

Rickets.

A LECTURE DELIVERED AT THE INFANTS' HOSPITAL, VINCENT SQUARE, S.W.

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(Concluded from page 165.)

What are the defects in the diet which are responsible for rickets? The first great factor is deficiency of fat. It is very seldom that one sees a baby suffering from any marked form of rickets if that baby has had a sufficient supply of fat. Next to fat comes a deficiency of proteids. But most of the severe cases of rickets I have seen have been caused firstly by the deficiency of fat, assisted by a deficiency of proteids. There is not the smallest doubt that from a deprivation of fat, and also a deprivation of the necessary proteid material, the worst cases of rickets result, but the most powerful cause of the disease is the absence of fat.

One other point I must explain, however, in reference to this deficiency. Remember that you can have food materials present in milk which are destroyed by the treatment to which the milk is subjected, and in this respect there is nothing so likely to injure the properties of milk as boiling it. I see many babies who have received a considerable amount of fat and proteids in their diet, and as regards the actual amount one could not say the supply was defective, but the milk has been systematically boiled, the properties of the fat and proteids as they exist in milk have been destroyed, and so the infant has for all practical purposes been deprived of the elements which are in the milk, but which are not present in a form in which it requires them.

Now let me remind you of one rather important thing in reference to this disease. First, one seldom sees a well marked case of rickets before about 12 months of age or older, that is to say, the rachitic rosary, the enlarged epiphyses, the big head, the swollen abdomen, typical of rickets, are more likely to be seen at two years of age than they are at nine months. Let me also remind you that the most important stage of treatment is at a time when not one of those signs can be seen. It is altogether dependent on the point of view you take whether you describe rickets as a disease of the second year of life or of the first six months. Those exhibiting the marked signs of the disease are nearly all of them over 12 months of age. On the other hand, if you take the view which we take in this

hospital, you will say it is a disease beginning in the first six months of life as a rule, and practically always beginning in the first twelve months.

THE SYMPTOMS IN RICKETS.

What are the symptoms of the baby that I am describing in which the disease of rickets is beginning? They arise in the digestive system, for it is there that all the trouble begins, and if we are watchful and aware of the signs that lead to rickets, we shall be in a much better position to protect our patients from the disease.

The first sign is constipation. It is particularly liable to occur in breast fed infants. They have gained in weight, they have thrived. Beyond a little fretfulness nothing particular is wrong except that the mother gives us a history of marked constipation. I remember in particular the case of a baby weighing 17 pounds at 7 months of age. The baby had suffered from constipation ever since it was three months old, but otherwise there was nothing wrong, the mother was very pleased, and it was not till this trouble had given rise to more and more difficulty that I saw the baby. I analysed the mother's milk and found it to contain 1.25 per cent. of fat. I took that baby in hand at once, saying that it would take a long time for me to get it really right, that its teething would be very late, but I should probably be able to counteract most of the symptoms of rickets other than that. Remember, then, that, as a rule, when a baby of seven months has not teethed, that baby has got rickets—a very early stage of the disease, perhaps, but a very important one. In all the babies I have had under my care that have been substitute fed throughout, there has not been a single baby that has not teethed by seven months of age. That is a most important fact, because the development of the first teeth are not only important in themselves, they are the precursors of the second teeth. The enamel germ is forming at that time, and anything that delays or injures the first dentition, prejudicially affects the second dentition. The great cause of the decaying teeth among us all at the present time is rickets in early infancy, particularly as it affects the teeth, so that the primary teeth appear at the 9th, 10th, or 11th month instead of at six months. I quoted that baby because there was only that one symptom present—constipation—but with every precaution to neutralise the conditions as far as possible, the baby did not teethe till about 10 months of age.

Before leaving the subject of constipation,

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