EPIDEMIC ERYSIPELAS.

ITS PROGRESS, CONTAGION, CHARACTER, AND TREATMENT.

By JOHN KILBURN, *Esq., Surgeon, West Auckland.*

DURING the winter and the early part of the present spring I have heard of the erysipelas prevailing in several towns and villages to the westward of the place where I reside; and, from the unusual fatality, I should suppose in a very malignant form. As it has within the last three months made its appearance here, and in places immediately adjacent, I have had an opportunity of witnessing and treating about twenty cases, a short account of the nature and treatment of which may not be uninteresting to some of the readers of THE LANCET.

The first symptoms of epidemic are not unlike those of the influenza, (which in December and January prevailed here to as great an extent as in any other part of the kingdom) being ushered in with rigour, succeeded by pyrexia, intolerance of light and severe pain of the head; to which are added inflammation of the tonsils and pharynx, extreme lassitude and fulness, and quickness of the pulse. These symptoms continue for about three or four days, when a small pimple, or redness, makes its appearance on one of the alæ of the nose, an efflorescence extends thence, through the course of the following day, across the apex, to each cheek, and, afterwards, to the eyelids, and continues gradually extending, in some cases, over the scalp, and down behind the neck, for five or six days, after which time it remains stationary, the eyelids swell for two or three days, sometimes so much as to enclose the eyes, and prevent any possibility of the ingress of light. Up to this period the fever continues unabated, and is very often attended with delirium; and although the fever was disposed to assume rather a typhoid type towards the termination, yet, with the exception of one or two cases, it has never exhibited any great degree of malignancy. The symptoms vary in different cases, but as it is not my wish to trespass too much on your valuable pages, I may be excused from entering into the particulars of every distinct case.

Out of the number which I have attended, one case has proved fatal, this occurred in a female in an advanced state of pregnancy, for although the male sex have not been exempt, yet the majority of cases have occured in females. In this fatal case all the preliminary symptoms were not only considerably more intense, but greatly prolonged beyond the usual time, before the erysipelas made its appearance in the face. She had, as there was more or less in most of the cases, dreadful affection of the respiratory organs, and the pharynx was so much swollen that she was unable to swallow anything, not even liquids, for some days previous to the fatal issue.

Cullen and Bateman seem to doubt the infectious nature of erysipelas. It certainly is not so catching as some other complaints of this nature, such as small-pox, measles, &c., nor do I suppose that the whole of the cases arose from contagion, but may rather, from an impure state of the atmosphere, as in the majority of cases no proof could be traced out to such an origin. But there are certain facts connected with the present epidemic which appear to me to give countenance to the opinion, that it is, at least, sometimes contagious; and the following examples are favourable to that opinion:—

1. W. W., a young man aged 18, went through the usual symptoms of this epidemic. Shortly after his recovery I was called to the maid-servant of the same family, and on inquiry I found that she was the person who altogether waited upon the young man during his illness.

2. I attended one family, consisting of three females and one boy, who all were attacked with the preliminary symptoms and inflamed throats of an erysipelatous character, and but one, the boy, had the eruption in the face. The patients were attacked in succession, not simultaneously.

3. The following example did not come under my own inspection, but for the truth of which I entertain not the least doubt:—An elderly man sustained a slight punctured wound on the hand, on which erysipelas supervened, and extended up the arm; it was accompanied with great constitutional disturbance, and his illness was of long continuance. An elderly woman came from a distance to wait upon him, and after a short interval became affected with the disease in her arms, of which she died.

4. A daughter of the woman, whose case proved fatal in my own practice, was attacked with the epidemic, previous to which she waited chiefly upon her mother.

These facts, and a few others which have come within my knowledge, strongly impress my mind with the opinion that erysipelas is not to be pronounced free from the quality of contagion. The cases which are supposed to have originated in that way, occurred only in those who were most amongst the affected patients, and, consequently, were those who were most likely to receive infection of any kind. Bateman intimates that it is probably communicable through being connected with other diseases which are so; but I very much dispute whether he or any other practitioner ever observed it unconnected with fever, and that fever so closely resembles the usual continued fever of this country that I doubt the ability of any one to draw the distinction between

them ; and the typhoid malignancy of some cases, and the tendency of others, to become so appear to me strongly corroborative of this opinion.

