REFRESHER COURSE FOR GENERAL PRACTITIONERS

BREAST-FEEDING DIFFICULTIES

BY

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Feeding difficulties fall naturally into two divisions: overfeeding and underfeeding, but the former is far less common and less important than the latter. When the supply of milk is abundant and it flows freely an active, greedy baby may take too much. Perhaps six out of ten of these babies promptly vomit the excess and make normal gains in weight; these present a laundering difficulty but not a feeding difficulty. Perhaps two more retain the excess and make exceptional gains in weight: as the food is well balanced, the growth is well balanced, and so, again, there is no feeding problem. The remaining two babies may suffer from frequent loose stools, through overloading their stomachs. Since frequent loose stools are also (and much more commonly) a sign of underfeeding, the first essential is to verify by test-weighing that the baby is really taking an exceptional quantity. If this is found to be so, then no immediate treatment is necessary, for the condition is not serious and usually rights itself. In no case should treatment aim at reducing the milk supply, for such treatment nearly always overreaches itself and creates an underfeeding problem. If it is considered essential to reduce the bowel action, this should be done by giving an emulsion containing 2 minims (0.12 ml.) of castor oil and 20 gr. (1.3 g.) of mucilage of acacia to the drachm (3.5 ml.) of water. One drachm before feeds is a suitable initial dose, and the dosage can be freely varied according to the result obtained.

In all other cases of difficulty the baby gets too little milk.

Recognition of Underfeeding

The number of babies classed as underfed will depend largely on the doctor's standard of satisfactory weight gain. There is wide variation in this. From the fourteenth day to the end of the third month the weekly gain is independent of the birth weight and should not be less than 6 oz. (170 g.). Eight ounces (230 g.) is a reasonable target for boys and 7½ oz. (210 g.) for girls. This does not mean that these gains can be looked for every week: such progress often occurs, but probably cannot be ensured in any way. But it does mean that every baby gaining less than 6 oz. (170 g.) is to be classed as momentarily underfed, and corrective measures applied so that it shall gain from 18 to 24 oz. (500 to 700 g.) in any and every spell of three weeks. It is not enough merely to get back to gains of 6 oz., but the arrears should also be made up.

Though it is true that loose greenish stools are generally a sign of underfeeding, the bowel signs are ambiguous. It is better to base treatment on weight and use the return to normal stools as a check on the adequacy of the measures taken.

When dealing with mothers who are not satisfied with the progress of their babies, one must remember that the babies are under constant observation by people who are concerned for them; in consequence the number rightly referred to a doctor greatly exceeds the number referred unnecessarily. Moreover, if the mother worries without cause it is bad for the baby; so much so that there will ultimately be a feeding difficulty if the case is dismissed without study and explanation. Often, however, the history will be overlaid with interpretation, so that in its first form it is useless: the essential facts may need to be elicited by cross-examination.

The main causes of underfeeding are mechanical difficulties, which may be in connexion with the mother, the baby, or both; infections; and insufficient flow or secretion of milk.

Mechanical Difficulties

In the baby, difficulty may be caused by *nasal obstruction*. There may be a congenital malformation of the nasal passages which, if severe, results in great respiratory distress, as the infant's reflexes are not adapted to purely oral breathing. Such cases are not primarily feeding problems, and are unsuitable for domiciliary treatment. Partial nasal obstruction may result from an upper respiratory infection, and may be treated with nasal drops before the feed. Chlorbutol and menthol nasal drops (N.F., 1952) are useful for this.

Hare-lip and cleft-palate constitute a bar to feeding at the breast, but not necessarily to feeding with human milk, provided the mother is good at manual expression of her milk. Breast pumps are in general unsatisfactory because they work by suction alone, without expression. This does not produce enough milk from the breast to maintain the supply.

Tongue-tie has been so often diagnosed in error that some teachers have reacted so far as to deny its existence. Although it is rare, I believe that it does occur and is well worth treating. Part of the process of getting milk from the breast consists in compressing the nipple against the palate by drawing the tongue along it. Occasionally the tongue is not mobile enough to carry out this movement. In some babies labelled "bad suckers" it can be observed that the tongue never comes forward beyond the lower lip or, in extreme cases, beyond the lower gums, and, as a confirmatory sign, the tongue does not point normally in the forward position, but shows a double curve and central recess. If the fraenum of such a tongue is snipped the tongue will point normally—sometimes at once but more usually after about three days. The "bad sucking" is completely cured.

