of the periods, midwives made a diagnosis of a full-term pregnancy; this convinced her of their ignorance, and she decided to devote herself to their instruction. She too, like Mère Marguerite, was often summoned to foreign courts.

It is, however, France that has the most celebrated midwives. Peronne du Moulier, midwife of Anne of Austria, was head midwife of the Hôtel Dieu, Paris. When she died, the queen paid the expenses of her funeral as a thank-offering. Marguerite de la Marche wrote a manual for midwives, "an elementary, methodical and concise book."

Anne Catherine Caranda was the first married woman admitted as midwife to the Hôtel Dieu in 1771. She had been separated from her husband twenty years, but it was stipulated that she should retire if she rejoined him. In the 18th century, we read of Christine Clarc, whose lectures were so popular that they were followed by doctors. Marie Prudence Plisson, distinguished in literature as well as in natural sciences, made a study of the controversial question as to whether gestation might be prolonged, and came to the conclusion that it might be longer than 280 days. Madame du Condroy obtained a permit from the king which authorised her to hold courses of instruction in all the provinces of the kingdom. She did practical demonstrations with a mannequin of her own invention, and made the midwives practice with it and a flexible feto. She died in 1825, but her niece and pupil, Marguerite Commenteau, continued the lecture courses, at one of which she met her husband, an obstetrician. She founded the Bordeaux Maternity Hospital, to which she and her husband devoted their time, money and energies. She published a book on midwifery principles.

The War Office announces that the medals of over 20,000 officers and nurses who served overseas during the war are still undistributed. In many cases the medals have been despatched to the recipients, but have been returned through the post, owing to non-delivery due to change of address. Ex-officers and nurses or their legatees or next-of-kin, who have not yet received their medals, should make early application to the Secretary, War Office.

RICKETS IN INFANCY.

(Notes of a Lecture given by J. Lawson Dick, M.D., F.R.C.S., to the Inspectors of Midwives' Associations, at the Midwives' Institute.)
(Reproduced from Nursing Notes.)

Of all the diseases of infancy, rickets is probably the most important; it is certainly the most prevalent one. It is true that, if the cases in a child's hospital are analysed, few will be found to be labelled as rickets. Nevertheless, it is true that, in nearly every instance, rickets is present to a greater or lesser extent.
If we except those born with congenital syphilis, most children are born equally healthy, and whether it be a child of the slums or a child in Park Lane, Nature sees to it that, at the outset, each infant starts life with equal chances. Even in the case of a tubercular mother, the child is usually protected; during pregnancy there is often a marked improvement in the mother, and it is only after her delivery, when protection is no longer needed for the child, that the disease returns, frequently with increased virulence.

Taking, however, the same two infants, six months after birth, the difference is only too well marked. The Park Lane baby has developed normally, the slum one shows the defects of its environment. This difference is usually due to rickets.

History of Rickets.—Rickets is a disease of comparatively recent growth. It seems to have been unknown a few hundred years ago. It was first dealt with by Grisson in his book “de Rachitide,” published in 1650, and he described it with such marvellous accuracy that even now—so far as the naked eye signs go—there is little to add to-day. Two interesting points to be noted are his description of it as a disease of the wealthy, and his statement that it was most prevalent and had its origin in the rich dairy counties of the West of England.

Distribution of Rickets.—If we take a map of the world and draw a horizontal line around it, passing through the North of Scotland, and a second one passing through Italy at the level of Rome, we shall find practically all the districts of the world in the zone between these two lines. Again, if we take England, we find that the districts in which rickets is worst are the coalfields between Glasgow and Edinburgh, the Durham coalfields, the industrial area between and including Liverpool, Manchester and Hull, that around Birmingham in the centre of England, in South Wales around Cardiff, and in London. There is also a considerable amount in other parts, notably in a broad strip which stretches from Norfolk, Suffolks and Essex to Somerset and Devonshire. In Ireland we find it in Dublin and Belfast, whilst it is absent in the poorer agricultural districts.

