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PART I.

ORIGINAL COMMUNICATIONS.

ART. XV.—*On the Study of Diseases of Children.* By
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THE subject which I here introduce is one of growing importance, and one in which, I fear we in this country are perhaps a little *behind our neighbours* in England, Scotland, the Continent, and America.

Now that we have *distinct sections* in our associations for this branch of science, when it is carefully studied by many able physicians, and seeing that *separate hospitals* exist for nursing and treatment, and clinics with their professors and lecturers are exclusively set apart for research and instruction in the peculiar diseases of children all over the world, it is no longer necessary to point out the position which this branch of medicine now holds.

This singular tendency of the present day has certainly been productive of most of the greatest discoveries and advances of our time, for the Science of Medicine has

grown large and vast. There are many indications that the future of medicine will be more and more an age of particular studies. Deeper and deeper must men be drawn into each branch than their predecessors, for were this not so, our knowledge could not increase. At the present day our literature and knowledge as a whole are so great that they are in their perfection and entirety, far beyond the grasp of any ordinary mind, or the scope of the longest life. The investigation of separate departments of medicine has thus not only become a necessity, but the public now require it of us. We as a profession exist for the benefit of our fellow-man, and with respect to particular knowledge and training on the part of their physicians in the various by-paths of medicine and surgery, the public may now be said to have almost acquired the right of demand.

The British Medical Association has devoted a distinct section to the discussion of these diseases, productive of great good, and the International Medical Congress of Hygiene and Demography has done the same. In the various teaching centres of England and Scotland we have *lectures, cliniques* and *demonstrations* held, and *professors* and lecturers on diseases of children now hold important chairs in the universities and colleges of London, Edinburgh, Glasgow, Liverpool, Manchester, and Leeds; while Paris and Berlin are both remarkable for the very excellent work done in this department.

In America this study has reached a high pitch of development; witness the fine children's hospitals, the scientific dietaries, even the percentages of milk constituents being prescribed for each individual case, and compounded at their milk laboratories, and the appearance of books on separate departments, a kind of sub-culture—*e.g.*, Sach's "Nervous Diseases of Children, &c." This branch, then, has now a growing *literature* of its own, recently advancing by great strides. There are also in some parts of the world valuable periodicals devoted exclusively to the diseases of children. Such literature is, however, deplorably absent in this country, for England, Ireland, and Scotland between them have not yet raised a good periodical on children's diseases.

One of the most inciting stimuli to this study is that so

well expressed in the sentence, "The child is father to the man." Disease in infancy affects the future. It may mar and paralyse the individual's prospects in after life. Many diseases in adults are caused by the neglect of disease in infancy. If we neglect the health of the child we cannot have healthy men and women. In this connection are often seen the dire effects of "*infantile rheumatism*," of "*rickets*," of "*scurvy rickets*," of "*rheumatoid arthritis*" (that most peculiar and obscure disease), of "*posterior basal meningitis*" (the existence and pathology of which has only been recently investigated by Drs. Gee, Barlow and Still), of "*infantile paralysis*," of the various tubercular processes, of so-called "*marasmus*," of "*chorea*," or that strange affection known as "*splenic anæmia*."

Hosts of other diseases almost peculiar to infancy may be cited as bearing on the future of the child, and stimulating us to inquire with all assiduity into the obscure processes underlying these affections.

Rapid advances are now being made in this department. We have earnest investigators at work, and knowledge is being acquired and utilised. The accurate clinical investigation of the cases, the strict inquiry into the family and hygienic histories, the noting of all previous illnesses of the child, and finally the careful registration of its present condition will produce a mass of clinical material which will much elucidate the obscurities of the study, while *post-mortem* examinations have revealed wonders in recent years.

Again, nearly all the advances in the knowledge of these diseases have been made by men who have made a profound study of sick children, and familiarity with their maladies can be gained only by extensive experience at the bedside. Witness, for instance, the labours of Kassowitz and Jenner in "*rickets*," of Barlow and Cheadle in "*scurvy rickets*," of Barlow, Gee, and Still in "*posterior basal meningitis*," of Barlow and Warner on "*subcutaneous nodules*," or of M. Parrot, Baginsky, and others.

Touching such a serious subject, fraught as it is with some of the most obscure diseases that affect mankind, and surrounded with difficulties so numerous and profound that few have hitherto attempted to conscientiously fathom

its mysteries, it is interesting to view the position in medicine which this fascinating study has occupied. It was formerly "*tacked on*" to a course of midwifery; but unfortunately in most cases this only consisted in the name being appended to the professor's course of lectures. But those were the days when the obstetric art was less far advanced, when gynæcology as it exists now was unknown or *in embryo*, and before our accoucheurs became such brilliant operating surgeons.