The plain treatment which I adopted in this epidemic was, at the commencement, upon the antiphlogistic plan ; venesection, which invariably relieved the pain and tension of the head, I made use of in the majority of cases, with decidedly beneficial effects; this was particularly marked in example 4, which terminated favourably in half the usual time that the others did. The other part of the treatment consisted in the exhibition of the chloride of mercury, combined with antimonial at bed-time, followed by gentle purgatives the following morning, and of salines in the intermediate time. This plan of treatment varied according to circumstances, was continued as long as the swelling and inflammation remained, after which stomachics and tonics were given, and where, as was the case in some instances, no abscess made its appearance in the neck, the patient recovered rapidly.

ON THE

MECHANISM OF RESPIRATION,

AND THE ARTIFICIAL AND NATURAL INFLATION OF THE LUNGS.

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As there are some points connected with the mechanism of respiration, which are but imperfectly understood, and others which are overlooked altogether, I beg leave to offer a few observations on the subject, especially as it is one that is intimately connected with the several departments of professional practice.

I am still farther induced to consider this subject from the appearance (of late) of some observations which I consider to be completely erroneous, and which, if allowed to pass unnoticed, might, at no distant period, exercise a material and injurious influence on the judicial investigation of infanticide.

It is unnecessary for me to occupy your pages with any remarks on such parts of the respiratory process as are fully described in almost all physiological works ; I shall, therefore, confine myself to those which have been but little, if at all, noticed.

In entering upon the consideration of this subject, we must bear in mind that two principal agents are employed in the mechanical act of respiration, namely, the lungs, and the parietes of the thorax ; of these the former may be considered the passive, the latter the active, agents.

Many are inclined to consider the lungs as active agents in respiration, and assign to them a degree of contractility which they certainly do not possess in the healthy state ; indeed, if they be endowed with any innate power of contraction whatever, it is too trifling to have any material influence in the several acts of inspiration and expiration, and, therefore, it is hardly worthy of being taken into account. That these organs do not assist in the act of inspiration is manifest, as they decidedly do not possess any power in themselves of expanding their bulk, and that they are equally passive in the act of respiration, under ordinary circumstances, we may reasonably conclude, if we reflect for a moment on the phenomena that take place when the air is being expelled from the lungs ; the thoracic parietes are then forced upon the surface of these organs by the contraction of the respiratory muscles, and thus, they being compressed, the air is expelled from them. Now, during this act, contractility in the lungs is wholly uncalled for, as the muscles of respiration are sufficiently powerful for its completion; indeed, the weight of the thoracic parietes, and the elasticity of the ribs, would produce this result, unaided by muscular contraction, although that is required in order that respiration may be the more completely performed, and with a sufficient degree of rapidity, particularly as impediments will occasionally present themselves that cannot be removed without the aid of muscular contractility.

Had the lungs, therefore, possessed contractility, a power would have been conferred upon them which was not required, as the parietes of the thorax are sufficient to reduce the lungs to their quiescent state, and we know of no property in those organs which could contract them further, unless we concede to them the power of overcoming the resistance of the thoracic parietes, or of producing a vacuum in the interior of the thorax, or assign to the cellular tissue of the lungs a degree of elasticity which is not acknowledged by anatomists in general, or consider that the contraction of the air cells so produced is counterbalanced by the rush of blood into the lungs, a theory which would be completely opposed to the prevailing opinions of the day, which advocate the expulsion of the blood from the lungs during *respiration*.

Again, if the lungs possessed contractility for the purposes of mechanical respiration, there should be (to render this beneficial), a consent of action between these organs and the muscles of respiration, sustained here, as elsewhere, in the human body, either by the nerves which supply those parts being derived from the same source, or by their frequent anastomosing with each other. This, however, is not the case, but rather the reverse, as we observe a remarkable want of