

The Proceedings at the Second Northern Congress of Pediatrics

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Report by

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Secretary General of the Congress.

Seventy pediatricists from Denmark, Finland, Norway, and Sweden were present at the congress, the president of which was Professor I. JUNDELL (Stockholm). As vice presidents Professor AXEL JOHANNESSEN (Kristiania), Professor MONRAD (Copenhagen) and Docent LÖVEGREN (Helsingfors) were elected by the members of the congress.

For main subject was chosen: — *Chronic Digestive Disorders in Artificially-fed Infants*. On the first day etiology and pathogenesis were discussed, with introductory lectures by Professor AXEL JOHANNESSEN (Kristiania) and Docent LÖVEGREN (Helsingfors), and clinic (symptomatology, diagnosis, and prognosis), with an introductory lecture by Dr. V. POULSEN (Chief physician, Copenhagen). On the second day prophylaxis and therapeutics were discussed, Dr. WERNSTEDT (Chief physician, Malmö) opening the discourses.

Professor JOHANNESSEN gave in large outlines a historical survey of the subject, and based on his great experience gained at the University Clinic of Pediatrics at Kristiania he mentioned the importance of the various etiological and pathogenetic factors (alimentary, infectious, constitutional), dwelling especially, among other things, on Bessau's attempt at reconciling the alimentary and bacterial points of view. Out of 271 cases of chronic digestive disorders treated at the University Clinic of Kristiania

during the last years, 40 per cent. must be supposed to have had their origin in the so-called »Milchnährschaden», while only 6 per cent. could be attributed to the so-called »Mehlnährschaden». 70 per cent. of the cases, in the least, had their incidence before the age of six months, and more than half of these during the first three to four months of life. 30 per cent. of the patients were not breast-fed, and the remaining 70 per cent. only for slightly above two months. 30 per cent. were premature children. The rate of mortality among the patients had fallen down to 10—14 per cent. during recent years, while it was previously 40—50 per cent.

Docent LÖVEGREN began by mentioning the part played by the alimentary, constitutional and infectious factors in the etiology of chronic digestive disorders; he also called attention to the part played by the individual care of the infant and, perhaps, by the psychic factor, which may, in certain cases, account for the difficulties of hospital treatment. While direct inspection will, in all essentials, give us information as to the etiology of these affections, in regard to their pathogenesis, we must have recourse to special methods of examination, and, if these fail us, which is often the case, we must act on a working hypothesis. LÖVEGREN showed how much we are yet groping in the dark with regard to the pathogenesis of chronic digestive disorders owing to our imperfect knowledge of the physiology of nutrition. He emphasized, besides the biochemic and secretory functions of the intestinal epithelium, the importance of the mere physical factor (the significance of osmosis) in regard to pathogenesis, and, referring to his own studies based on animal experiments, as to the sensitivity of the liver towards the shiftings of the osmotic pressure in the portal venous system, he could not forbear to associate these relations with the pathogenesis of digestive disorders. Therefore, he considered Bessau's view as premature, in so far as Bessau would deny the significance of the mineral salts in regard to pathogenesis.

Dr. V. POULSEN began by describing the symptoms of the chronic digestive disorders which he includes in the name of dyspepsia chronica. He suggested a classification into three groups: chronic fat-dyspepsia, chronic carbohydrate-dyspepsia, and chronic protein-dyspepsia. These three groups might then be subdivided according to etiological views into an alimentary, an infectious, and a constitutional group, and the carbohydrate-dyspepsia again according to the clinical picture into an atrophic, a hypertrophic and a »puffy» or dystrophic form. The atrophy (Finkelstein's »decomposition»), which he is only accustomed to

reckon with when the question is of the classical pedatrophie, he would prefer not to rubricate into a separate group. He showed that Finkelstein's and Czerny's nomenclatures were only slightly divergent, but he preferred his own classification as it did not necessarily associate the presence of diarrhoea with dyspepsia.

