LECTURE
ON THE
DISEASES OF CHILDREN.

DELIVERED IN THE

Chatham Street School of Medicine, Manchester,

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LECTURE II.

General Remarks on the Physiology and Pathology of Children—Objective Symptoms—The Head—The Throat.

GENTLEMEN,—When we speak of “diseases of children,” we understand all diseases whatever, if developed in an infant or young child; according to the different age or degree of organic development, all diseases are modified in their symptomatic appearance, and in their course and mode of treatment. But then, just as some chronic and organic affections of adults or old people never occur in the early period of life, as for example, hypertrophy or atrophy of the heart, aneurism, certain degenerations of the liver, spleen, or kidneys, tania, &c., so, on the other hand, there are some diseases proper to infants and children, which hardly ever, or very seldom, are observed in adults. These are “diseases of infancy and childhood.”

As the most exclusively infantile may be considered the following:—Trismus, hydrocephalus, rachitis, cancrum oris, and *muguet*; spasmus laryngeus, and eclampsia, which have so much resemblance to some forms of hysteric affections; also croup and whooping cough, which occur sometimes just in the same form in adults, and eruptive fevers, which are very frequently seen much beyond the age of puberty. There are still some other forms or special modifications of maladies, such as chorea, the ophthalmia and jaundice of newly-born children, &c., and besides these, some congenital malformations. These diseases, proper to infancy and childhood, are less frequent, and by no means more important in practice than other maladies—febrile, inflammatory, acute or chronic, common to all ages. If some of the gentlemen present will recollect rheumatic or gastric fevers, with all that variety of complaints, as these affections occur in their practice, with many symptoms only to be learnt from the words and local indications of the patients, and if you imagine then a little speechless child placed under the like circumstances, the difference between both series of patients will be very evident, and apparently more difficulty will be attached to the latter; consequently all diseases to which children are subject, merit to be all the more carefully studied.

Authors have endeavoured to establish certain periods in the progressive life of the child, attached to some

salient physiological processes, and consequent dispositions to certain diseases. These attempts are more or less imperfect, as in nature all is but gradual transition. I find it much more important in any treatise on diseases of children, to pay a particular attention to the *two first years of life*; not only because some diseases are nearly exclusively restricted to that tender age, but because all are the most dangerous in their course, the most difficult to distinguish, and the most delicate to manage in this age. There is no speech by which such little patients could enlighten us; and there is the delicacy of their stomach, easily deranged by medicines.

The *physiological character* of infancy and tender childhood I am accustomed to delineate in few words, namely, much delicacy of organic structure, much sensibility and mobility, and want of strength. This qualification is applicable to the nervous, the vascular, and the vegetative sphere of life, and consequently also to the three respective classes of maladies. Supposing that everybody present knows the particulars of the physiology of the early periods of life, I shall merely limit myself to pointing out the great secretory activity of the salivary glands and mucous membranes in this age; then, above all, the regular course of *three* important processes of development, viz., the commencement of dentition between the sixth and the eighth month, the closure of the fontanelles about the twelfth month, finally, that degree of locomotive power in the legs which enables the child to walk about the thirteenth or fourteenth month. If these three scales of progressive development take place sooner, it is of little importance, but if later than at the mentioned terms, it signifies weakness in the constitution of the child, and in particular a scrofulous or rachitic disposition.

According to the adduced general physiological character of delicacy of structure, sensibility, mobility, and weakness, children are more easily and more frequently deranged in their health than adults; their diseases run proportionally more quickly, either to recovery or to death. Slight, even inappreciable causes, are able to put the nervous system into a tremendous disorder, and destroy the child's life. Pure nervous convulsions are very frequent in the tender age. Inflammations run quickly, either to resolution, transudation, or suppuration. With regard to the vegetative system, children are the most liable to alterations of the fluids and of the organic structure. Rachitis affords a striking example. There is an eminent disposition to sympathetic symptoms and affections; gastric derangement, dentition, worms, a paroxysm of intermittent fever, cause sometimes severe fits of convulsion. The high degree of sensibility and mobility is the source of the great frequency of febrile movements, but at the same time of the unsteadiness or the remittent character of almost all sorts of fevers. The weakness of the organic power at this tender age prevents the development of some severe diseases to that height at which we observe them in adults. An infant seldom arrives at the third stage of extensive lobar pneumonia, or to the acme of typhus. There is a great disposition to

diseases of the mucous membranes and of the skin, both very contagious in children.

Objective symptomatology and physical examination.—In order to facilitate the synthetic proceeding of diagnosis, it is important to study and analyze the single phenomena which from the child fall under the perception of our senses. I shall mention the most conclusive.

