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Epidemie Intemperie

A fair analysis, well written.
Epidemic
Catarrhal Fever

by
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Epidemic Catarhal Fever.

There is no class of diseases more calculated to strike terror into the minds of a community than that comprehend those maladies which occur in the epidemic form. Nor is this to be wondered at. From the first appearance of the disease in, it may be, a distant country, the attention of the populace is kept alive by reports fast following one
upon another, describing the approach of the calamity, the various changes which it undergoes in its progress, the intensity of its influence as exerted on the inhabitants of dissimilar climates, and last not least, the extent of the mortality resulting from it in different localities.

Such being the case, how important it must be that every physician should be well acquainted with the native and history of epidemic diseases, and, as far as possible, with the laws which regulate their visits!

Though much useful information may be obtained from the
attentive study of the different visitations of epidemics, and by carefully comparing them with one another; yet, by placing too much value on the deductions obtained from these retrospective observations, we are liable to be drawn into error. For in very many instances the symptoms presented by the same disease at one period during which it may be prevalent are widely different from those which appear on another occasion; and, of necessity, the treatment must likewise be different. This did not escape the observation of the illustrious Sydenham, whose remarks
that on each fresh visit of such disease he had to work out for himself a fresh knowledge of the appropriate plan of treatment.

True as this remark is in reference to the great majority of epidemics, yet a singular exception presents itself in that particular disease which I have chosen as the subject of this thesis, viz., Epidemic Catarhal Fever, or, as it is more familiarly styled, Influenza.

In studying the numerous accounts given of this malady from the first well-authenticated notice of its appearance in the beginning of the Sixteenth cen-
tury, down to the recent epidemic of 1847-48, we are at once struck with the wonderful similarity of the symptoms manifested on each occasion of its epidemic prevalence. Notwithstanding the great changes which have taken place, both in the climate of Britain and in the hygienic condition of its inhabitants, again and again has the influenza appeared with no essential modification of the phenomena presented on each visit.

Such being the case, it is evident that advantage will be obtained by taking a retrospective view of some of the principal epidemics of influenza which have visited
this country; but before doing so, I think it advisable to give a brief summary of the symptoms which are observed in this malady.

Semiology.

The symptoms of Epidemic Catarhal Fever may be conveniently divided into three classes; viz., Fever, Catarhal, and another class comprising those symptoms which cannot justly be referred to either of the preceding classes.

The Fever symptoms manifest themselves at the commencement of the attack, thus forming a distinguishing characteristic...
between the epidemic and sporadic forms of the disease.

The patient complains of a feeling of chilliness, which in the more severe cases is accompanied by shivering and even actual rigor. The chills, alternating with heat, dryness and flushing of the skin, continue until the fever is completely established at which period the catarhal symptoms generally supersede. After this, in the great majority of cases, the fever is of a mild character, much relief being experienced from perspirations which commonly set in to a greater or less
degree. But, nevertheless cases are met with in which, the heat and dryness of the skin remaining, the fever is much aggravated at night, at which time the patient suffers from restlessness, with languor and depression of spirits, accompanied sometimes by delirium. The disease is always attended with great prostration of strength, which in many instances occurs at the very commencement of the attack.

\underline{Wet-natured Symptoms.}—After the alternations of heat and chilliness beforementioned, the patient complains of heaviness and pain of the head with a feeling of tightness in the frontal region. The eyes are suffered with
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tears, the eyelids red and puffy, and there is sometimes an inflammatory condition of the vessels of the conjunctiva. The nasal passages next become affected. Severe fits of sneezing come on, attended with a copious watery discharge from the nostrils. This discharge is of a peculiarly acid nature. Some authorities mention epistaxis as an occasional symptom. Thus, Dr. Whytt in his account of the epidemic of 1758 says: “—others were attacked with bleedings at the nose, sometimes profuse and continuing for several days.” Dr. John Nelson Scott in the epidemic of 1803 noticed that “some were afflicted with repeated
attacks of epistaxis."

The Pharynx and Tongue are generally more or less inflamed, and
the voice is hoarse. There is a feeling of constriction across the chest, with
dyspnoea and a harsh distressing cough. It has been remarked that
the dyspnoea prevails to a degree much higher than can be account-
ed for by the Bronchial inflammation or any other pulmonary lesion.

The expectoration is at first scanty and consists of a clear viscid mucus;
but afterwards becomes more plentiful, requiring at the same time a mucous,
putridulent character. Auscultation generally reveals the existence of sonorous,
mucous and sibilant rales. Brepit-
ation at the base is not an uncommon sign.

The Symptoms which can be classed neither as febrile nor catarrhal I will proceed to consider under the various systems to which they can be referred.

Circulatory System. — The circulation from the first is in a state of great depression. The pulse is soft and feeble. Although at first pretty quick (from 60 to 80) as convalescence approaches it is generally found to be slow, sometimes as low as 50 beats in a minute. Some observers describe it as intermittent in this stage.