The three lecturers having finished their discourses, a long discussion ensued. Professor AF KLERCKER (Lund) preferred the term dystrophia to dyspepsia, and an etiological principle of classification: Dystrophia lactogenetica, amylopoetica and postinfectiosa. He had not encountered any cases of protein dystrophia. Docent WERNSTEDT, (Malmö) preferred a clinical classification of chronic digestive disorders with and without dyspepsia. Professor FRÖLICH (Kristiania) found it difficult to agree upon a nomenclature before we knew the physiology of overnutrition. We do not know whether »Milchnährschaden» be due to a morbid alteration in the fat metabolism, so he would prefer the term of milk dyspepsia to fat-dyspepsia. Docent LICHTENSTEIN (Stockholm) pointed out that atrophies had become of rare occurrence at Stockholm. He preferred a clinical classification into a milder form: 1) dystrophia resp. hypotrophia a) simplex (without diarrhoea), b) dyspeptica (with diarrhoea) —, and a more severe form: 2) atrophie, with the same subdivisions.

Professor MONRAD (Copenhagen) considered Poulsen's classification as readily surveyable, it would easily include most clinical pictures. The time was, however, not yet ripe for the working out of a generic Scandinavian nomenclature of these diseases. He agreed with POULSEN that the presence of diarrhoea was not necessary to make the diagnosis of dyspepsia, for in case of fat dyspepsia there was often obstipation. Atrophy, Parrot's atrepsy, had also become rare in Denmark, probably because a one-sided diet of carbohydrate food (its most frequent cause) was now but slightly in use. — On the basis of 2,000 examinations of newly-born infants at Kaiserin Augusta Victoria Haus at Berlin, Professor YLPPÖ (Helsingfors) pointed to the infectious causes as predominans in regard to the incidence of chronic digestive disorders. Dr. ERNBERG (Stockholm) likewise pointed out the significance of infection and of constitutional factors in regard to these diseases, confirming, besides, that atrophies had become rarer. Docent LÖVEGREN (Helsingfors) emphasized the importance of the alimentary etiological factors, the circumstance that, in Finland too, chronic digestive affections had become of rarer occurrence, just indicated the dominating part played by the alimentary etiological factors.

Professor JUNDELL (Stockholm) maintained that the classification ought to be primarily clinical and not etiological, as the etiology cannot be established with certainty neither by means of anamnesis nor by examination. Professor JOHANNESSEN (Kristiania): There are other conditions too, beyond those which can be improved by the educational work done by physicians, which are of importance in regard to the etiology of infantile dyspepsias. Professor MEDIN (Stockholm) thought that the decline in the rate of incidence of atrophies might be attributed to the general improvement of the state of health among children, and be thought to have influenced the fall in the death rate. At the beginning of last century the mortality was, during the first year of life, 19,5 per cent., at the year 1900, it was 10 per cent., and now, twenty years later, it is 7,5 per cent., which is a consequence of the improved standard of living among the Swedish population. Dr. POULSEN (Copenhagen) admitted having asserted his point of view rather sharply, but, nevertheless, he thought that his classification permitted of a rather rapid rubrication of the individual cases. Finkelstein's classification was capacious, but Finkelstein, too, used etiological subdivisions. He hoped that the Scandinavian pediatricists could agree upon a nomenclature, as he did not find any very grave discrepancies in the standpoints advanced.

This part of the main subject having been debated upon. Professor KJ. OTTO AF KLERCKER (Lund) and Docent W. WERNSTEDT (Malmö) delivered lectures on spasmophilia, under the headings, respectively, of: *Some Observations concerning the Pathogenesis of Spasmophilia*, and *Further Contributions to the Solving of the Problem of Spasmophilia*. At the first Scandinavian Congress of Pediatrics AF KLERCKER had presented some investigations performed by late Dr. Jeppson, showing that certain potassium salts, in subject animals as well as in children, had the power of augmenting the mechanic and galvanic nervous irritability, producing, in certain cases, even a spasmogenic effect; of the sodium salts tested only the phosphate had a similar effect, however not quite so constant. As a hypothesis was advanced that the potassium phosphate should be the proper spasmogenic salt, and, according to this view, the wellknown »spasmogenic» effect of cows milk and whey, respectively, should be due to their relatively high content of potassium phosphate. AF KLERCKER now had examined how far the spasmophilic state might be thought to develop on account of a preceding too abundant supply of potassium phosphate with the food. On determining

the potassium, phosphoric acid, and lime contents of the cow's milk applied at the University Clinic at the various seasons, he found no great variations as far as the latter two substances were concerned, whereas, in the case of the potassium, he found a maximum content in March (2,22 pro mille) and a minimum one in July-August (1,4 pro mille); potassium is found in cow's milk chiefly as a phosphate; but although investigations prove the potassium phosphate content to be highest at the season at which cases of spasmophilia occur most frequently, and lowest at the season at which they are most rare, AR KLERCKER is not of opinion that the pathogenesis of spasmophilia can be exclusively attributable to a too abundant supply of potassium phosphate; against this theory speaks, partly, that severe spasmophilia may occur in children whose diet is very poor in milk and, on the whole, deficient in potassium phosphate, as well as in other mineral salts; and partly, that it is not cured by means of a wheyless diet, in support of which he stated some experimentally examined cases: two patients who were treated with a wheyless diet, but in whom normal conditions were not established until a slight quantity of human milk was added to the food. He was, therefore, of opinion that human milk should be supposed to possess direct protective properties (vitamines) against spasmophilia.

