just been enumerating. Sooner or later they will successively marshal themselves upon the line of morbid action, and proceed with dreadful regularity to the final issue. And when you witness, as you have with us so many opportunities of witnessing, those painful, protracted, and laborious struggles which characterize the later stages of such cardiac disease, you will surely be inspired by a generous and holy desire to avert the induction of those causes, which now so often lead to a miserably oppressed life and premature death.

LECTURE ON THE DISEASES OF CHILDREN.

DELIVERED IN THE

Chatham Street School of Medicine, Manchester,

By DR. MEREI,

Fellow of the Hungarian Academy, late Professor of the History of Medicine at the University of Pesh, Clinical Professor of the Diseases of Children, and Director of the Children's Hospital at Pesh; Fellow of the Imperial Society of Medicine at Vienna, etc.

LECTURE III.

OBJECTIVE SYMPTOMS AND PHYSICAL EXAMINATION OF THE ORGANS OF THE CHEST.

GENTLEMEN,—In my last I said that the physical examination of the organs of the chest forms the most perfect, the most splendid part in children's practice. In fact, not only does a little child not give us those accounts and indications by which an adult patient frequently enlightens us as to the state of the lungs and heart, but it even not seldom happens that in little children very severe acute inflammations of the lungs and of the pleura take place without cough, or, at least, without appreciable cough. I can state this not only as a fact which I have frequently witnessed in my life, but also as a source of mistake at the same time. Little children affected with very acute pleurisy are sometimes impeded in coughing (during the first stage of this disease) by severe pain, and by the exhaustion consequent upon it. Again, if a large transudation fills up one half of the chest, suppressing all the activity of the correspondent lung, and the other lung is perfectly healthy, they do not cough under these circumstances; and as there is in this state much oppression of the brain, and even a degree of sopor, I have seen persons wrongly apply leeches to the head. Then, if the child survives to that height of the disease, the cough begins, and increases in proportion with the progress of the absorption of the liquid. It may be that there was in such cases some slight cough, but it was, at least, very indecisive, and perhaps escaped altogether the attention of the assistants. In those cases either percussion or auscultation would have assisted us, and been enough to make clear the quality of disease. There are likewise other cases, less serious, but in great

number, in which by no other means than by physical examination can we get exact information. It would be, however, extravagant and disadvantageous should we neglect to observe the external phenomena of respiration, crying, and cough.

Before we apply our ear to the chest we observe closely the child with our eyes. The *respiration*, if deranged, will be either slow, deep and heavy, or quick, superficial, and checked. The slow and heavy inspiration is peculiar to some adynamic fevers, or cerebral transudations. The quick and frequent, if not also checked, is common to febrile excitement; but if superficial and checked, then it denotes either an affection of the respiratory organs, or of those of the circulation. This sort of respiration is dyspnoea, united with much anxiety and occasional sighs in affections of the heart, and with expression of pain in the countenance in severe pleurisies. We look then at the *movement of the chest*, which, in cases of impeded inspiration, will appear to move more or less incompletely, *i.e.*, in lobar pneumonia and pleurisy. In this case there will be abdominal respiration. Sometimes we perceive proportionally less movement on the affected half of the chest; this is even the case in very strong rheumatic pleurodynia.

Crying is impossible in acute pulmonary or pleuritic affections, just because the *outcry*, as a more violent act of expiration, makes necessary a deeper inspiration incompatible with those affections. If, then, under such circumstances, the child inclines or begins to cry, we see immediately that the *back-draught*,—that is, the inspiration, is checked, and thus the continuation of loud wheezing is prevented. Speaking in general of crying, if the child at once begins violently to weep, and then ceases, and shows good spirits, and we observe this change several times, we may suspect either a spasmodic pain in the abdomen, or otalgia. The most sudden and severe pains in children are,—spasm of the bladder, (dysuria spasmodica,) of the stomach or intestines, and otalgia. If the child cries in consequence of dysuria, we observe the urine voided drop by drop; if ceasing to weep, and eructations come out, we conclude there is spasm of the stomach, and if flatulencies are emitted, the cause of the previous violent spasm may be a spasm of the intestines. If, during most violent cries, the child inclines its head laterally, and brings one of his hands near one ear, we may suspect otalgic pains. I must acknowledge, however, that in some cases I did not observe those latter signs, and it was only afterwards that the commencement of mucous or purulent discharge from the ear made clear the cause of violent crying.

On all occasions when children weep *violently*, there is a disposition to some convulsive movements, or to spasm of the larynx. The first consist in short and repeated shocks of back-draughts, the latter in impeded, noisy, forcible, and prolonged back-draughts. If this happens occasionally in consequence of long and vehement crying, it is of no importance; but if those abnormal modifications of crying are frequent and vehement, it signifies a nervous disease. Thus, in

laryngeal spasm, after each short checked outcry, there ensues a prolonged, forcible, and noisy back-draught.

