GENERAL CONVULSIONS IN EARLY INFANCY INDUCED BY THE TAKING OF FOOD,

AND THEIR BEARING UPON PYLORIC OBSTRUCTION IN THE INFANT.

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It is a familiar fact that in early life convulsions of reflex origin and often of little moment may arise from trifling irritation acting upon the periphery of nerves in various parts of the body. In infants the alimentary canal is the most common seat of this irritation, and a general convulsive seizure induced by the pain and irritation of teething or by a meal of indigestible food is a matter of common experience with every one. It has happened to me to meet at rare intervals with a case in which a healthy infant has been thrown into violent fits a few minutes after taking a meal of some simple food which an ordinary child, even the youngest, would digest with ease, and this without the seizure being preceded by vomiting, crying, or the slightest sign that the food did not completely agree.

The first instance of the kind which came under my notice, and made a strong impression upon me, was in a baby of a few weeks old, the child of a hard-working and experienced practitioner, who was naturally much alarmed and perplexed by the singularity of the case. Since its birth the infant, although fed with judgement, had fallen into strong convulsions a few minutes after taking his bottle, and the fits had been repeated with the utmost regularity after each meal. At the father's request I went to his house to see the child. I found a seemingly healthy and well-nourished infant, who looked comfortable and placid, and appeared to be in every way in a normal state. The child was being fed upon Swiss milk and water. He was given in my presence about an ounce of this mixture, which he sucked from his bottle with apparent enjoyment. He finished his meal, and the bottle was replaced upon the table. The child then closed his eyes and appeared to be sinking into a quiet sleep, when in about two minutes he began all at once to twitch in the face; then to jerk his limbs in violent convulsions; his chest became fixed; he ceased to breathe; his complexion turned darker and darker; then he stretched himself out with a slate-blue face, and lay quite still. We did what we could to re-establish respiration, but without any success; the child was dead. The whole attack did not last longer than thirty seconds, if it lasted so long. This distressing experience occurred many years ago. Since then I have seen some four or five other cases of the same kind, although without the same tragic ending, and found that with ordinary treatment and some help to the digestion the attacks could be brought quickly to a close. All the cases have been in hand-fed babies, and have presented exactly the same characters. The patients have all been healthy-looking infants, well-nourished and apparently strong, not peevish or fretful, or sufferers from abdominal discomfort or other sign of indigestion, but who after each meal of the simplest food were thrown without any warning whatever into strong convulsive fits. The peculiarity of the cases is, of course, the complete absence of any sign of uneasiness between the end of the meal and the beginning of the seizure. If I had not seen with my own eyes that this could be so I do not know that I should be able to believe it; but having seen it I am sure of the fact.

I have brought these cases forward, not for their own sake, although their interest is not to be denied, but because they seem to me to throw a strong light upon the mechanism of pyloric obstruction in the newborn infant. There are some who hold that this contraction is a congenital lesion, that the infant comes into the world with a thickened and narrowed pylorus. Others, with whom I agree, look upon the contraction as due in the beginning to a reflex spasm of the pyloric wall induced by the taking of food, and believe that the continued repetition of the contraction determines a hypertrophy of the muscular layers which encircle the opening. That the signs of obstruction are often absent at birth, and may not appear until an interval of some weeks has elapsed is a strong argument in support of this view.

I submit that the cases I have just brought forward furnish a practically conclusive argument in favour of the spasmodic theory. If such mild irritation as is caused by the mere presence of food in the stomach can induce general convulsions in an impressionable child, why should it not be able to set up a local spasm of the pylorus? It has happened that the local spasm has been actually conjoined with general convulsions, as appears in a case published by Dr. Walter J. Harper,¹ a very characteristic case which ended in recovery. If these nervous manifestations can occur together, surely they may also occur independently of one another.

The tendency to local spasm in infants is a fact universally recognized. A common example of it is laryngismus stridulus. This laryngismus may occur alone, or it may be complicated with general convulsions, or even alternate with them. It may be said that if pyloric obstruction were due to local spasm induced by gastric irritation, the cases of general convulsions I have instanced above should all of them have been complicated by spasm of the pylorus; but this does not necessarily follow. To take laryngismus again. This local spasm is commonly the consequence of post-nasal irritation, and can be put a stop to by treating the post-nasal catarrh. General convulsions may also be induced by post-nasal irritation, as I have seen again and again; but either may occur without the other, although the irritant capable of exciting them is the same. So I see nothing unreasonable in believing that gastric irritation may set up general convulsions without pyloric spasm, or pyloric spasm without general convulsions, or both together.

REFERENCE.

¹ *Lancet*, August 19th, 1905.

THE INFECTIVITY OF ENTERIC FEVER.

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SPORADIC cases of enteric fever are of almost daily occurrence in all large cities, the source of infection in each instance seldom, if ever, being ascertained. Occasionally outbreaks of enteric fever occur, due in most instances to a contaminated water or milk supply. The following seven cases, however, are of interest, and worth recording in illustration of the extent to which personal infection plays a part in the dissemination of this disease.

Name.	Age.	Residence.	Situation.	Date of Sickness.	Date of Removal.
L. R.	7½	All same address	3 up, 1st R.	Feb. 3, 1906	Mar. 2, 1906
M. C.	9		1 up, 2nd R.	Feb. 16, 1906	" "
D. C.	4		" "	Feb. 23, 1906	" "
N. A.	9		1 up, 1st L.	Feb. 25, 1906	Mar. 4, 1906
S. S.	8	Next close	2 up, 1st L.	Mar. 4, 1906	Mar. 9, 1906
B. C.	1½		1 up, 2nd R.	Mar. 9, 1906	Mar. 12, 1906
T. H.	3½		2 up, 2nd R.	Mar. 5, 1906	Mar. 8, 1906

It will be seen that L. R. suffered from an indefinite illness for thirty days before removal. She was not so ill as to compel her to take to bed throughout, occasionally being up, when she associated at play with the others above mentioned. In point of fact, the day before her removal to the Infectious Diseases Hospital her mother, not being satisfied with the child's condition, had taken her to one of the dispensaries in the city. The matter was reported by the dispensary to the Health Department, which thus put us on the track of the others.

The dates of sickening of the other six support the view that all were infected from L. R. They all attended the same school, but occupied, with the exception of M. C. and N. A., different class-rooms, and, no other cases of enteric fever having occurred in connexion with this school, it is not to be considered a factor in the propagation of the disease. The milk supply, likewise, in all instances, was from a different source.

All the cases occurred in the same tenement—six in the one close and one in the other. The block is of four flats, composed of dwellings of two apartments—four on each flat—one w.c. serving for all four families. All the