Docent WERNSTEDT's lecture will be published in extenso in *Acta pædiatrica*. It shall, therefore, only be briefly stated here, that his investigations showed that the different action on spasmophilic infants of human milk and of cow's milk is hardly attributable to their unequal contents of salts, not to a possible spasmophilo-protective substance in human milk, but that the decisive factor is the unequal correlation between some of the main constituents of the milk. In a large series of experiments (136 examinations performed on 20 children) he showed that the whey of cow's milk loses its spasmogenic effect if sugar be added to it at a quantity so as to make the relation between salts and sugar equal to those of human milk. Finally he stated that if spasmophilic infants were fed with a mixture of $\frac{1}{3}$ liter 12% cream, 55 g. sugar and water up to 1 liter, this will exert the same alleviating effect on spasmophilia as does human milk, and this mixture generally agreeing well with the infants and being of the same caloric value as human milk, it may be recommended as a nutriment in the case of spasmophilic infants.

In the ensuing discussion Professor JUNDÉLL used Wernstedt's researches as argument against the vitamin theory in

tetany as well as in rickets, whilst Professor MONRAD emphasized the difficulty of bringing Wernstedt's investigations in accord with the periodical seasonal incidence of spasmophilia. Professor AF KLERCKER found that Wernstedt's investigations did not account for the favourable effect of the negligible quantities of human milk in the two cases mentioned in his lecture. Dr. ERNBERG considered the accumulation of infections at certain times of the year the cause of the seasonal incidence of tetany. In his final replication, Docent WERNSTEDT pronounced that his investigations did not permit of the drawing of any conclusions in regard to the underlying causes of the incidence of spasmophilia. They just show that, in children suffering from spasmophilia, cow's milk releases, resp. increases, the spasmophilic symptoms owing to its divergence from human milk in the relative proportions between salts and sugar.

Dr. KIRSTEN UTHEIM (Kristiania) delivered a lecture on *Blood studies in Infants suffering from Chronic Digestive Disorders*. These investigations, which had been performed at Mariott's Clinic at St. Louis, showed that children suffering from infantile atrophy have a reduced power of performing an oxidation process such as the one of changing benzol to phenol. The caloric value and carbon content of the urine are considerably augmented in such children. The high energy factor of the urine is not due to an augmentation of creatinin, uric acid, and amino-acid, but to an increased concentration of organic acids in the urine. The excretion of ammonia is correspondingly increased. The organic acids of which the question is, are but to a slight degree dissoluble in ether, and do not seem to be augmented by means of an increased quantity of fat in the nutriment. The caloric loss in feces and urine, expressed as a percentage of the caloric content of the food, is considerably augmented in the said children, as it reaches up to 26 per cent., whereas in normal children the loss is only 7—8 per cent. This lecture has been published in the American Journ. of diseases of Children Oct. 1921.

In connection to this Dr. FRIDERICHSEN (Copenhagen) advanced that in his investigations as to the neutralizing regulation of the intermediary metabolism in atrophic children he had found this to be reduced just as in the case of intoxications, the figure for hydrogen in the blood (P.H. 7.15—7.20) being below normal (P.H. 7.30), which, like Uthheim's investigations of the urine, showed that the oxidation processes in the intermediary metabolism were reduced. Furthermore, he had found that the intermediary acidosis was not due to the presence of ketones in the blood.

