

THE HISTORY OF SANITATION IN ENGLAND.

In reply to a correspondent who asks for references to works dealing with the history of the progress of sanitation in England, we can refer him to the following volumes: *English Sanitary Institutions*, by Sir John Simon, K.C.B. (London: Smith, Elder, and Co. 18s.); *Public Health Reports*, by John Simon, C.B., F.R.S., vols. i and ii (London: The Royal Sanitary Institute. £1 10s.); and Dr. J. C. McVail's *Prevention of Infectious Diseases* (the Lane Lectures, 1906) (London: Macmillan and Co., Limited. 1907. 8s. 6d.). The memorial volume of the writings of Dr. J. B. Russell, entitled *Public Health Administration in Glasgow* (Glasgow: J. Maclehose and Sons. 1905.) is also well worth consulting.

CLARIOR E TENEBRIS.

R. writes: Two surgical operations were performed in a country cottage hospital; one amputation of the mamma, the other removal of a dermoid cyst. The nature of the second case had been explained to the attendant nurses. Common report, however, gave a more comprehensive account and a mixed pathology. An elderly sympathetic lady inquired of the local chemist, "Lor, Mr. H—, is it true that Mrs. — has had a 12 lb. growth taken from her breast? They do tell I that when the doctors came to cut it open they found a set of false teeth and a wisp of hay!"

LETTERS, NOTES, Etc.

INFANTILE DIARRHOEA AND ATROPHY.

J. R. writes: After reading the discussions on teething and its alleged troubles, and that on infant mortality, which have appeared in recent issues of the BRITISH MEDICAL JOURNAL, it seems to me that something might be done to lessen the appalling infant mortality in the South Wales mining districts.

Concerning teething, I can heartily endorse the preponderating opinion expressed in the discussion. Given healthy conditions as to feeding, clothing, etc., teething proceeds without any constitutional disturbance whatever. It is no doubt a handy peg on which to place all those indefinite symptoms so common to the period of dentition, especially as the parents are so ready to attribute all baby's troubles to its teeth. Unfortunately such diseases of infants as diarrhoea and sickness are ascribed to teething, when the obvious cause is perhaps staring us in the face. So far, I have never given teething as a cause of death in any certificate; nor do I consider that it is sufficient *per se*. Further, we should do well to be careful and exclude all other possible conditions before attributing any infant's ailment to its teeth, and especially to discourage parents from this idea, since it leads them to look upon serious conditions too lightly, and to delay seeking advice.

The discussion on teething may well be compared with that on alcohol—for example, there are still many who stick out for alcohol as a food, and for the possible benefits to be got from its judicious use. Surely, for all practical purposes, alcohol cannot be considered as a food, even though minute quantities can be oxidized in the body. Compared with the baneful influence of the drug, where do the benefits come in? So with the teeth, although the great bulk of infant diseases have other obvious causes, yet old superstitions die hard, and there are those who would maintain a position for teething as a cause of sickness, or even death, in infants.

As to notification of births and its application to medical men and midwives, I am not competent to speak, but, as a practitioner in a large colliery district, I may say that some such system with the provision of health visitors would supply a great need in South Wales. The scheme adopted in Sheffield might be applied with benefit, and I should be grateful if the writer of that description would furnish particulars as to how supplies of dried milk could be procured for colliery patients, and the cost.

The following remarks are based on the experience of two epidemics of severe diarrhoea occurring in the autumn last year and at the present time. The work of colliery practice being so irregular, it is impossible to get continuous records of cases, and therefore I am unable to give figures.

During the last two months there have been something like 100 cases of the severe type requiring treatment at the patients' homes. The patients comprise both tradespeople's and colliers' families, but the severe diarrhoea has been almost entirely limited to the latter. Further, only very few cases occurred amongst breast-fed infants—not included in the 100; these cases readily improved under treatment, and there were no deaths. There were 7 deaths amongst the 100 cases, and 2 cases of extreme infantile atrophy are in the last stages. These were congenitally debilitated, and very quickly developed diarrhoea on artificial feeding.

