"GASTRIC ATTACKS" IN CHILDHOOD.*

BY

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THE usual age at which gastric attacks occur in childhood is between 2 and 7 years, probably most commonly between 5 and 6. By "gastric attacks" I mean a train of symptoms which points to the alimentary tract as the seat of the disturbance. Thus a child aged 3 refuses his tea, seems fretful, out of sorts, a little feverish, and alarms the household by vomiting, during the evening, some of the food taken at his dinner. The doctor is summoned in the morning, finds his patient with a temperature and a dirty tongue, drowsy, irritable, and still refusing food. In the course of the next few days recovery takes place. The picture varies enormously, depending on the underlying cause, and on the particular child. Thus the child may show a very slight disturbance and be nauseated only. Again, the vomiting may be profuse, the bowels may be obstinately constipated with pale motions, or there may be profuse diarrhoea.

The common causes of gastric attacks are, in my opinion, (a) infections in the alimentary tract or elsewhere; (b) dietetic errors; (c) overexertion and excitement. There seems no doubt that the first is far and away the commonest.

Infections.

The so-called cyclical vomiting attacks (to be discussed later), where the condition recurs over and over again at more or less regular intervals, may be closely simulated by recurrent tonsillar infections. Thus a small child with acute tonsillitis may make no complaint, but refuse its food, become feverish, drowsy, irritable, and through the presence of acetone bodies, formed as a result of the infection, complain of nausea, or vomit. The tonsillar infection may, directly or indirectly, affect the liver, so that the old term "chill on the liver" would aptly describe the situation. On the other hand, the stomach or bowel may be infected, secondarily to this tonsillitis. Careful inspection of the throat should always be made in every "gastric" case. The removal of tonsils should be advocated if such cases should show a tendency to recur.

In thin, nervous, dyspeptic children, especially little boys, and particularly only children or the youngest in the family, catarrhal infections of the nasopharynx or chest may precipitate the condition described, so that the gastric symptoms completely dominate the picture. In girls chronic pyelitis should always be thought of. In these cases, a number of which I have recently been studying, bouts of mild fever occur at more or less regular intervals of two, three, or four weeks. Examination of the urine between attacks may show surprisingly little pus, but during the febrile attack much pus appears. A catheter specimen, both during and between attacks, shows the presence of the infecting organism on culture (as a rule *Bacillus coli*). But the indications for obtaining such a specimen between attacks are not definite, and the result is that cases are missed. During the attack the presence of pus is masked by urates and phosphates, and it is only by the microscope that the real condition of affairs can be ascertained. The bouts of fever are accompanied by drowsiness, lassitude, anorexia, and, if food be pressed, by nausea and vomiting. The result is that they become known in the family as "gastric attacks."

During the influenzal season gastric attacks are common and receive the name "gastric flu." In such cases the onset is extremely sudden, the vomiting is often accompanied by diarrhoea, and there is little doubt that the mucous membrane of the alimentary tract is the direct site of the infection.

Dietetic Errors.

At this age slight variations in diet will not produce gross symptoms in the average child. We should not there-

fore commence an examination of such a patient with the thought in our mind that he has only probably overeaten. It is true that such may be the case, but I believe only in a minority of cases; infections are the predominating cause. There is a type of child who appears to have an inherited inborn tendency to "liverishness." His mother or father was liverish as a child, and may exhibit train or tram sickness or headaches in adult life. Their child is termed the "nervous child," and most often he is found to be their only offspring. This little fellow—for as a rule it is a boy—gets recurrent gastric attacks at more or less regular intervals throughout the year, becoming less and less frequent as he approaches the school age. A consideration of his diet shows that he tends to be overfed on milk, cream, and eggs, and the overanxious mother, seeing his frail little body, plies him with what she considers the most nourishing food. The treatment of such a case is obviously the reduction of fats. Cream must be abolished, eggs and milk reduced to a minimum, certainly not more than two eggs in the week or half a pint of skimmed milk in the day. To metabolize what little fat he gets a maximum of carbohydrate must be given, and this can best be done by offering barley-sugar, jam, golden syrup, treacle, or honey at the end of the mid-day and evening meals. A régime must be adopted whereby three meals only are given and nothing allowed between them. Instead of the child losing weight on this apparently scanty diet he will, paradoxical as it may seem, rapidly put on weight.

In my opinion the error of overfeeding on fat as above described is by far the commonest dietetic error made.

The clinical picture of the above case may show some of the following features. For twenty-four hours the child appears to take his food extraordinarily well. The following day he is irritable, drowsy, and yawning with anorexia, and this is followed by a sudden onset of violent vomiting, when even sips of water are returned. Cramps and colicky pains about the navel occur next, and the parents fear the onset of appendicitis. The abdomen, however, is not tender, and is inclined to be flat. The bowels, as a rule, are constipated, and the urine is filled with acetone and diacetic acid. The management of the attack should commence by getting the bowels to move. Small doses of calomel (1/6 or 1/4 grain) should be given with 5 to 10 grains of sodium bicarbonate hourly until the bowels move. Glucose water and sweetened drinks of fruit juice should be given in sips. As a rule, with the opening of the bowels the vomiting ceases, and drinks of water should then be pushed, when recovery will be rapid. Single isolated bilious attacks due to gross indiscretions of diet are likely to occur in any normal healthy child, and may simulate this picture; the treatment is identical.