Professor MONRAD (Copenhagen): *On the Treatment of the Exsudative lymphatic Diathesis.* This lecture will be published in *Acta pædiatrica*. According to Monrad's view *materia peccans* in this diathesis is the animal fat, which he totally prohibits in these patients, whereas he allows vegetable fat. For the last four years, only, his material consisted of 327 patients, 203 of whom were treated ambulatorially, 124 at hospital. In the discussion he was supported by Dr. BRINCHMANN (Kristiania) and Professor FRØLICH (Kristiania), while Docent LICHTENSTEIN (Stockholm), partly on the ground of his own successful feeding experiments with butter-meal gruel, partly supported by Niemann's investigations, confessed his doubt as to Monrad's conception being correct. Professor JUNEDELL (Stockholm) had not obtained beneficial results from his administration of a fatless diet to the patients in question, so he attached more importance to the local treatment. Dr. ERNBERG (Stockholm) thought that treatment of the nervous symptoms were of main importance, and he questioned the lecturer as to his attitude in the case of tuberculous children with exsudative diathesis. Dr. COLLETT (Kristiania) also emphasized the importance of the psychic factor. LÖVEGREN (Helsingfors) thought that not only fat, but other foods too, such as for instance cocoa, might act idiosyncratically. Dr. v. MATÉRN agreed in Lövegren's view. In his replication Professor MONRAD advanced that when several of the partakers of the discussion asserted to have tried a fatless diet without any result in cases of chronic eczema, strophulus and asthma, it should be fully ascertained primarily, that there had been absolutely no animal fat in the food, and, secondly, that the children had actually suffered from exsudative-lymphatic diathesis, as it was far from being all cases of strophulus, asthma, *lingua geographica*, enlarged tonsils etc., that rested on that diathesis. Therefore, he doubted that Lichtenstein's eczematous children, which recollected on being fed with butter-meal gruel, had actually suffered from exsudative diathesis. He attached only slight importance to Niemann's metabolism experiments, the sources of error being too numerous. Ernberg and Lövegren had mentioned the nervous symptoms; he thought, however, that there was a question of confusion with the neuro-arthritic diathesis, which must by no means, as it was done by Czerny, be identified with the exsudative-lymphatic diathesis. As to Ernberg's question whether he did apply a fatless diet also in cases where the children were suffering from active tuberculosis, his reply was in the negative; the combating of the active tuberculosis was of such primary importance, so as to place

treatment of the diathesis secondarily. Strange enough, however, exsudative-lymphatic children were seldom tuberculous. In 144 of his patients tuberculin tests were performed repeatedly; 133 gave negative reactions, 11 only positive. Frølich had mentioned his experiments with fatless diet in 46 children, the results attained went far to support his own views, and he had been glad to receive Brinchmanns' adhesion. Brinchmann having had the opportunity of seeing his own feeding experiments at Dronning Louise's Children's Hospital. Finally he warned against the indiscriminate adenotomy and tonsillotomy. In his material 75 adenotomies, altogether, had been performed without the slightest effect, and 13 children had been tonsillatomized, likewise without effect. In exsudative-lymphatic children suffering from adenoid and hypertrophy of the tonsils, a fatless diet should always be instituted if there is no indication for immediate surgical aid, and in many cases there will be no need at all of operation.

Professor I. JUNDÉLL (Stockholm): *Investigations concerning the pathogenesis of Rickets*. The lecture will be published in *Acta pædiatrica*. Jundell had devised the following experiment: a number of healthy children were given milk from cows that were fed with a feed stuff containing no fat-dissolving A-substances; none of the children developed rickets. Other, highly rickety, children had milk from cows being fed with a feed stuff very rich in vitamins. None of them improved in the course of 41—122 days of observation. This speaks against rickets being an avitaminosis.

Professor A. YLPPÖ (Helsingfors): *The Development of Ossific Nuclei and Rickets, and the part played by these factors in regard to Growth Disturbances in Premature Infants*. Premature infants increase in growth and length at a considerably slower rate than do children who are carried to full term. This disturbance of growth sets in immediately after birth. The lecturer examined how far rickets, together with other factors, would account for this fact. The investigations, which were performed by means of skiagraphs, comprised 88 premature infants and, as controls, some infants carried to term. The lecturer did however not account for all the results of his investigations, but confined himself to the question of rickety alterations during the first months of life, and to the occurrence and development of the ossific nuclei. As for these nuclei in the lower femoral epiphysis, the prevalent view is that the presence of these is

an indication of the child's having been carried to full term. Ylppö's examinations showed that the formation of this ossific nucleus normally begins towards the close of the seventh month of pregnancy, so that we shall have to drop this as an indication of a child's having been carried to term. Furthermore, his investigations showed that the occurrence of the ossific nuclei was delayed in premature children, and that, almost without exception, rickets is to be found in such children during their first months of life, the affection having most probably, already begun to develop in intrauterine life, so as to justify our talking of a congenital rickets.