The point to be noted is that it is just in those districts and zones, in which the wealth of the world is mainly concentrated, and into which food is poured in greater abundance than anywhere else, that rickets is most prevalent. In India, China, and Japan we find great food scarcity, and every form of disease associated with malnutrition—wasting, diarrhoea, starvation—and yet rickets is, to all intents and purposes, absent. This seems to disprove the theory that rickets is due to food deficiency.

Symptoms and Signs of Rickets.—Though rickets may begin to develop immediately after birth, the signs do not show themselves until from six to twelve months. It is essentially a disease of the first two years of life. The symptoms are:

1. Backwardness in development.—The first signs are backwardness in growth and development. It is important to detect these at the earliest possible moment; and, therefore, it is essential for comparison to know the
normal rate—especially in regard to weight, the circumference of the head, the closure of the anterior fontanelle, the teeth, speech and the development of muscular power.

**Weight.**—The average weight at birth is 7 lbs.; this should be doubled at five months and trebled at eighteen months. *Circumference of the head.* At birth this is normally thirteen inches; at nine months, seventeen inches; at one year, eighteen inches; at five years, twenty inches. Note the rapid growth at first as compared with the slow increase later; in the first year it increases five inches, while in the next four it only increases two. It is during the first two years of life, when rickets is at its worst, that the brain is increasing most rapidly, and it is little wonder that rickets exercises a profound and permanent effect on the nervous system. *Anterior fontanelle.* This should be closed at the end of the second year; in rickets, closure is often delayed until the third or fourth year. *Teething.* The lower central incisors should be erupted by the seventh month. All the primary teeth should be cut by the end of the second year, and by the sixth year the first molars of the second set should be showing. If a child has cut no teeth by the end of the first year, however healthy it may appear otherwise, rickets is almost certainly present. Rickets frequently leaves a permanent defect in the enamel of the central and lateral incisors, of the tips of the canines and of the first molars. *Muscular Power.* At the third or fourth month the child should have power to raise up its head, between the sixth and ninth month to sit up, and between the twelfth and the eighteenth month it should begin to walk. Inability to walk until the second or third year, is, in the great majority of children, due to rickets.

2. *Wasting.*—A child with rickets is usually thin and wasted; on the other hand, in cases of “fat” rickets this symptom is absent. A child brought up on the bottle may be fat, and yet have well-marked rickets. Not infrequently an excessive deposit of fat takes place at the same time that well-marked rickets is developing.

3. *Muscular Weakness.*—The enlargement of the abdomen, which is such a characteristic sign, is largely due to muscular weakness. This muscular debility is one of the most pronounced and earliest symptoms. We find that the child will be prone and placid. A rickety child is almost always good. It does not cry because the effort to fill its lungs takes all its available energy. The only time when it is irritable is when it is picked up. This is due to the discomfort caused by anything which embarrasses breathing and to the tenderness of the joints which makes any movement or handling painful.

4. *A general increase throughout the lymphatic system,* and enlargement of the lymphatic glands are common. Tonsils and adenoids are often due to rickets.

5. *Sweating.*—There is often very profuse sweating about the head, neck and shoulders, so great at night that the pillow may be drenched.
6. Ravy Changes.—The softness of the bones tends to produce the characteristic bony legs, or knock-knees, as soon as ever the child attempts to put its weight on them. This softness also accounts for the pigeon breast and "rachitic rosary." The ends of the bones, notably at the wrist and ankle, swell, and there is marked tenderness. The "rachitic rosary" is due to a similar enlargement at the ends of the bony ribs. The effects of rickets in the development of the bony pelvis in the female are of great importance. The tendency is to the production of what is called a "flat" pelvis, that is, of a pelvis in which the anterio-posterior diameter at the brim is contracted, so that the head of the child has difficulty in entering the true pelvis, and delay and difficulty occur during delivery.