Digestive System. — Derangement of this system generally prevails to greater or less degree. The appetite is weak and thirst is increased. The tongue is
fool, being coated with a moist fur, which in some cases is white, in others of a yellowish hue. There is generally tenderness over the region of the stomach accompanied by nausea and vomiting. The state of the bowels varies in different cases. Sometimes they are not much affected, or diarrhoea may occur, but in general a constipated condition seems to obtain.

It has been remarked, that, when the catarrhal symptoms were less marked, the seat of irritation has been transferred to the alimentary canal, in which case the above symptoms were much aggravated.

**Urinary System.** — In almost every case the quantity of urine secreted
is much diminished. It is generally high-colored, sometimes very thick, and during the height of the disease has been noticed to deposit a pink-coloured sediment. Dr. Graves in the epidemic of 1837 found it loaded with lithates and super-lithates, and containing a large quantity of purpuric acid.

Nervous System. — Among the symptoms which may be referred to a disordered condition of this system, prominently appears, the great debility and prostration of strength before alluded to. Coming on as this does, at the very outset of the attack and continuing long after all other symptoms have disappeared, it may be considered as pathognomonic of the disease. By
some it has been likened to the collapse of cholera, and in the more severe cases has been noticed to be accompanied by a loose state of the bowels,

The patient also suffers from great pains of the back and loins, of greater intensity than would be expected from the mild character of the febrile attack.

As beforementioned, delirium sometimes occurs.

I will now conclude this account of the semiology of the disease by remarking that although we always find these phenomena existing to a greater or less degree, yet in the different visitations of the epidemic, some particular class of symptoms is generally observed to be predominant.

The disease generally runs its course
in from three to seven days, but leaves the
patient in a state of great debility. The
cough also often continues, and when this
is the case the disease is apt to recur.

History of Influenza.

The first epidemic of Influenza,
of which we possess an accurate account
is that of 1570. A disease presenting simi-
lar symptoms is mentioned in an Irish
Manuscript of the 15th century, under
the names of "Fracht" and "Slaodan," and
it is also probably identical with the
malady "Creatan" alluded to
by the early Gaelic writers: but of
these we have no trustworthy des-
crption.
1510. - Dr. Short states that the disease came from Malta, and speedily spread through the whole of Europe, "not missing a family, and scarce a person." The symptoms as described by him agree with those which I have given.

In 1557 it again appeared; this time beginning in Asia, and travelling westward.

In 1580 it was again prevalent following the same course and extending to America. From this period till 1658 it disappeared, leaving the field open to a more terrible rival - Plague.

The epidemics of 1658, 1675, 1710, and 1729 present nothing particularly worthy of mention.

During the Epidemic of 1732-3 great-
care was taken in the preparation of meteorological observations, particularly in Edinburgh, but the results of these seem merely to show that the weather was variable, that when the wind was southerly it was generally dry, and when Northerly—damp.

Passing over the visitations of 1737-8, 1743, 1755, 1762, 1767 and 1775 we arrive at the great epidemic of 1782.

On this occasion the disorder first appeared in the East Indies in the autumn of 1781. Shortly afterwards it prevailed at Tobolsk, and then spread through Russia, Denmark and Holland, and
reached London in the beginning of May. This was perhaps the most widely dispersed of all recorded visitations. It has been calculated that more than half the population of Europe suffered from it.

In 1789-90 it invaded the whole of the United States, but was scarcely met with in Europe. It was characterized by the mild nature of the catarhal symptoms which indeed in many cases were totally absent.

In 1803 Influenza prevailed in England. It appeared in London early in January and occupied nearly three months
in its diffusion over the country. The disease was preceded by widespread epidemic diarrhoea, and after its cessation low fever prevailed.

The next visit was in 1831, the malady having taken a year in its passage from China, where it first appeared on board the H.E.I.C. ship "Inglis." On this occasion the disease was complicated with dysentery, and was superseded by the cholera of the following year.

In 1833 it was again prevalent. In this instance horses were much affected by the malady, many fatal cases occurring.
The epidemic of 1837 was widely spread and very fatal. It much resembled that of 1831.

The last visit of smallpox in the epidemic form was in 1847-48, on which occasion according to Dr. Farr it killed, directly or indirectly, not less than 5000 persons in six weeks.

Etiology.

Concerning the cause of influenza there has long been a difference of opinion. Some careful observers have thought that it spread by contagion whilst others equally trustworthy have declared it to be non-contagious. Cullen was of the former opinion, and
named the disease "catarrhus contagio." But the rapidity with which the malady will travel from one place to another, and the suddenness with which it breaks out in a spot which has had no communication with an infected locality, clearly show that the diffusion of the disease cannot be entirely due to this cause. Thus, we have the well-known example of its simultaneous appearance on board the widely separated fleets of Lord Howe and Admiral Phipps. Neither fleet having communicated with the shore for nearly a month.

