Advice to Parents on Further Children

Apart from advice about the patient, parents of a defective child will often seek advice on their own behalf. They are usually very interested in the aetiology of the defect and its possible transmission. With younger parents, or those with only one child, the problem of whether to "risk another one" arises. In most cases parents are well advised to take this risk, though the facts, so far as possible, should be presented to them and the decision left with them. The immediate reaction to the birth of an abnormal child is often to decide against a further one. If the affected child is the only one parents are liable to become morbidly interested in it to the detriment of both themselves and the child. The odds are heavily against the birth of more than one defective in a sibship unless it is one of the uncommon conditions definitely known to be hereditary—phenylketonuria, epiloia, etc. Most of these conditions are readily recognized. The characteristic butterfly-shaped rash at the sides of the nose betrays epiloia; the green colour in the urine on addition of a few drops of liquor ferri perchloridi characterizes phenylketonuria; the hairy features and distended belly are characteristic of gargoylism. A careful family history is of course essential, though evidence of unrelated neuropathies—for example, senile dementia, schizophrenia, cerebral arteriosclerosis—is not relevant, especially in distant members of the family. Before arriving at a decision in such a matter it is desirable to have the child examined by a paediatrician or expert in mental deficiency.

Occasionally it happens that there is more than one defective in a family, sometimes without it being possible to ascribe the condition to any particular syndrome. In these cases further children are inadvisable. Ordinary methods of birth control are usually adequate, but sterilization may be indicated. Rhesus blood group incompatibility raises a special problem. If one child has been so severely damaged as to be mentally defective the prognosis for a further affected child is poor. However, if the father is heterozygous there is an even chance that a subsequent baby will not be affected.

Parents may also seek advice about the possibility of the transmission of the defect through their normal children to their grandchildren. They can usually be reassured on this score, with emphasis on the environmental factor, but in conditions such as phenylketonuria and gargoylism the possibility cannot be overlooked.

Conclusion

Mental deficiency is still very much a blank space on the medical map. Much more information is needed about the natural history of children with limited ability. This information is not readily got from institutions where children grow up under abnormal conditions which may themselves cause what are thought to be the typical features of mental defect. The general practitioner can do much to fill this gap in our knowledge.

In general, mental defect should not be seen as something fixed, rigid, or conforming to set patterns. In this as in all other branches of medicine individuals must be studied as such. No matter how gross the defect each has his own individual peculiarities and traits. In spite of the absence of specific therapy for this group of conditions the outlook is by no means uniformly gloomy. The family doctor can by a sympathetic and understanding approach help to solve many of the problems arising from those of his patients with less ability than their fellows.

Next Refresher Course Article.—"Haemophilia," by Dr. J. V. Dacie.

Refresher Course Book.—The first 55 articles of this series (fully revised) are available as a book, price 25s. including postage, from the Publishing Manager, B.M.A. House, Tavistock Square, London, W.C.1.

A SCHEME FOR THE ORGANIZATION OF A MILK-ROOM IN A GENERAL HOSPITAL

BY

JOHN L. EMERY, M.D., D.C.H.

(From the Department of Pathology, Children's Hospital, Sheffield)

With the rapid development of the country's paediatric service the traditional feeding of infants according to the fancy of the ward sister is being replaced by the prescribed feeding of the paediatrician. The latter has usually been trained in hospitals having expensive milk-formula rooms. The provision of such rooms in all hospitals and maternity homes is economically impracticable, and advice on the subject is asked by paediatricians with beds in many and diverse hospitals.

The advantage of the milk-room lies chiefly in the production of accurate, varied, and clean milk formulae. The disadvantage lies in the danger of rapid and widespread dispersal of infection among the babies of the hospital. Unless a system is almost foolproof the possible disadvantage outweighs the advantages of a central milk service.

FIG. 1.—Showing the general plan of a milk service. Note in particular that the materials from the ward do not go direct to the milk-room.

The system described below was introduced into a Sheffield hospital three years ago, when a milk-formula room was developed and when no extra equipment was available. The system (Fig. 1) has worked extremely well; regular bacterial checks have been satisfactory, and the milk service has entailed virtually no capital outlay on the part of the hospital. The essential points of the system are: (1) a sterilization barrier between the wards and the milk-room; (2) after preparation the feeds are capped and sterilized by steaming; and (3) the nurse feeding the baby does not handle the teat of the feed-bottle.

