Obstetric Nursing.

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PART II.—INFANTILE

Chapter V.—Hand Feeding.

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At their completion, this Course of Lectures will be published as one of the Series of "Nursing Record Text Books and Manuals."

WHAT we have to do is to adapt the casein of cow's milk to the digestive power of the infantile stomach, and for this purpose we will avail ourselves, as a peptonising agent (there are others, of course), of the Zymine Peptonising Powders (Fairchild) that we have with our Patent Safety Bottle, from Messrs. Burroughs and Wellcome, and we must carefully follow the instructions given us. We can prepare the milk for baby in large or small quantities; I prefer the latter. To begin with, we require about twenty fluid ounces (a pint) per diem, and if the milk is boiled up at once, and then kept in a cool place we can use it in small quantities as required. The following little experiment (No. 5) may be of interest to Obstetric Nurses. Fill your test-glass with the peptonised milk whilst it is lukewarm, and add the necessary quantity of essence of rennet, and in due time carefully examine the milk, and you will find that the rennet has *not* coagulated the curd. Why is this? Because it had been acted upon by the peptonising process to which we had subjected it, simulating, as it were, what I may call the *secondary* action of the gastric juice, *dissolving* and rendering the casein more assimilable, without very greatly depriving it of a portion of its nutritive qualities. We have simply pre-digested the casein *out* of the stomach to render it more digestible *in*. There are many points in connection with this interesting subject we have not time to enter upon, the object of our little experiment being to show my young Nursing readers the *effect* the peptonisation has upon the casein of the milk and why we peptonise it.

So far, we have only dealt with the albuminous element of the milk. We will now turn to the fatty, or cream, a portion of which will have to be removed. Before doing this, test the cow's milk. If the quantity be normal, skim off rather less than half before you peptonise; the proportion of fatty particles in human and cow's milk respectively being as twenty-five in the former to thirty-eight in the latter. I need not tell you how important a part cream plays in infantile feeding. The nutritive value of casein is *not* complete without it. Next, as to the saccharine portion of milk, which you can see by the tables I quoted, is more abundant in human than cow's milk; hence we have to add sugar to it. But if there is less sugar, there is also less water than in human milk, and we know how sweet cow's milk is to the taste, and the proportional differences are not very wide—for instance, in human milk, sugar stands to water as about 48 to 890 parts of water (somewhere about four per cent.), and in cow's milk as 30 to 860 parts of water (say about three per cent. excess); and we must bear these scales in mind when sweetening our baby's food.

We now come to the most abundant of all the milk constituents—the aqueous—the proportional difference in the quantity of water in human and cow's milk respectively being as 890 in the former to 860 in the latter—not quite three per cent.—which is only slightly in favour of human milk. We may ask why do we add water beyond this limit? For a very important reason. If you glance down your tables you will see that cow's milk contains a larger proportion of solid or mineral matters than human milk, Nature requiring more bone-forming material for a calf than a baby. The proportion of these constituents stands as 110 in human and 140 in cow's. We cannot remove these solid matters in either milk, so we must weaken them by adding water to cow's milk rather out of proportion to the actual ratio of the aqueous portion of both. If we make our soup too salt or our tea too sweet, it would be rather a difficult matter to get either of these substances out of those fluids, so we put *more* soup to the one and more tea to the other; and on the same lines we treat our baby's milk. As well as in the solid, there is an excess in saline ingredients in cow's over human milk, and this also is equalised by dilution with water.

We must now retrace our steps—go back to the birth of our baby, and begin to feed him, and describe his food as we go on. The first question we have to ask ourselves is, shall the infant be fed at once?

This matter rests with the baby; some infants will *not* take food, others never cease crying till they have it. Generally speaking, I do not consider it is necessary to feed them at birth, but I am sure it is often expedient to do so. What shall we give our baby? I do *not* advise milk-and-water to begin with. Some Nurses give a little warm sugar and water; but, for my

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