Doctor B. HAMILTON (Stockholm): *Continued Investigations concerning the Lime Assimilation in Premature Infants.*

On examining the relations of lime assimilation in premature infants, it proved that these children in most cases had very low figures for lime retentions during their first months of life. (Lecture delivered at the first Northern Congress at Copenhagen 1919. The results of the analyses published in the American Journal of Diseases of children 20, 316, 1920.) These low retentions may presumably be explained in the following way: children, carried to term, breast-fed with a sufficient quantity of milk, show a rather constant excretion of lime of about 0,2 g. CaO daily, independent of ingestion, age and weight. Such a quantity of lime thus seems necessary for the intermediary metabolism. It proved, now, that the premature children had, in most cases, normal retentions if only the ingestion of lime exceeded 0,2 g. CaO daily. It would be supposed, therefore, that these children also would require such a quantity of lime for the intermediary metabolism, and that the lime ingested goes primarily to the gratification of this requirement; the quantity only that is left when this requirement has been gratified, is accessible to retention. These examinations of the lime assimilation in breast-fed infants show, very constantly, a retention of about 0,015 g. CaO per day and kg. during the first three months of life, later about 0,025 g. per day and kg. With these retentions the relative lime content of the body at birth (7—14 g. CaO per kg.) cannot possibly be retained. It can be approximately calculated that the decline in the lime content, which is bound to occur after birth, reaches its minimum at the 4th to 5th month. This decrease in the lime content is, according to all probability, due to the consumption of a congenital depot of lime. In premature children, too, such a fall in the lime content would be bound to occur after birth, and, owing to the

low retentions; this reduction would in most cases be very considerable. As there is every reason to assume that the congenital lime depot in these children is missing or insufficient, the reduction in the lime content should in this case be due to loss of lime in the osseous tissue.

C. A. LOOFT, M. D. (Bergen). *Rachitis cerebialis*. The lecture will be published in *Acta pædiatrica*; it treats of studies of the intellectual development in 134 rickety children as compared with 73 sound children of the same age groups. For the determination of the intellectual development four tests were applied: the time for the intentional grasping of things, the time for the commencement of the static functions, the beginning of talk and the vocabulary available at any time, and the child's attention, chronographically determined, to light, sound (tones), and to toys in motion. The results proved that the rickety children were considerable backward in intelligence as compared with the sound babies. Rickety children that had undergone anti-rachitic treatment, ranged above those that had not, but did not come up to sound children. As to how far the intellectual debility will persist through life, this can only be ascertained by following the children through the years; immediately after the disappearance of the clinical symptoms, at least not all of the patients are intellectually normal. In regard to the causation of the intellectual debility, the functional impairment of the brain owing to disturbance in the lime metabolism and ensuing deficiency in lime, as well as the relations of the phosphorous, should be supposed to play a part.

On the second day of the Congress the discussion concerning *Chronic Digestive Disorders in Bottle-fed Infants* was continued, Docent WERNSTEDT (Malmö) opening the discussion with a lecture on *Treatment and Prophylaxis* in regard to these affections. Having given a survey of the subject based on personal experience, he mentioned the different methods of treatment, which depended on the presence or absence of diarrhoea, and he advanced the following theses: 1) Butter-meal gruel is not only a good normal food in certain circumstances, it is also applicable as sick food in certain cases of digestive disorders, 2) the normal food of artificially fed infants should be revised especially in regard to the question of the significance of the relative proportions between the various main constituents of the nutriment. $\frac{1}{3}$ milk should be excluded as normal food.

In adhesion to Wernstedt's therapeutic methods, Dr. V.

POULSEN (Copenhagen), delivered a lecture on butter-meal gruel. In 16 patients, all other sorts of food having previously been tried, he tried butter-meal gruel with a beneficial result in 11 cases. The indication is failure to gain in weight and growth. An absolute proviso is that the children have no diarrhoea, and have had no diarrhoea recently. In very serious and advanced cases of digestive disturbance, butter-meal gruel should not be instituted. Whether the beneficial results obtained from butter-meal gruel be due to the fine correlation between the various ingredients constituting it, or to its high caloric content, we do not know.