Frequent and prolonged weeping, with some uneasiness and irascibility, this latter persisting even during the intervals, is very seldom to be attributed merely to the temper, but most probably to some illness of the child.

Coughing is a more or less vehement and suddenly checked expiration, preceded by either a free and deep, or a superficial and impeded inspiration. Cough, in simple bronchitis, consists of loud and full expirations, with a free and deep inspiration. In pneumonia the expiratory act of cough is more or less superficial, imperfect, and the inspiration laborious or checked. In acute pleurisy these qualities of the acts of coughing are the most pronounced, and we observe during their performance an expression of pain or of anxiety in the child's countenance. If the cough is only occasional, short, but not checked, with persistent expression of painful anxiety on the face, yet with slow, deep, and long inspirations, this is the general character of cough connected with affections of the heart. Violent, loud, short, but frequently and rapidly following expiratory acts of coughing, with interposed, single, loud, long, and full inspirations, is the character of convulsive cough. Cough is, in general, more moist in children than in adults, moist even sometimes in the first stage of acute pneumonia. After we have observed for some time the respiration of the child, or the respiratory acts of its crying or coughing, and after we have observed these acts in different positions, (dorsal and both laterals, because in pneumonia the respiration is more easy, and cough less irritable, if the child lies on the affected side,) we proceed to the—

Inspection of the structure of the chest.—We distinguish the phthisical and the rachitic structure of the chest. The former, always united with a delicate slender complexion, appears to be round, but evidently narrow in its upper part. The rachitic chest is laterally compressed, or better to say excavated, whilst prominent at the sternum, and presenting the shape termed “pigeon-breast.” In those latter cases we find also frequently an abnormal curvature at the spinal part of the chest. It is most important to be aware of the rachitic structure of the chest, because I found the phenomena of visible respiration, as well as those of auscultation and percussion, considerably modified by it. For some years I was in frequent embarrassment with the diagnosis of similar cases, till at least clinical observation, united with repeated dissections of similar children, led me to some conclusions. A high degree of rachitic compression impedes the respiratory acts. The ribs deviating from their normal curve, cannot obey the respiratory movements of the intercostal muscles. Thus we see in these subjects a high degree of dyspnoea; then passive congestion takes place in the lower half of the lungs, and mucus accumulates. Auscultating on these very parts we perceive little or nothing of the vesicular respiratory murmur, but frequently some fine râles, resembling the subcrepitation, whilst towards the upper half of the dorsal part of the chest we hear a violent bronchial

respiration, resembling the tubular soufflé in pneumonia, with occasional large râles. The sound of percussion is something dull at the lower dorsal part, in particular near the spine, where the spongy part of the vertebræ is frequently in a state of swelling. The percussion is, anteriorly, in general clear, and very clear at the lateral hollow of the excavated parts of the chest. All these abnormal phenomena proceed from the structure of the chest. Chronic bronchitis and passive congestion, are most common in these subjects, but it is important to know, that acute pneumonia and lobar hepatisation, are quite strange to them. In some of these cases I discovered, by dissection, that state of passive carnification, at the back margins of the lobes, which Legendre and Bailey term the “foetal state.”

The particularities and difficulties of auscultation on little children are many:—

1st. The respiration of young children is regularly quick and noisy. This must be allowed for.

2nd. There is much propensity to mucous secretion, and as they do not eject it, mucus accumulates, and causes a great many large and fine râles, which veil the respiratory murmur, and impede us sometimes in perceiving the crepitation in pneumonia, or the rubbing sound (frottement) in pleurisy.

3rd. Mucous obstruction of a large part of the bronchial tubes sometimes takes place, and prevents the perception of the vesicular murmur. This case we enlighten by percussion, as the sound in mucous obstruction is clear, or but very slightly dull. Nor is there true bronchial respiration in these cases.

4th. A little child's chest is of a small extent, consequently if we auscultate, even at the middle of the chest, our ear is struck by the respiratory sounds of the trachea and of the large bronchial tubes, and there is difficulty in perceiving slighter alterations of the sounds.

5th. The child will neither perform a deep inspiration, which sometimes we need to observe, nor will it speak words at our wish and command; thus, bronchophony, pectoriloquy, and oegophony, are lost from us, we can only hear sometimes the modified sound of the voice during cries.

In order to get a full inspiration, as fall as the child can perform it, I find the best plan the following:—I order the child to be taken in the arms of its mother or nurse, in a position which allows auscultation, behind and laterally; then I approach cautiously from behind, and lay one of my hands on the upper part of the abdomen, and exert with it a gradually increased pressure, thus the abdominal viscera pushing the diaphragm upwards, the child exerts its power to overcome this impediment by a more extensive inspiration. If this act is prevented by pleuritic pain, we perceive it by its anxiety or irascible struggle with its trunk and hands, and by moans and cries, as far as they are possible. In this manner we should always assist the physical examination of the organs of the chest. The *percussion*, on the contrary, is the most enlightening means of examination in children. The walls of their chest are thin and flexible, consequently we perceive more imme-

diately the sound of the pulmonary texture, and even its consistence.

