

CLINICAL NOTES ON SOME COMMON AILMENTS.

BY A. KNYVETT GORDON, M.B. CANTAB.

RICKETS.

This is a disease of infants, and is really a disorder of nutrition, the effects of which are most obvious in the long bones, though they are not confined to these. It is entirely preventable; that is to say, it is due either to ignorance of the proper way of feeding babies, or to inability on the part of their custodians to provide them with the nourishment they should have. Even when the disease is fully established, it often subsides completely when the diet is changed.

The ideal food for babies is, of course, the mother's milk, and consequently we scarcely ever see rickets in breast-fed babies, unless weaning is very much delayed, until a time, that is to say, when breast milk is no longer entirely sufficient for the nutrition of the growing child.

The main factor in the production of rickets is a deficiency of fat, especially when this is combined with excess of starch and sugar, and too little proteid (or nitrogenous) food. Hence we see rickets most frequently in babies that are fed on patent foods alone which are, practically all of them, deficient in fat.

Some very interesting experiments were made some time ago in the Zoological Gardens on lion cubs. Those which were weaned early and fed on raw meat alone, all became rickety, while two fed upon rice, biscuits and raw meat, died of the disease. When some of the rickety cubs were given milk, cod liver oil, and pounded bones, they recovered, and in three months' time showed no sign of the disease at all. Two young monkeys were fed upon vegetables only, and they became rickety also.

Similarly, in babies the chief cause of rickets is giving the infant "what we have ourselves" or such things as sweetened condensed milk, which is usually deficient in cream. When one comes to think of it, the ignorance on this subject is both widespread, and appalling in depth. Apart from the gross carelessness which allows a baby to feed upon cabbage and potatoes—a state of things which is well known to every district nurse, for instance—we have the well-meant ignorance which thickens the milk in a septic bottle with patent food or "baked flour" (a northern abomination) or gives the baby biscuits to keep it quiet, and then gin or soothing syrup for the consequent stomach ache. The worst of patent

foods is that they make a baby fat, which is taken by the uninitiated as a sign of health. Surroundings have something to do with it as well, for in the country children stand improper feeding to an extent which would result in a town in the development of rickets in a very short time. It is uncommon in Jews because even the poorest suckle their children.

The change in the bones is interesting; normally the long bones grow in length by the production of bone in the cartilage between the shaft and the portion at each end which is called the epiphysis, and in thickness by a similar production just below the periosteum or covering of the bone. In rickets there is an overgrowth of soft tissue in both these situations, but the new growth does not become bone. The exact cause of this is not well understood; but we know that the lime out of which bone is normally formed does not reach the bones, but is passed in excess instead in the urine. We do not know why a deficiency of fat in the diet should have this effect. Later on, if the diet be corrected, the lime salts get to this new tissue and it becomes bone.

If the child is allowed to put any strain on these soft bones they bend, and become deformed; consequently we see deformities in the legs when the child is allowed to walk too soon.

To enumerate the signs according to the bones affected we have a large head, flattened chest (from the strain of respiration), and swellings of the wrists and ankles—at the epiphyses, that is to say, of the long bones. Inasmuch as the ribs have epiphyses also, we can feel a row of beads on running the hand down the side of the chest, which has been called the rickety rosary. The enlargement of the head is most marked at the sides and forehead, so that the child appears to have a square head, and the space between the bones of the skull, which should be closed at the ninth month or sometimes earlier, often remains open until eighteen months or two years. The spine may be curved backwards or, less frequently, sideways. When the child is allowed to walk too soon, in addition to curving inwards or outwards of the legs, giving rise to knock knee or bow legs respectively, the pelvis is flattened and its outlet narrowed. Consequently, in females we may get trouble, when they grow up and have children, from obstruction to the passage of the head in delivery. Teething is prolonged and troublesome, and the teeth, when they arrive, are very prone to decay.

Apart from the bone changes, rickety children are anæmic, and subject to flatulence—

[previous page](#)

[next page](#)