The ensuing discussion now turned upon both lectures. Professor MONRAD (Copenhagen) warned against the application of butter-meal gruel as a routine food. He advised against giving newly-born infants $\frac{1}{2}$ milk, $\frac{1}{3}$ milk should be given initially, and not until the second or third week should one rise to $\frac{1}{2}$ milk. Otherwise he and Wernstedt agreed in their therapeutics, excepting that he held the decisive factor in case of fat dyspepsia to be the diminished ingestion of fat and not the increased ingestion of carbo-hydrates. Professor JUNDÉLL (Stockholm) thought that there was no risk in beginning with $\frac{1}{2}$ milk. Dr. ERNBERG, (Stockholm) had applied butter-meal gruel in 254 cases (115 being in their first quarter, 76 in the second, 38 in the third, and 15 in the fourth, and in 10 cases to children above one year of age). Contra-indications: serious infections and, especially, severe cases of diarrhoea. He had not encountered any special incidences of rickets subsequent to the feeding with butter-meal gruel, the which he would, however, not recommend as a normal food. Docent LICHTENSTEIN (Stockholm) agreed with Docent Wernstedt as to method of treatment. He had applied butter-meal gruel in about 200 cases also to premature infants, either unmixed or as »allaitements mixte», with good results. He had also applied it in atrophic cases, contra-indication being the presence of diarrhoea. He did not think it productive of rickets, any more than any other food which tends to rapidly increase the weight; he would, however, not recommend it as a routine food. Dr. HEINEMAN (Stockholm) had applied butter-meal gruel during the last two and a half years to 70 young infants who were deficient in weight and partly slightly debilitated, and he had obtained good results; 25 per cent of the infants developed rickets; they showed a rather low resistance against infection. Dr. BRINCHMANN (Kristiania) found butter-meal gruel to be a valuable convalescence nutriment in atrophic cases without dyspepsia. It may,

however, also be administered in mild cases of acute dyspepsia. Singeing of the butter and baking of the flour is not necessary in the preparation of butter-meal gruel. Rickets was not very frequent of occurrence subsequent to the feeding with butter-meal gruel. Professor JUNDELL (Stockholm) wanted definite indications for the application of butter-meal gruel. As a routine-food, also in cases of debilitated and premature children, Jundell had seen excellent results in regard to gain in weight and growth, but the children, like normal children, developed rickets in a high degree, so as to counter-indicate its use as a normal food. Besides, the resisting power of children fed with butter-meal gruel, towards infection, was yet unknown. Butter-meal gruel is deficient in vitamins; however, the administration of a butter-meal gruel rich in vitamins (prepared by mixing raw cream with sugar, flour and water) did also produce severe cases of rickets among the children. Professor YLPPÖ (Helsingfors) had applied milk mixtures rich in protein in cases of chronic digestive disorders with dyspepsia or diarrhoea. The acid reaction of the stools can be changed to alkaline by increasing the protein content of the food, it is not the absolute protein content that is decisive, but its correlation to sugar and salts. In cases where the protein-rich milk does not lead to any result, an egg-gruel may often be applied with success. (500 water, 15 wheat-flour, 1 egg, 500 milk.) Professor AF KLERCKER (Lund) had seen good results from butter-meal gruel in cases of premature infants. He has shown that singeing of the butter is unnecessary, the singed butter containing in reality more volatile acids than the unsinged. Dr. ERNBERG (Stockholm) did not consider the craniotabes subsequent to the application of butter-meal gruel and other foods rich in calories, as dangerous. Docent LICHTENSTEIN (Stockholm) would likewise protest against butter-meal gruel being established as a rickets producing food. Docent LØVEGREN (Helsingfors) feared that butter-meal gruel should reduce the immunity from infection. Professor FRÖLICH (Kristiania) warning strongly against using butter-meal gruel as a routine food, stated that, at Kristiania, a mixture of rusks, sugar, milk, and butter had already been in general use as a normal food half a century ago. He agreed with the lecturer in his dissuading from $\frac{1}{3}$ milk, he himself applied $\frac{1}{2}$ milk with 7 per cent. sugar increasing to $\frac{2}{3}$ milk + 5 per cent. sugar at the age of 4—5 weeks. Dr. LOORT (Bergen) warned against using butter-meal gruel as a normal food, having seen rickets occur subsequent to its application in nearly all cases. At Bergen a mixture of rusks (10 g. wheat flour, 3 g. sugar, egg and 1,5 g. butter) was

in general use, and this food produced rickets. Dr. A. MEYER (Copenhagen) called attention to the pseudorachitis described by the Dane, Wichmann, who based on a large material had demonstrated that phenomenon in normal breast-fed babies during their first months of life, if they had gained excessively in weight. He would suggest to have examined whether a number of those cases which had been mentioned as rickets subsequent on calorie-rich food, were not actually pseudorachitis.