This enormous growth of midwifery and its correlated sciences has therefore so—rightly—demanded all the skill and time of our masters in these arts that the insidious processes of children's diseases have of late years taken with many a second place, and with most no place at all. This has been inevitable, and so these diseases have been hitherto untaught in most of our schools. Again, between the two subjects of midwifery and diseases of children it is impossible to trace any scientific connection, except perhaps some accidents and conditions of the new-born as the direct result of child-birth. It cannot, therefore, be expected that the scientific research and teaching of all the depths of this study must still encumber our obstetricians, for instead of this supplement to the midwifery course being a simple, easy matter, as was at that time thought, it turns out to be perhaps one of the most obscure and difficult branches in the entire domain of clinical medicine. The result is therefore that these diseases have hitherto been necessarily *much neglected*, and even yet are *ill understood*.

Nothing in this study is more melancholy than the *high mortality*. The death-rate of children under one year of age is simply appalling. Into a discussion of the causes of this high mortality one cannot enter heré; they have been described elsewhere,^a and they are too profound to be embraced in a general review such as this. There is also evidence that serious neglect of sick children exists at the present day both in the homes and schools, chiefly, however, among the middle and poorer classes of society.

The phrases, "*I am sure it has worms!*" or "*It is evidently*

^a Cf. On the Mortality of Children in Ireland, 1886-1896. The Medical Magazine, June, 1898; also Transactions of the Academy of Medicine in Ireland, 1898; and the Dublin Journal of Medical Science. Ibid.

teething!" have too often led good physicians to relax their careful scrutiny of the case, and prescribing superficially or at haphazard, to pass over perhaps a case of *cerebellar tumour*, *cerebral abscess*, *intussusception*, or other fatal disease. It is well known there is hardly anything more difficult in medicine than to skilfully examine and diagnose the case of a young infant which perhaps at the time is resisting every effort of the physician. The occasional misleading story of the mother or friend aggravates this, and a trap is thus ever set to catch the unwary physician who may hastily prescribe, or to whom perhaps the subject may not be an interesting one.,

The *medical examination of a sick child requires a singular dexterity*. It is, moreover, mainly upon medical skill and influence that future improvement in these conditions must depend.

There seems also to be a remarkable *lack of instruction* in diseases of children, even at some of our large hospitals, and with this we should contrast the awakening interest of some of the provincial schools where the students are specially examined in this branch. The pessimistic spirit of almost all students in approaching an infant cannot therefore be wondered at. It starts crying, and the examination is given up, whereas if properly trained they probably would not have disturbed it at all, or, if so, they would know that the cry was a perfect mine of information even if the student could get no further. When every medical man will have the opportunity of taking out a certified course of practical instruction in diseases of children, he will be provided with the skill and knowledge to overcome such deficiencies, but not until then.

Until very recently no such teaching has existed, and so the diseases of children have been a sealed book to most of us. It is our duty as physicians to study with all the skill we can their peculiarly weird complaints.

Serious *disease is very frequent* amongst children, but it often requires much searching to find it out. The care of the young in other paths of nature teaches us many lessons, and a comparison of the lives of animals or plants contrasts forcibly with the neglect of children in many places.

One of the most interesting prospects to the student of

the diseases of children is the fact that *many cases of disease are still undescribed*. Cases are seen in hospitals and private practice which have no true description in medical literature. There is, therefore, abundant original work to be done in this domain. Diseases now surely fatal may yet be alleviated or cured by new methods. Many morbid processes need accurate investigation, and there is much to be seen at the bedside which cannot be found in any book.

The differences between the diseases of children and those of adults, those which attack one and not the other, the varieties even of the same disease as met with in both, are sufficient to fill a most useful volume; one can therefore merely allude to a few. The young child is of the frailest calibre, and its sympathies of the most tender and delicate nature. Disregard for this, nay, the passing oblivion of it, will hinder the investigation of many a case, and the opportunity will be gone, perhaps never to return, of examining some organ of importance. Mindful of the stranger who perhaps used it inconsiderately the child will not so resiliently lend itself again to a careful examination.