In the mother, *malformed nipples* are a fairly frequent cause of difficulty. If observed early they can be cured by the wearing of "Woolwich-type" nipple shields for the remainder of the pregnancy. Even if the condition is not observed until near the confinement it is still worth ordering the shields; though, as their action is gradual, they will not be nearly so effective.

If the practitioner does not see the mother until the nipples are actually causing difficulty in feeding, then the matter is serious. A breast pump may sometimes be applied just long enough to draw out the nipple to its fullest extent, and the baby immediately substituted; but this will not be enough in severe cases. The most generally applicable method of feeding an infant on human milk when the mother's nipples are not usable is for her to express the milk by hand. Her ability to do this well usually depends on her having practised daily expression of colostrum for six weeks or so before the confinement. A breast pump should not be used to obtain milk, for the reasons given above. Faulty nipples, if not treated in time, may spell defeat, even though everything else is propitious.

Cracked nipples are even commoner than malformed nipples, and, like them, can be almost entirely avoided; if they occur, they constitute a very serious difficulty. The two main causes of cracked nipples are: (1) failure to keep the skin soft by oil-massage during pregnancy and, in the worst cases, deliberate hardening by scrubbing and spirit lotions; and (2) excessive suckling during the first three to four days after the birth, before the milk has "come in." It is most regrettable that much traditional teaching advocates both these faulty procedures.

A cracked nipple cannot heal while it is in use, so that suckling must be temporarily given up. Also, every cracked nipple is liable to infection and needs to be softened—ends which can be met by the exhibition of penicillin cream during the resting period. If there is a yield of milk to be preserved manual expression should be performed. The breast pump is even more definitely contraindicated than in the treatment of malformed nipples, for the suction, in elongating the nipple, opens the crack, and is just as painful as suckling. Nipple shields of the type through which the baby sucks are to be classed as pumps in these respects. If cracked nipples due to both hardening of the skin and excessive sucking coincide with engorgement the position is more serious still, as the epithelium of the nipple becomes oedematous and liable to further damage.

Some degree of *engorgement* is usual between the third and tenth day after birth. If it is severe and not properly handled the breasts may become swollen, hard, hot, and superficially oedematous. The areola, under which lie the main collecting sinuses, will be too taut for the baby to grip and squeeze between its jaws, and in consequence feeding is impossible until the tension subsides. This will happen after two or three days; but those are days of starvation for the infant, of acute discomfort with a high liability to mastitis for the mother, and of internal damage probably leading to partial involution for the breasts themselves. Treatment is therefore advisable, and the most effective method of shortening the engorgement is the exhibition of stilboestrol: three doses of 5 mg. at four-hourly intervals. In the most severe cases a larger first dose, up to 20 mg., has been recommended. Stilboestrol treatment is suspected of having some permanent effect on the lactation in a fair proportion of cases, but it reduces the danger of mastitis and the period of starvation.

If the doctor is at hand at the beginning of engorgement, then the best way of forestalling the acute phase is to institute a regime of frequent but short feeds, perhaps two-hourly feeds of five minutes each side. The baby is usually hungry enough at this stage of its life to accept such a regime and feed vigorously, provided that its rest is not cut down too much; this is one reason for keeping the feeds short. Such feeds may be followed by careful expression by hand (by the mother, because she is less liable to damage the underlying tissues), but care should be taken to see that she does not get too anxious and exhausted. This regime is most successful when it has been explained in the course of antenatal education: it is quite impossible if, at the same time, the nipples have been allowed to become cracked.

Infections

Many babies with infections do not present only a feeding difficulty, and the doctor will quickly sort out those with a frank pyrexia, with obvious respiratory difficulty, or with acute diarrhoea. However, the class of infected babies includes many more than these. There are many mild infections which are very difficult to recognize. On the whole subject of infection in infancy, no one should omit to study Cruickshank (1945) and Moncrieff (1953). A history of loss of appetite, or of vomiting of sudden onset, or of offensive stools is suggestive of an infection; abnormal redness of the mucous membranes or of the finger-tips (as though a number of whitlows were forming) is a sign pointing in the same direction. There may not be actual loss of weight, but the gain is sure to be low. Many such infections pass unrecognized.

The treatment of an infection should be the immediate exhibition of penicillin by injection, in doses of 300,000 units (suspended) every 24 hours. Without prejudice to the question of how antibiotics should be used in adults, there must be no delay in giving them to infants, in whom an infection may not provoke any physiological reaction.

