, and as I think, a very pernicious opinion has lately been supported by physicians of great respectability; and authors of the highest reputation, not indeed in this, but in other enlightened nations, have ascribed not only this but many other Epidemics, even the plague itself, to a morbid constitution of the atmosphere, independent of contagion. To determine whether this doctrine be true or

false, is of the highest importance to mankind. Knowledge, in this instance, is power. So far as it can be proved, that a disease is produced by contagion, human wisdom can prevent the mischief. But the morbid constitution of the atmosphere cannot possibly be corrected or controuled by man.

" This important question may fairly be brought to issue on the present occasion. Let the facts above recorded, in regard to the progress of the Epidemics of 1775 and 1782, be compared with what has happened in 1803. We first heard of it at Paris, then in London, next in Bath, Chester, and other large towns which have the greatest intercourse with London; afterwards in smaller towns, and last of all in the villages which surround them.

" It is contended, that no hypothesis about the wind, weather, season, or any morbid constitution of the atmosphere whatsoever, can possibly account for such facts. But the progress of the Epidemic may be distinctly traced, and explained in the most satisfactory manner, by personal contagion of travellers ill of the distemper, who, as above related, actually conveyed it from place to place. While these events are fresh in the memory of medical observers in every town in the kingdom, I wish to appeal to their testimony, to correct any false representation in regard to the present Epidemic. On the contrary, I

& where it spread so early as the 10th of January

have no doubt that many of them will have had the sagacity to discover the individual patient who first introduced the distemper into each place. No physician ought to be satisfied with conjectures, when such numerous and decisive facts are so obvious to every observer.

" It might be difficult to exterminate the Influenza from any country, because it spreads so quickly and universally through all ranks of people, being attended with little danger to the generality of mankind. But as the Influenza is fatal to patients ill of many other diseases, or debilitated by age, it is certainly of much importance to know that such persons may be preserved from the contagion by cautious *separation*, so as to prevent every patient ill of the distemper from approaching them; and by strict *cleanliness*, so that no dirty clothes, &c. which can contain infection, may be brought to them.

" In order to discover what effect this distemper produced on the bills of mortality, I classed the mortal diseases of Chester for ten weeks, during which period the Epidemic seemed to have a fatal influence. From the middle of November 1775, till the end of January 1776, there died 43 by *decay of age*, and 20 by *asthma;* and only 62 by all other known diseases."

Cruttwell, Printer, St. James's-Street, Bath.