We are also dealing with a period when development and growth are increasing and rapid. This remarkable process of growth modifies in a certain measure each disease, and tends to remove from the child's ailment that sharp outline or delimitation and mapped out edge of disease which is witnessed in the fully grown organism. We have then quite a different semeiology. *The symptoms of disease in children are not the same* as those shown by adults, and the symptoms of even the same disease affecting both are quite different in the two cases. *Adult patients are therefore not a true guide* to the physician when he proceeds to investigate the case of an infant. In some cases the symptoms are indeed so different that they are hardly recognisable as due to the same morbid process.^a Again, the pathology of some diseases of children is different from that in adults. This is a striking fact. For instance, why will tubercle so readily affect the brain and meninges in a young child when adult patients so frequently escape? At present we cannot tell. It is so also in some instances. This

^a Cf. Enteric fever.

disparity is sometimes observable even in morbid anatomy itself. It cannot, however, be wondered at, for we find that some organs of young children are *anatomically different* from those of grown up individuals. These points in children still need investigation. The *brain* has an anatomy and physiology of its own in childhood; likewise the very *bones* which enclose it—at times, indeed, being so deficient as to scarcely suffice to contain it (“foetal rickets”). The *heart* varies from the arrangement so familiar in adults. The *stomach* is not the same. The *mouth* is essentially dissimilar. The *liver* varies in its proportionate size and relations. The *spleen* also. The *bladder* is not in the same place, nor has the *kidney* even the same anatomical appearance. Shown for the first time to any qualified medical man, I venture to say he would not even recognise it as human, but attribute it to one of the lower animals.

Likewise the *secretions* are unlike those of fully-matured organisms. The *urine* is not the same. Do we know the proper quantity of urine a child at any given age should excrete? Are we certain of its perfectly normal specific gravity? Do we know its correct chemical composition? As yet we do not know any of these points. With the other secretions the case may be similar.

Then, again, we find in infancy some diseases which are more unfavourable and dangerous than they are to adult patients, and, as once pointed out by Dr. West, rational treatment, and, as far as we can see, correct treatment, is often strikingly unavailing. Failure sometimes follows our best efforts. Young infants may change very rapidly, and therefore require more watchful attention.

In taking the *history* of these diseases very different information has to be sought for to that in an ordinary medical case. The parents must be questioned as to the birth, its antecedents, the food, state after birth, and hygienic conditions, in addition to the notes usually made in other cases.

Another very important subject is *the therapeutics of childhood*. How different from that of adult life. No rule of thumb is possible for use at different ages—*e.g.*, a child will stand a larger dose of belladonna proportionally than

an adult, while an infant will be poisoned by what *should be a proportionate* dose of opium. The doses of arsenic, mercury, or purgatives all have to be adapted to the idiosyncrasy of childhood. Then, too, counter-irritants are often recklessly applied to young children, and sometimes with disastrous effects. Again, in bronchitis, the drugs which may cut it short in the adult may actually drown and suffocate a child in its own secretions, and we may kill the infant with our "expectorants" forgetful of the fact that no young child ever expectorates. Linseed poultices applied to the chests of young children also require careful consideration, and I firmly believe have been responsible for a certain proportion of their deaths. The inhalation of steam must be likewise cautiously prescribed. At a past annual meeting of the British Medical Association it was desired to have a paper in the Section on Children's Diseases on "doses and drugs proper for different ages in children," but I believe no one could be found who would undertake to write it.

There are few facts which have more interest than the striking peculiarities exhibited in children's diseases, and the host of *ailments that are confined to this period of life*, are rarely seen in advanced years. The more one investigates these morbid conditions the more infinite do their distinctions become, and the more complex the questions underlying them. To enumerate these disparities accurately is a subject so large as to constitute a noble aim in any one professional life; therefore, one can here merely draw attention to it. "*Infantile paralysis*," "*tubercular meningitis*," "*marasmus*," "*posterior basal meningitis*," "*hydrocephalus*," "*chorea*," "*ricketts*," "*scurvy ricketts*," "*Friedreich's disease*," and a host of others all require elucidation, and offer the most interesting field for original research.

In young infants there is *nothing too trivial to notice*, and the slightest occurrences often have the gravest import. A little discharge from one ear, its alteration, or cessation, may lead to the discovery of a cerebral abscess or suppurative meningitis. A slight change in the character of a cough in supposed enteric fever may be the first sign to tell us our diagnosis is wrong, and that acute tuberculosis has

all along been deceiving us. This I have frequently observed.

The *field of work open*, then, to the earnest student of these diseases is very large. It will occupy him for a lifetime. So much has to be learnt, and so much taught. There is no lack of material. Then in our medical curriculum what more profitable course could possibly be adopted for part of the *fifth year* than a practical study of these peculiar ailments in a well-organised children's hospital? What more interesting than to observe some familiar diseases under totally new conditions and influences, perhaps cloaking their former appearance, requiring different treatment, and to learn many serious affections which have no counterpart in the adult? To the scope of inquiry in this field there is no limit.