Inhibition and Failure of Lactation

It may be difficult to distinguish clinically between inhibition of the flow of milk and failure of secretion as causes of underfeeding.

If, when the baby is taken away from the breast after about two minutes, milk is seen to be squirting from the nipple it can be assumed that there is no inhibition of the flow of the milk. This simple test is either positive or indecisive, never negative. On the other hand, if a baby takes the breast eagerly, but soon refuses to suck, cries vigorously, and will not make another attempt, it can usually be assumed that the contraction of alveoli and ducts in response to the stimulus of sucking has been inhibited. Once more the absence of this behaviour means nothing. The time at which underfeeding occurs is some guide to the probable cause. Since the growing baby demands more and more milk, the later underfeeding occurs the more likely it is to be due to a lack of active tissue in the breast. The same line of reasoning indicates that a gradual drop in the baby's gains is probably due to inadequate secretion; a sudden drop to inhibition of flow.

The causes of inhibition of flow are psychological, but fortunately they are usually superficial. It is extremely common at the moment when the mother takes sole charge of the infant and at the same time resumes her household duties. Worries quite unconnected with the nursing couple may inhibit the flow at any time. So may uncongenial people in the entourage; a midwife or mother-in-law may easily prejudice the success of breast-feeding.

Either cause of underfeeding may produce the other. If the mother is worried because the baby's growth is slowing down, this may add failure of flow to failure of secretion. And if the inhibition of flow, when secretion is plentiful, leads to stretching of the breasts the secretion will be reduced. In addition, underfeeding through failure of the flow is a self-aggravating condition—that is, the fretfulness of the underfed child worries the mother and so prolongs her inability to give the milk which is present in the breast. This underlines the need for prompt and firm treatment when a baby is gaining insufficiently; it is important to deal with the situation before secondary causes come into operation.

Treatment of Underfeeding

The first line of treatment is complementary feeding. Provided a good technique is used (see below) this method will ensure immediately an adequate intake, with the highest possible proportion of human milk, it will ease the mother's anxiety, and permit a return to full breast-feeding if the flow or secretion of milk is restored. It is also largely self-regulating.

Other treatment may also be required. If the mother is nervous or the baby cross, sedation may be advisable; for the baby syrup of chloral, 15 minims (0.9 ml.), should be given half an hour before the feed. If inhibition of the flow of milk from the gland is the cause of underfeeding, some psychological exploration of the situation will be necessary. Simple measures, such as feeding in physical comfort, in solitude and quiet, and without haste at the start, are often all that is needed. If the secretion is inadequate the mother's output will be increased by shortening the interval between the feeds, for this keeps the gland in full activity for more of the day. The length of the feeds should not be increased; it may have to be cut down if the frequency of feeding is reducing the baby's sleep. In a few cases of only slight underfeeding, treated early, this method may take precedence over complementary feeding. In cases in which failure of flow is the primary cause of underfeeding there is no indication for feeding more often, and to do so might increase the tension already present in the situation.

The technique of complementary feeding deserves careful attention. Any normal artificial-feeding formula will serve for the complement, for, though the baby is unaccustomed to any but human milk, the amount of complementary feed that it will have to take is usually small. The complement should be offered immediately after the breast-feed; it must therefore be prepared beforehand and kept warm during the feed. It should be given by spoon from a cup; the quantity to be given is what the infant will readily take. If the complement is given from a bottle, only the second of the four

purposes of complementary feeding (allaying anxiety) will be fully achieved. There have been disputes on this question, and many cases have been cited in which an adequate intake was immediately secured and the mother's anxiety was allayed. But no cases have yet come to my notice in which the proportion of human milk in the diet was the highest possible or in which a return to full breast-feeding was practicable without a sacrifice of weight gain.

Conclusion

Finally, brief mention must be made of three conditions which may worry either the doctor or the mother—namely, failure to establish lactation, vomiting, and constipation.

Non-lactation is often diagnosed too soon. It is important at all times to give sips of sterile water (with or without sugar) to allay the baby's thirst, as this interferes with its rest more than hunger does. But artificial feeds should not be given until the eighth day or until the baby has lost 15% of its birth weight, whichever is the earlier; and they should not exceed 1 oz. per lb. (60 ml. per kg.) of body weight a day until the fourteenth day. If by that time the milk is still not coming in in effective quantities it may be doubted whether lactation can be established.