If we are aware of the above-mentioned circumstances, by and by, with patience, careful exercise, and intelligent combination of all that we see and hear, and of all that we feel with our percussing fingers, we cannot fail to arrive at a high degree of certainty in this sort of diagnosis. A new practitioner must proceed in a very simple way. He must not attempt to discover scattered lobular pneumonia, or single tubercles; this is, in general, a matter of approximative induction or conclusion. The pathological knowledge of the respiratory organs is carried to-day to a certain minuteness, which makes the subject rather difficult to the understanding. My anatomical line and gradation is the following:—

Simple bronchitis.—Inflammation of the bronchial tubes of large and middle size.

Capillary bronchitis.—An extension of the former into the fine bronchial ramifications. The highest degree is—

Broncho-pneumonia—by some authors termed catarrhal pneumonia, by others vesicular bronchitis, which, taken anatomically, is all the same; and it is even difficult to draw a line of separation between capillary bronchitis and broncho-pneumonia, only we may apply this latter name, or its mentioned synonymes, to the highest degree of capillary bronchitis. As merely an appendix, or a somewhat higher degree, or neglected state of broncho-pneumonia, may be considered the—

Lobular pneumonia.—This consists in the hyperæmic, indurated, or suppurated state of either single scattered lobuli, in which case we say *scattered lobular pneumonia*, or there are a great many of them present in one part of the lung, and then we say *generalized lobular pneumonia*, and hence, then, the gradual transition to lobar pneumonia. The expression “*mammellous lobular pneumonia*,” signifies a circumscribed indurated state of single lobuli; and with the term “*partial lobular pneumonia*,” French authors understand a lobular inflammation whose centre presents much hardness, but gradually less towards the periphery. These are pathological subtleties important in science, but less available in practice. Then we have—

Lobar pneumonia.—This is the phlegmon of the lungs; it takes a whole part of one or both lungs, with all its constituent elements, and begins in general in the finest parenchyma of the lungs, without, or at least frequently without, bronchitis. In all these forms of broncho-pneumonia and pneumonia, there can be a complication of tubercles, either scattered, or extensive infiltration. We can only conjecture at their presence. Tuberculous caverns are seldom found in little children.

Pleurodynia.—Pain in the pleura, without fever or inflammation.

Pleuritis.—I term the first stage of acute pleuritis *pleuritic transudation*; there cannot be any mistake in this term.

Carnification has just the same value as in adults, but is less frequent in children.

Now, I am sure, that for practical purposes we

can limit our diagnosis upon the following points:—*Simple bronchitis*—numerous large râles, clear sound of percussion, much cough, free inspiration, free movement of the chest. Or, *broncho-pneumonia*—very much diffused large and fine râles, the vesicular murmur not always, nor everywhere, audible, the inspiration imperfect, the movement of the chest lessened, the sound of percussion less clear, in some cases even partially a degree of dullness. In this latter case, and by the more pertinacious course of the malady, we may suspect lobular pneumonia complicated with it; and if these fine râles and some dullness are perceived between the scapule, and the habit of the child scrofulous, we suspect tuberculosis. Or, there is a high degree of dyspnoea, the movement of the chest much impeded, no vesicular murmur in a large part of the chest, but around it some fine râles, or crepitation and respiration present, we are induced to suppose *lobar pneumonia*. Lastly, with regard to pleuritic affections. Impeded inspiration, with evident expression of pain in the countenance, without fever, denotes *pleurodynia* on that side where the chest moves less freely, and where we perceive, by auscultation, less distinctly the respiratory murmur. If, under these very phenomena, fever be present, we regard the affection as the *first stage of pleuritis*. If over the lower part of the lung, much dullness is present, no respiratory murmur, no râles nor crepitation, no bronchial respiration, this denotes a large *pleuritic transudation*. If the transudation is less, or begins to be absorbed, then râles appear, and bronchial respiration.

Gentlemen, these are the most important significations of physical symptoms of the respiratory organs important for practice, and attainable by the well-informed practitioner even in a tender child.

On the next occasion we shall speak on the symptoms of the heart, and proceed to those of the abdomen.

CASE OF POPLITEAL ANEURISM,

CURED BY PRESSURE ON THE FEMORAL ARTERY.

By W. WARD, M.D., HUNTINGDON.

Read at the Cambridge and Huntingdon Branch Meeting of the Association, held at Ely, June 17th, 1851.

THOMAS BAKER, of Spaldwick, aged 36, admitted into the Huntingdonshire Infirmary, March 13th, 1847. Has been for the last ten years of his life an ostler at an inn, and previously to that time a post-boy, and in the habit of drinking much beer, but has always had good health; is a stout muscular man, of sanguine temperament. In August last he first felt pain in the popliteal space and about the knee, which made him lame, but did not observe any swelling or pulsation. The pain and lameness then disappeared, but came on again three months ago. His wife then observed a pulsation under the knee, which had escaped his own observation; since that time it has gradually increased.