Summary of Method

(a) The ward nurses are required to swill out the milk-bottles and teats in running tap-water immediately after they have been used. The ward staff place all used bottles, teats, etc., in a central receptacle—a crate which is quite separate from the milk-kitchen and which the milk-nurse is forbidden to touch or handle. This is taken by a porter to the hospital general autoclave. It is treated by steam at 5 lb. (0.35 kg. per cm.²) for 20 minutes, removed wet, and

FIG. 2.—Diagram to show method of folding paper to make formula caps; the name is written in pencil on the cap before it is fixed over the bottle.

then taken to the milk-kitchen. (N.B.—The milk-nurse touches and handles nothing direct from any of the wards.)

(b) The bottles are cleaned by the milk-nurse—using chemical detergents—for example, solution of sulphestol (“teepol”)—and then swilled in ordinary hot tap-water and allowed to drain. They are then filled with milk feeds.

(c) After filling, the teats are put on the bottles and a folded paper cap is fixed over each bottle and secured by a rubber band. The child's name and ward have previously been written on the paper cap (Fig. 2). Each cap is made from a quarter of a sheet of machine-glazed sulphite paper (£1 13s. 6d. a ream—480 sheets).

(d) The filled and capped bottles are then placed either in crates or free in an ordinary bowl sterilizer. The only addition to the sterilizer is a shielded thermometer (price 25s.) fixed permanently through a hole bored in the lid of the sterilizer. The water is left below the level of the bottles (Fig. 3). The bottles are left in the sterilizer for 30 minutes after the temperature of the thermometer registers 210–212° F. (98.9–100° C.). If no thermometer is available the bottles are left in the instrument for 45 minutes after boiling has begun. This method of terminal heating does not alter the appearance of the feed or produce partial caramelization with browning as when an autoclave is used.

(e) After sterilizing, the milk-nurse takes the feeds and places them in the child's ward refrigerators, from which they are used. When the bottles are in the crates the bottles are not touched by the nurse. This dispersal to the wards is necessary to cool a large bulk rapidly (an average of six feeds per child), as a normal large refrigerator cannot be used for cooling large volumes of fluid. It is rare that any single ward has more than two bottle-fed babies at one time, and the ordinary ward refrigerator seems to be capable of dealing with these. (A fully equipped milk-kitchen requires a specially built cooling refrigerator.)

(f) Before being given to a child, a feed is warmed by standing for 10 minutes in a pan of water that has previously been boiled in the pan and allowed to cool partly. The water should not cover the paper cap.

(g) For formulae that are altered by heat treatment—that is, lactic acid milk or cereals—the bottles and teats are first sterilized, then filled with the fresh feeds by the milk-nurse, and taken immediately to the refrigerator.

(h) The laboratory makes a monthly bacteriological check of random feeds for sterility.

FIG. 3.—A diagrammatic drawing of the modified sterilizer for terminal heat of the feeds. Note that the water surface is below the level of the perforated shelf, and that the thermometer is fixed through the lid.

(i) The milk-room nurse has other obvious duties, such as the collection of breast-milk from maternity units and maintaining it clean for the use of ill babies. The milk-nurse should preferably not handle babies or children during her other daily duties, and if she has ward duties she should do her milk-room duty first.

It is essential that all nurses in training have experience in making milk formulae.

The speed and efficiency of the milk-room are increased by the use of an electrical rotating brush for cleaning the bottles and a “mechanical domestic whisk” for mixing the powder-milk formulae.

This system is based on recorded American systems. The paper cone caps were designed as a substitute for the “formula bottle caps” used by the American Sterilizer Company. The paper caps prevent the teats of the bottles being seen by the nurse before feeding the child, but in practice the milk-nurse is usually told of the baby's need, and sterile spare teats are always made available.

Narrow avenues of cross-infection in the wards by such means as refrigerator-door handles are not entered for, but the system does appear to be efficient, involves little financial outlay, and is applicable to any hospital.

The Minister of Food, after consultation with the Secretary of State for Scotland, has announced that plans are under way to extend the areas in Scotland in which only specially designated milk may be sold, and an Order will shortly be laid before Parliament. Since last April only specially designated milk may be sold in Glasgow, Edinburgh, Aberdeen, Dundee, and many towns in Lanarkshire and Renfrewshire. When the new Order comes into force over 60% of the population of Scotland will live in areas which are assured of a safe milk supply. (*Scotsman*, November 21.)