In a lecture on *The Mortality from Tuberculosis during the first five Years of Life as compared with the Frequency of Cattle Tuberculosis in the various counties of Sweden*, Docent LICHTENSTEIN (Stockholm) showed that any influence on infant mortality from tuberculosis by cattle tuberculosis cannot be demonstrated in Sweden, whereas investigations point to human sources of infection as being predominant in regard to infantile tuberculosis. The lecture will be published in *Acta pædiatrica*. Professor MONRAD stated that similar conditions were prevalent in Denmark.

ARTHUR COLLETT, M. D. (Kristiania) described a case of *Hermaphroditism and premature sexual development in a child of one and a half year*; the anomaly was due to tumour in the suprarenal capsule, which was removed by operation.

Dr. GRUND (Stockholm) delivered a lecture headed *Contributions to the Studying of Periodic Vomiting with Acetonemia*. Based on the investigation of nine cases, the lecturer concluded that, intervals of no carbohydrates in the food, or a reduction of carbohydrates, will produce a considerably higher acetonuria in children suffering from the said disease than in healthy children. This fact, collated with the considerable acidosis which occurs at an early stage of the vomiting attacks, undoubtedly leads one to draw the conclusion that these children must suffer from a defective assimilation of carbohydrate and fat, which, no doubt, constitutes an important factor in the occurrence of the periodic vomiting. During the attacks he had seen beneficial results from treatment with grapesugar enemas for combating the acidosis; and besides, he recommended chloral. In the periods intermitting the attacks the patient should be kept on a diet poor in fat and liberal in vegetable food-matter, and not more than $\frac{1}{4}$ l. milk daily. The neuropathic symptoms should be attended to. Professor FRØLICH (Kristiania) found in Grund's investigations a corroboration of the view advanced by himself

in 1916. He had treated 46 patients altogether (30 girls and 16 boys); once among his material three children belonging to one family, and twice two of a family, had the affection; in one case, too, the father of the patient had been affected with the disease in childhood. Hæmaturia was detected once in one patient, twice in another; icterus was demonstrated once. He mentioned the differential diagnosis of this disease as compared with appendicitis and ileus. Treatment should consist in a fatless diet. There are formes frustes with one day's ill-feeling, nausea, bad spirits, and frequently a herpetic rash. He believed the affection to be conditioned by the patient's defective power of assimilating fat, perhaps owing to an insufficiency in the relation between the carbohydrate- and fat-metabolism. Dr. FRIDERICHSEN (Copenhagen) stated that the disease in question was rare in Denmark. He reported a case, exhibiting curves of the acetone concentration in the blood subsequent to one test-meal consisting of fat, and another consisting of proteins, which proved that the latter also produced a considerable, however slower, rise in the ketonuria. Professor JUNDELL (Stockholm) corroborated Grund's and Frølichs statements.

Dr. L. STOLTENBERG (Kristiania) delivered a lecture headed »*The Action of Subcutaneous Salt Injections on the Temperature of a young Infant, and on the Chlorin- and Nitrogen Content in the blood.* Investigations proved the Cl-, Na- and N-content of the blood serum to be very labile. Subcutaneous injections of Ringer's mixture and of physiological salt solution did not have any effect on the Cl- or N-content, nor did they produce any rise in temperature. The fever caused by the sodium chlorid was due to bacteria in the solution, and therefore, saltwater for subcutaneous injection should be redestillated and sterilized immediately before use. Docent LÖVEGREN (Helsingfors) had established by experiments that subcutaneous or peripheral intravenous saltwater injections do not cause any rise in temperature, where as portal intravenous injection produces such a rise owing to alteration in the osmotic pressure.