Vomiting is a constant cause of complaint. Few mothers (strange though it seems) expect milk to be curdled in the stomach, so that the curds in the vomit alarm them. Vomiting should be judged in relation to test feeds and weight gains. If it seems that the baby's progress is affected by the vomiting, and there is no infection, then belladonna, 5 minims (0.3 ml.) of the tincture in water, or atropine methonitrate, 2 to 5 drops, should be given before the feeds. Even when the infant's progress is not affected, this treatment may be necessary to quieten the mother. If the vomiting continues in significant quantity, a stomach wash-out should be given to determine whether there is mucous gastritis; if large quantities of mucus are found the treatment should be repeated daily until the condition remits. The only cases of vomiting needing weaning are those which follow on puerperal sepsis.

Constipation is usually a false report. What is nearly always meant is that the motions are infrequent, but the stools are normal in themselves and passed without strain. The condition demands no treatment whatever. In the rare cases in which the stool is hard and difficult to pass (and pyloric stenosis has been excluded) a mild laxative should be given, such as mist. magnes. hydrox., B.P., $\frac{1}{2}$ to 1 drachm (1.7 to 3.5 ml.), or syrup of senna, 15 to 30 minims (0.9 to 1.8 ml.).

The number of points at which prevention is not only better than cure but also much simpler is worth stressing. Regular supervision will always lead to greater success than can be secured by interventions to deal with difficulties.

REFERENCES

- Cruickshank, R. (1945). *Arch. Dis. Childh.*, 20, 145.
Moncrieff, A. A. (1953). *British Medical Journal*, 1, 1.

Next Refresher Course Article.—"Pyelitis in Children," by Professor A. V. Neale.

The Treatment of Accidental Poisoning.—In the paragraph on the treatment of aspirin poisoning in this Refresher Course article (May 30, p. 1214), the use of "intravenous sodium lactate (70%)" is advised. In order to obviate any possibility of misunderstanding, it should be stated that the sodium lactate is to be given in *isotonic solution*. The 70% refers to the strength in which the lactate is usually purchased.

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LINGUA MEDICA

A STUDY IN MEDICAL SEMANTICS*

BY

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Socrates: He who first gave names gave them according to his conception of the things which they signified, and if his conception was erroneous . . . shall we not be deceived by him?—PLATO, *Cratylus*.

The meaning of anything is usually another name for the same thing.—CHARLES CHAPLIN, *Limelight*.

The language of medicine has more than utility value. It enshrines the ideas about disease which were held by primitive societies, the gradual evolution of medical knowledge in 2,500 years, and the geographical course which this knowledge has taken. It illustrates the mental processes by which men in all ages have found names for natural phenomena, incidentally giving us glimpses of their domestic, agricultural, and military background, and it explains why medical concepts, however modern, are still most accurately expressed in the language of Hippocrates.

Sources

The principal sources of medical words are five: Saxon, Graeco-Roman, Romance, Arabic, and Modern German.

Saxon

This source comprises our native Anglo-Saxon, together with Scandinavian, Teutonic, and other languages of North-west Europe. The words which it furnishes are all short, and express simple ideas—*head, hand, ache*. Their derivation is of no interest except to students of these languages.

Graeco-Roman

This is, of course, the most prolific source. The Greek component derives from early Greek, Minoan, Egyptian, and Asiatic sources, and first appears in organized form in the writings of Hippocrates (b. *circa* 460 B.C.). On the decline of Greece proper the words were taken over by the Greeks in Alexandria and later by the Romans. The Romans were in the habit of employing Greeks as their physicians, among them Galen (A.D. 131–200), but they also practised medicine themselves either as professionals or as amateurs. The head of a household, at any rate in the provinces, would dispense medicines to the members of his villa. But whether Greek or Roman, professional or amateur, they were bilingual, and used Greek and Latin words according to convenience. This explains the double nomenclature of the present day: *nephros, ren*; *orchis, testis*; *encephalon, cerebrum*. Andrews (1947) maintains that Latin words were completely suppressed except for a few such as *anus, penis*, which might be used in vulgar jokes. This is manifestly incorrect, as the writings of Celsus and others abundantly show.

Romance

Romance words are those which, though of classical derivation, arose in Italy, France, or Spain. From Italy we have *belladonna* (beautiful woman, from the effect of the drug on the eyes), *malaria* (bad air), and

* In this article the following abbreviations are used: Ar., Arabic; E., Modern English; M.E., Middle English; F., Modern French; O.F., Old French; G., Greek; L., Latin; Lit., Literally; Pop., Popular.