Possible Complications of Rickets.—A rachitic child tends to suffer from catarrhal affections, such as bronchitis. Should it develop measles, bronchopneumonia is likely to supervene, and the result is often fatal. In whooping cough the weakness of the chest bones causes the lungs to collapse and pneumonia sets in, and the child succumbs. Late Rickets. Certain signs only show themselves at puberty when the child leaves school and starts work. The extra strain leads to flat foot, knock knees and lateral curvature. Rickets is the most curable of diseases, and even without special treatment it tends to right itself from the age of two years onwards. Certain defects, however, may persist; such are (1) muscular weakness; and (2) weakness of the ligament of the joints, which result in double-jointedness. This weakness, as adult life approaches with its greater stress, tends to produce these symptoms at puberty.

Etiology of Rickets.—The two factors to which the onset of rickets is generally ascribed are wrong feeding and faulty environment.

Feeding.—Rickets has been classed with the two other "deficiency diseases" as being due to a lack of vitamines, and the giving of "fat soluble" has been looked on as a short cut to its cure.

It has been claimed that the mere administration of fat will prevent or cure the disease. It is, however, becoming increasingly evident that rickets develop where abundant fats are given. Contrary to what is generally believed it may be stated that the best of Breast Milk will not prevent rickets where the environmental conditions are conducive to its production, nor will any error in diet produce rickets when the child is brought up in the fresh air, with abundant sunshine and ample opportunities for exercise. The "vitamine" theory is totally inadequate as an explanation of the prevalence of the disease in England, Europe and America.

Environment.—The causes of rickets must be sought for in the faulty environment which prevails in the slums of our great industrial areas. These are notably lack of sunshine and fresh air, the breathing of vitiated air, lack of the opportunities for exercise and want of proper cleanliness.

While these conditions are typically met with in our slum areas, it must never be lost sight of that in our gloomy and uncertain climate these conditions may be reproduced under what would seem to be the most favourable conditions. Thus, if the child of wealthy parents, living in the country, or in the
best surroundings of an elegant town house, is thought to be delicate, and is coddled in warm rooms with shut windows, and allowed but little outdoor exercise during the winter months, it will inevitably develop the disease.

_Treatment._—It follows, therefore, that the treatment consists in paying strict attention to general hygiene. There must be good ventilation and abundant sunshine in the house and ample exercise out of doors. The child must have its separate cot, so that it does not breathe vitiated air. Baths, especially sea-water ones, are very beneficial. Massage, applied gently at first and then more strongly, is good. Cleanliness is essential. When these wants are supplied the use of small doses of cod liver oil or other tonics is likely to be useful. Rickets is a disease of faulty development and growth, and attention to the diet is of great importance. Speaking generally, it may be said that the net should be thrown as widely as possible over all the articles of diet which may be reasonably allowed to the child. Avoid carefully all eccentricities in the child's diet. But the great point insisted upon is that, first and foremost, steps must be taken to remedy the faulty conditions which surround the child, and which are responsible for the production of the disease.

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.HEALTH VISITORS' LEAGUE.

_Dear Fellow Members,_

I have a little news to impart this month as I have received letters from several members.

Miss Rawson writes from Palwal as follows:—"Efforts were made in April last to start an Infant Welfare Centre in connection with the daily dispensary in the town; and this was carried on up to August with a certain amount of success. In all 148 babies attended and there were 984 attendances. They were bathed and weighed at intervals and efforts were made to instruct the mothers in the importance of cleanliness. It was found, however, that most of the babies attending required medical attention also, and that the sending of them to and from the ordinary clinic caused some confusion in the general dispensary work. In September it was therefore decided to start a babies' clinic instead, for all children under and up to five years of age. This is held at the same time, and in the same building, but in a separate room. A Nursing Sister attends regularly each day and a Doctor twice a week. 165 babies have attended and have put in, in all, 1,015 attendances. They have been treated mainly for eye, ear and skin diseases during that time; comparatively few show signs of definite malnutrition or malnutrition. Special attention is paid to the condition of nutrition, and advice is given to the mothers with regard to their own or the children's diet. This clinic is felt to be a distinct advantage in freeing the ordinary dispensary from crying babies and in allowing of special attention being paid to the little ones."