The chief barrier to the advance of this branch, which has sometimes led men to discard it, undoubtedly is its inherent *difficulty*. It may be regarded as one of our most obscure and difficult studies. They meet us at the threshold and many have turned back when face to face with its initial embarrassments. They are none, however, which diligence and patience will not eventually overcome. We cannot question the younger patients. We can ask them nothing. They can tell you nothing. All our stock phrases become useless. Our stereotyped methods of examination fail us sadly. The patient can describe nothing, for intelligent speech is wanting, just as in veterinary work amongst the lower animals. Infants have, however, methods of expression of their own—a "*language of signs*," as it has been termed, which must be learnt. It is most expressive when carefully observed and understood. Disease has to be sought for in every organ and locality. The patient never knows where the mischief is, and the mother or friend rarely enlightens one. The cause and seat of the malady are thus sealed from our ears, and it may have existed for weeks or months unobserved until a skilful examination on our part reveals it. A frightened child also will tell us nothing, and indeed may directly mislead one.

After these few observations on the study of these diseases one can readily form an idea of what it should require from the medical man. In the first place it requires

the *observation* to be trained up to a very high standard indeed, perhaps exceeding that necessary in other branches. This assiduous culture of observation is a *sine quâ non* to the student of children's diseases, and once acquired is of lifelong value to the possessor. In addition to this the medical examination of a sick child requires exceptional dexterity, only acquired by careful practice and training, and our examination must be more cautiously and skilfully conducted than in adults. Unless this is so, much will be missed and passed over. I do not wish to convey the idea that the examination of an adult is an easy matter, far from it, but what I do wish to say is, that however difficult the examination of a fully grown individual may be that of an infant is infinitely more so. It is no easy matter to acquire one's information from a young child, and it requires a large amount of tact.

Then another point, this study^a is one essentially *over and above the ordinary practice of medicine*. It can be reached only through and beyond a sound knowledge of medicine. It is superadded to medicine. It is a new and complete Practice of Medicine under entirely altered conditions. No portion of medicine can be relinquished but a great deal that is fresh must be acquired. We must scrupulously train ourselves in a thoroughly new sphere. Like workers in miniature—and this is medicine in miniature—our methods must be more refined and exact, and executed with great skill and delicacy. Moreover, we must often modify our views of disease as based on the gross lesions of adult life.

Lastly, and above all, the investigation of disease amongst children if properly conducted will, I believe, be found to *teach* the practitioner and student *clinical medicine* more thoroughly than any other method whatever. It is the very best school or training ground for general practice of medicine. The examination of the organs of a young infant is not easy. Mapping out the cardiac dulness, sketching out the liver or spleen, deep examination of the abdomen, careful investigation of the nervous system

^a I do not call it "specialty," and I most strongly condemn the word, because to no one special organ should a physician's attention ever be confined.

with its motor, reflex, sensory, ⁺atrophic phenomena, and estimating the mental condition, combine to form one of the severest tests of any practitioner's knowledge.

The refinements of skill, the great tact, the opportunities and necessities for observation, the caution required in receiving the statements of friends, and the necessity of discovering for oneself the actual state of the system from facts which are evident to one's own senses, will be of life-long value to the physician.

Again, many of our most distinguished physicians have been experts trained in the examination of sick children.

Proficiencies, then, in these diseases can be acquired only by a regular course of practical training after a thorough medical education in a well-organised children's department or hospital. It requires a large amount of patience.

Never to be in a hurry and yet to be very quick is not easy. No class of practice taxes us more, and to be successful one must cultivate it. Further, it exacts from the practitioner the most delicate sense of touch that it is possible to acquire, for a rough handling will reveal very little.

I trust sincerely the Irish School, so justly famed for clinical work, will not continue to neglect a branch of medicine so refined and interesting, but will avail itself of the wonderful educational advantages it offers to senior students of a useful and fascinating study.

I have made no allusion to the peculiarities of the surgery of childhood. It is ably dealt with by others. I have merely touched upon a most important branch of education which of late years has not received from us, physicians in this country, the attention which, to my mind, it deserves.

ART. XVI.—*Clinical Reports of the Rotunda Hospitals, for One Year, November 1st, 1898, to October 31st, 1899.* By R. D. PUREFOY, M.D. T.C.D., F.R.C.S.I. (Master); and R. P. R. LYLE and H. C. LLOYD (Assistants).

(Continued from page 270.)

FACE PRESENTATION.

The face presented in five cases coming under treatment in the Intern Maternity, and three of these occurred