The prevalent type of symptoms is restlessness, screaming, profuse diarrhoea, green liquid stools with offensive odour, often with vomiting, rapid emaciation, and death from septic intoxication or exhaustion in seven to fourteen days. The temperature may be 99° to 100° at the onset, but the disease usually ran an afebrile course, and the temperature became subnormal towards the end. The extremities became cold and cyanosed, the expression pinched or wizened, the eyes sunken, skin inelastic. When at the onset the child is fat and overfed, intoxication symptoms predominate, and the case is apt to terminate suddenly in death from convulsions. The atrophic cases are remarkable for the length of time the child keeps living.

Hot, dry weather undoubtedly predisposes, but the main

factors are unhealthy environment and bad artificial feeding. The districts are greatly congested and housetoom scarce, so that several families occupy one house. Coal for the colliers is cheap, and hence the fires are big and the living-rooms unbearably hot and stuffy. Food lies about on the table, and the baby's bottle can often be seen with the milk in it curdled and sour. The baby may often be seen at table picking at bread and butter, egg, bacon, potatoes and gravy, or even tinned salmon. If the doctor remonstrates the mother says children cannot be kept from it, or that it does not eat it, etc. The bottle in 90 per cent. of cases is that with $\frac{1}{2}$ yard narrow rubber tubing. The child has the teat in its mouth, the bottle in a pocket or in bed at its side; and there it is left, to be quiet or go to sleep. Any remonstrance from the doctor is met with the reply that they have reared other children in a similar manner, or that the hygienic feeder is too much trouble, or that the baby will not take it. One objection to the Allenbury feeder seems to be the large size of the teat, which makes it awkward for the child to suck. This seems to be valid, and I would suggest that smaller ones be made. Considering that the profession is unanimous in condemning tube bottles as insanitary, it would be a boon to infants if chemists and others were forbidden to sell them.

Unfortunately, very little heed is paid to the doctor's directions as regards the feeding, especially if they entail trouble on the parents. All the doctor is required for is to visit daily, give medicine, and sign death certificate, if necessary, to prevent an inquest. A little more interest in these matters on the part of the public health authorities would greatly assist colliery surgeons.

Preventive treatment resolves itself practically into proper feeding—namely: (1) Breast where possible, and at stated intervals; (2) sanitary methods where artificial means are required. During excessive heat and drought, with the home conditions as above described, I find that milk in any form is very badly borne by children prone to the diarrhoea. Condensed milk agrees better than fresh. Perhaps the dried milk would meet the difficulty. In bad cases I withhold milk entirely, giving barley water or rice water with white of egg and small quantity of virol. If vomiting is marked, the addition of bismuth to the feed is beneficial. Explicit directions as to quantities and times of feeding, cleansing of bottles, etc., are absolutely necessary, and it is preferable to get the parents supervised by a nurse. Sodium citrate has not been effectual in preventing sickness.

As to medicinal treatment, mild cases often yield to small repeated doses of castor oil and lime water. In all cases a preliminary dose of castor oil is useful. This must be followed by some form of intestinal antiseptic, and perhaps calomel or carbolic acid are as suitable as any.

A mixture containing bismuth carbonate, pure carbolic acid, with fractional doses of tincture of opium, does fairly well for many of the septic cases. In obstinate cases the following powders will sometimes check the diarrhoea: \mathcal{R} Pulv. calomel, gr. $\frac{1}{2}$; pulv. ipecac. co.; pulv. kino co., aa gr. $\frac{1}{2}$. One powder once or twice daily for a child of 3 months and upwards. Half the above dose given to a child 1 month old acted like a charm, arresting the stools for twelve hours and giving sleep through the night.

Authorities differ greatly as to the use of alcohol in these cases. In South Wales it is the first of medicines, and we find the children have usually been well dosed with brandy before we see them. Personally, I have seen no benefit result from its use either in small doses or large. Several parents have noticed the child to become more restless after a dose of brandy, and have subsequently left off giving it without being told. In my opinion, it increases the vomiting and prostration and hastens the end.

Those cases in which it was withheld, even when they ended fatally, have battled bravely with the disease and surprised all who saw them by surviving for a lengthy period, while some have got through and recovered from a very low condition without a drop of alcohol in any form. On theoretical grounds alone I fail to see the value of spirits to the infant suffering from a catarrh of the gastro-intestinal mucosa, and practical experience seems to bear out my contention.

ERRATUM.—In the second column, line 37, of the leading article on p. 633 of the issue for September 5th, there is a misprint by which Edinburgh instead of Scotland is credited with the possession of four universities. We regret the error, which is, however, so obvious, that it can scarcely have misled any reader.

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