The *head*. We observe the proportion between the volume of the skull and that of the face. A large skull, and a small face, is the sign of a scrofulous, rachitic, or eminently nervous complexion. In the latter case the abdomen and legs may be quite regular; in both the former, we find a large abdomen and flabby legs. We likewise observe some salient protuberances, (two, three, four, or five,) two of which laterally on the front, two on the parietal bones, and one at the occiput, impart frequently an angular form to the head; this is frequently the case with the large skull of scrofulous or rachitic children. The retarded ossification of the fontanelles is of the same signification.

The expression of the *face* is a sort of speculum for the practitioner. The bloated face, characteristic in whooping cough, is connected with an abnormal turgor round the eyes; the bloated face in rickets, on the contrary, with a furrow along the lower eyelid, (I would call it circled eyes); the collapsed face, with sunken, excavated eyes, and a high expression of languor—proper to acute diseases; the senile face, meagre, wrinkled, without languor—proper to chronic, scrofulous, and atrophic affections; the superintelligent face, with (proportionally to the age,) too much expression of seriousness and intelligence, frequent in scrofulous and nervous constitutions.

The *eyes* have a great share in the mentioned expressions. The expression of languor arises almost entirely from the eyes. Increased contractility, or *contraction of the pupil*, is proper to the first stage of meningitis, but we observe it also sometimes in pure nervous cerebral irritation, and during convulsions. *Dilated pupil* obtains sometimes in typhus, but much more in cerebral transudation.

I shall pass over the examination of the *ears* and the mouth, including that of the teeth and the tongue; but, with regard to the latter, we find it proportionally to the same diseases more moist than in adults. Suckling children have in general a white mucous coat over their tongue. Before the fourth year it is very seldom we see a dry and brown furred tongue.

The *facial lines*. Certain lines, or slight furrows, very commonly perceptible in meagre faces of adults, are hardly present on the healthy turgid face of a little child; but some of these lines appear eminently under the influence of certain diseases, and impart to the face of the child a more or less characteristic expression. These lines have been studied by Eusébe de Salles and Billard, of Paris, and termed by those physicians *facial lines*. I shall mention the three following:—

1. The *oculo-zygomatic line*, from the interior angle of the eye towards the middle of the zygoma. This I find the most valuable of all; there is only the alterna-

tive of an affection of the brain, and of a recent very severe diarrhoea; consequently, if this latter be not present, we may be induced to believe in the probability of an affection of the brain.

2. The *naso-buccal*, from the ala nasi running in a semi-circular form over the anterior part of the cheek, around the angles of the mouth; sometimes accompanied by another short one, which is called the labial. This line is said to signify severe abdominal affections; but the fact is, that we see it very frequently in all sorts of chronic and consumptive diseases.

3. The *mental line* (chin line), commencing near the angles of the mouth and running downwards laterally to the chin, which is regarded too, as a sign of pulmonary affections; but I can state, that this line is only seen in high degrees of dyspnoea, consequently it is also visible in the dyspnoea which depends upon the rachitic compression of the chest, without disease of the lungs.

Some more particulars may be adduced with regard to the signification of the lines and furrows in the child's face. I shall take an opportunity to show from time to time these facial lines and angular skulls, on appropriate individuals, as brought before us.

The *nocturnal head sweats* merit to be mentioned. They consist of abundant perspiration limited to the head, of a disagreeable somewhat acid smell, leaving on the linen a dirty stain, of an undetermined colour, and occurring on some children regularly every night. This partial perspiration I observe the most frequently during the second year of age, in children presenting a large skull, retarded osseous and muscular development, suffering or disposed to impetiginous scrofula, hypertrophy of the brain, rachitis, or hydrocephalus. This sweat seems to be a critical effort of nature against the before-mentioned diseases; as I observed in many instances, that, upon its suddenly ceasing, one or the other of those diseases broke out. It is interesting to know that this perspiration subsided in a short time and without any bad consequences, under the influence of *high doses of iodide of potassium*, carried to the degree of iodine fever. This I have experienced in many cases, and at the same time I observed an improvement, that is to say, a lessening of the scrofulo-impetiginous habit.

The *throat*, outside and inside, the latter as far as accessible, frequently affords some phenomena, the signification of which can hardly be mistaken. The difficulty consists rather in the resisting efforts of the child, which we encounter frequently as soon as we intend to depress the tongue, in order to look at the pharyngeal or laryngeal parts. By the assistance, however, of one or two clever persons, we get rid, if necessary, of these difficulties. (Some details on the mode of examining the inside of the mouth and the throat.)

On the next occasion we shall speak of the symptoms and physical examination of the organs of the chest, a subject interesting as well as important, by its perfection attained in modern times.