Docent HOLMDAHL (Lund) in a lecture called *the Instruction on the Subject of Myelodysplasia seen in the anatomical Light*, showed that the cardinal symptoms in this branch of instruction (which consists in considering enuresis as caused by a hydromyeloic process in the sacral spinal cord) are anatomically unmaintainable; thus, a defective closure of the sacral curve does not justify the diagnosis of spina bifida occulta or myelodysplasia,

because such defective closure is quite a normal variant in the ossification of os sacrum, and, moreover, the material advanced originates from children or young people in their twentieth year of life, at which time of life the ossification has not yet been accomplished, so as to make such material utterly valueless in regard to the conception of the definitive formation; fistulae and cicatrices in the region sacrococcygea and fovea coccygea cannot, from an anatomico-embryological point of view be considered as symptoms of a rudimentary spina bifida occ. or myelodysplasia, as these formations histogenetically rest upon suppositions quite different from those alleged to a spina bifida. Enuresis should not be considered as a pathological process in medulla sacralis, as such an affection would give rise to a functional disturbance of the bladder just in the opposite direction.

Dr. A. BRINCHMANN (Kristiania) in a lecture on »*Chronic Colitis in Childhood*» belived to be able, by means of catalase determinations in feces from children, to demonstrate chronic states of inflammation, probably localized to the mucuous membrane of the colon. It has previously been difficult to comprehend this group of disease as an independent affection, most frequently it has been conceived as a functional disturbance resting on a nervous or other basis. A complete description of the nature, symptomatology and therapeutics of this affection will be published later. Docent LICHTENSTEIN (Stockholm) asked the lecturer why he thought the affection localized to the colon.

Dr. GRETA MUHL (Stockholm) delivered a lecture, headed: *The Influence on Metabolism of a Fat-deficient Diet in the case of Breast-fed Infants*. In two healthy young breast-fed infants the nitrogen-, fat- and mineral-assimilation was examined for three normal periods and seven periods of reduced fat content in the diet. The deficiency in fat seems to have a specific resorption-improving action on the lime resorption, in the absence of any serious case of dyspepsia. Furthermore, the experiments proved the nitrogen retention to be reduced owing to increased excretion through the kidneys, which would account for weight and growth being below normal. The total resorption of salts was almost unaltered like that of the normal periods during which the infants had gained more in weight, the organism disposing of the superfluous salts to the effect that Ca and P are deposited in the body, Ka, Na, and Cl are excreted through the kidneys.

In a lecture headed: *Contributions to the question of Nosocomial Infections and the problem of combating them*, Dr. A. HÖJER (Stockholm) stated a statistics of the nosocomial infections of diphtheria, scarlatina, morbilli, varicellæ and pertussis, at Kronprinsesse Louise's Children's Hospital at Stockholm, covering the years 1911—1920. He entered upon the problem of combating the nosocomial infections, calling attention to the individual isolation such as it is carried through at Feer's »Box Ward» at Zürich. In the ensuing discussion, Docent LICHTENSTEIN (Stockholm) advanced as his opinion that the carrying through of the box-system would not prevent the spreading of measles at a ward; the staff must also be reckoned with as a source of infection. The psychic effect of the box-system is scarcely beneficial. Dr. ERNBERG (Stockholm) emphasized the importance of having many small rooms in a ward and a sufficiently numerous staff. Dr. A. MEYER (Copenhagen) advised frequently repeated examinations for diphtheria bacilli, attaching likewise much importance to the staff as carriers of infection. Professor MONRAD (Copenhagen) laid stress on the importance of isolation, but he was against the box-system. Professor JUNDELL (Stockholm) recommended sick rooms in larger blocks of buildings, where the patients might be kept who not wanted to admission to the hospital.

As honorary members of the Association of Northern Pediatricists were elected:

Professor AXEL JOHANNESSEN (Kristiania), Professor PIPPING (Helsingfors) and Professors WÆRN and MEDIN (Stockholm).

The Board of Direction consists of the following members elected at the Congress:

for Denmark: Professor BLOCH, Professor MONRAD, Dr. med. A. MEYER (secretary general), Dr. FRIDERICHSEN (secretary),

for Norway: Professor FRØLICH, Dr. med. LOOFT, Dr. med. COLLETT (secretary),

for Sweden: Professor JUNDELL, Docent WERNSTEDT, Docent LICHTENSTEIN (secretary),

for Finland: Professor YLPPÖ, Docent LÖVEGREN, Dr. SOURANDER (secretary),

The Congress, which was inaugurated with a reception at the characteristic »Höganloft» at the »Skansen», the evening before the opening of the Congress, and which ended with a banquet at the »Skansen» on the last day of meeting, was passed under the most pleasant forms and in the best of spirits due to the extraordinary hospitality and kindness of the Swedish hosts.