On the other hand, we have many well-authenticated instances which prove that contagion is one mode of
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its diffusion. I will mention a few of these.

The first appearance of the Influenza of 1782 in the north of England occurred at Shields immediately after the arrival of some infected ships from London where the epidemic prevailed.

The manner in which the disease attacks a family would seem to prove its contagiousness. Its appearance though rapid is always progressive. It does not seize on a family all at once; but first one individual is attacked, others a few days afterwards, and so on, until all susceptible of the disease have been affected by it.

Dr. Fowler relates the case of a lady who infected seven nurses in succes-
sion. Her daughters who were kept away from her escaped.

Dr. Duncan of Edinburgh after ample experience of the disease in the epidemic of 1803 was fully satisfied of its contagiousness. He says, "I have no more doubt of the contagious nature of the influenza than I have of the contagious nature of the measles, chinchilla or typhus fever."

Dr. Bardsley's account of what happened in the Manchester Lunatic Asylum is important. None of the patients were affected with the epidemic (although permitted to walk out daily in the airing grounds) until the keeper and matron became affected after which it speedily spread through the institution.
It is also worthy of notice, that with our increased facilities for speedy travelling the spread of the epidemic has become more rapid.

But there are many other cases which the theory of contagion is quite inadequate to account for. Various hypotheses have been advanced, most of them pointing to an impure state of the atmosphere; and there is now little doubt that whatever the impurity may be, the atmosphere is the medium through which it is conveyed.

Most epidemics of Influenza have been preceded by great vicissitudes of the weather. But these vicissitudes themselves differ so much on different occasions that they throw but little
light on the subject.

The earlier writers thought that the influence was of a volcanic origin; eruptions of Etna, Vesuvius and Hecla having been noticed in connection with many of the earlier epidemics. Dr. Brunt suggested that seleniumed hydrogen, which is a product of volcanic action, might be engaged in the production of the disease.

Variations in the electrical condition of the atmosphere have also been adduced as an explanation.

More recently, a tolerably plausible theory has been advanced by Dr. Schönlein of Basle. He found that during the prevalence of certain mental disorders, ozone was unusually abundant in the at-
mosphere. Joining this with the fact that the inhalation of ozonized air caused irritation of the air tubes, he was led to suspect that the presence of this ozone might be the cause of influenza and some other catarrhal complaints. That it might induce common sporadic catarrh is very possible; but how the action of a purely chemical irritant can produce a contagious disease like influenza, I am at a loss to understand.

Another argument which seems to me to weigh against all meteorological theories, is the remarkable capriciousness in the selection of the localities affected. Thus, the epidemic is often confined to particular quarters of a city, certain
strips of territory, or even to one side of a river.

This objection does not apply to the following theory, viz., that which is based on the supposed presence of animalcules in the atmosphere. It is well known that the migrations of the insect tribes are characterized by a capriciousness as remarkable as that noticed in influenza; and if we are allowed to draw an analogy between the movements of known insects, and those of smaller animals which are only supposed to exist, we overcome the above difficulty.

All this is mere hypothesis; but until some better theory is advanced I am of opinion that that last—
mentioned is worthy of consideration.

Treatment.

The treatment of this disease has with each epidemic been somewhat varied, for the derangements of health produced in different subjects are so diversified, that, notwithstanding the general analogy presented in the visitations of Influenza, we cannot be surprised at the varied treatments which have arisen. Yet, still in the general principles of treatment a correspondence between that of early and recent epidemics may be observed. As a general conclusion it may be ad
duced that those remedies which are eliminative have been most success-
ful; this conclusion agreeing with the theory, that the disease is dependent on the introduction of some virus into the blood. It has thus been observed, that there has ever been a general agreement as to the importance of diaphoretics, diuretics, aperients and the use of mild emetics. Whilst as regards the employment of bleeding and drastic purgatives opinions have differed much, the mass of evidence, however, leading to the conclusion that depletion and severe purgation have proved injurious. Yet, should the inflammation have extended to the pleura or lungs, the application of the cupping glasses or the opening of a vein would doubtless afford relief.
to the urgent symptoms of the case.

As a general plan of treatment, the necessity of keeping the patient in bed, the inhaling of an atmosphere of an appropriate temperature, the administration of calomel and mild aperients, followed by the use of James' powder and saline medicines are indicated.

If the patient should suffer much from cough, laboured breathing, or if there be much rhoncus or expectoration audible in the chest, it may be advisable to apply a blister and give diuretics and expectorants.

In those cases where the powers of the patient are very prostrate, and the expectoration of mucus from the air-passages difficult, it will
be necessary to administer stimulants such as Ammonia, wine and nourishing broths. As the disease abates if the patient be kept in a languid state, recovering tent slowly, the use of such tonics as the Sulphate of Quinine or Iron will be found of great benefit in restoring the depressed powers of the system.