Overexertion and Excitement.

In examining the child with a gastric attack we should ascertain whether previous attacks have occurred, and having excluded infection and gross dietetic errors the possibility of overexertion being the cause should be considered. It would appear that a certain proportion of the available blood sugar is required for fat metabolism. With great mental and physical exertion—so that the child becomes overtired—the available supply of sugar is deficient for fat metabolism and the general body nutrition. An attack of vomiting or nausea occurs, very similar to those attacks of hypoglycaemia seen in the diabetic subject who has been given an overdose of insulin. In one such child, observed by Graham Ross in America, an attack could be precipitated at will by such means. Most adults can recall the faintings, giddiness, or nausea felt by them as children on some occasion when they went to school without breakfast. This, if slightly exaggerated, may easily develop into a so-called gastric attack.

I have not touched on the rarer causes of gastric attacks, such as food poisoning, nor have I mentioned those children who show violent vomiting and profuse diarrhoea at the onset of acute infections, such as scarlet fever, measles, or pneumonia; nor have I mentioned typhoid fever or dysentery, which ought always to be borne in mind. Comparatively speaking, these cases are uncommon, and those I have mentioned should be thought of first.

* A lecture given to the Chelsea Division of the British Medical Association.

Diet.

A diet suitable for a boy of 5 or 6 who tends to have liverish or gastric attacks at intervals should be along these lines. On waking he should have a glass of orange, grapefruit, or grape juice, sweetened with four lumps of sugar. Breakfast, half an hour to an hour later, should consist of some cereal, such as porridge, groats, cream of wheat, puffed rice, or shredded wheat, with a very little milk but well sweetened with sugar. As a second course, on two days in the week he may have an egg, and on four days, crisply done, very thin rashers of bacon, which should be fried until the fat has been mainly removed and allowed to drip, so that a minimum of grease or fat remains. Fish should be given on one or two mornings. Crisp toast and butter with freshly brewed tea or Horlick's malted milk, or well skimmed milk and water, equal parts, one cupful only, complete the meal. Nothing should be given all the morning. For dinner—and it is best to have early dinner with these children, say at 12.30—fresh mince or stew, underdone beef or steak or cutlet, should be given on four days in the week, with chicken or fish or brains on three days. A small portion is sufficient. Potato and green vegetables, a tablespoonful of each, should also be given. Milk pudding or stewed fruit, but not suet pudding, should follow, and the child should have water to drink. At tea—4.30 to 5 p.m.—thin bread-and-butter or crisp toast, with stewed fruit, jam, treacle, honey, golden syrup, or a little milk pudding, may be given. The drinks should be the same as at breakfast. In winter a bowl of soup may be taken at this meal.

The child should not have an excess of eggs or cream, much creamy milk, pastry, or suet pudding, chocolate, or cocoa.

GENERAL MEDICAL PRACTICE AND THE MEDICAL CURRICULUM.*

BY

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You can readily understand that my return to this classroom as Regius Professor awakens many memories—memories of undergraduate days of almost unalloyed happiness, and later memories of early essays as a teacher during the years when I was assistant to Professor Murdoch Cameron, who had succeeded to the chair in 1894. The decade immediately preceding this year was most eventful, not only in surgery but also in obstetrics and gynaecology. It witnessed the birth of surgical obstetrics and gynaecology. Quick to recognize this development, more especially as it affected obstetrics, Professor Cameron introduced into the Glasgow Maternity Hospital the modern operation of Caesarean section which Säger of Leipzig had evolved in the early eighties. The successes he secured and reported focused the eyes of the obstetric world on the school of Glasgow. I feel sure you desire to be associated with me in wishing Professor Murdoch Cameron many years of enjoyable leisure.

In selecting a subject for the inaugural address which use and wont prescribe, my chief difficulty was in deciding whether to review the past or forecast the future. I have chosen the latter, for to forecast the future is one of the few adventures left to the middle-aged. Besides, there is a certain fitness in the choice, because to you the future is everything. It occurred to me, therefore, that as most of you will ultimately embrace the arduous but very honourable calling of general practice it might be of interest if I placed before you the future of general practice as I see it, and the manner in which the medical curriculum might be modified to suit the changing conditions which are slowly but steadily occurring in general medical practice.

* Inaugural address (abbreviated) delivered on January 10th, 1927, on appointment to the Regius Chair of Midwifery in Glasgow University.

We have reached a very important stage in the evolution of medical education. For many years the general trend of medical education has been along certain simple lines—namely, as knowledge in a department has advanced the policy followed has been increased instruction in the subject or subjects of that department, with the result that the student of the present day finds it impossible to digest the mental food provided. As a remedy it has been suggested to lengthen the curriculum; and when we consider the length of the medical curriculum in other countries as compared with ours—take Sweden as an extreme example with its eight to nine years—this policy might appear justifiable. But before adopting such a policy—which to those responsible for medical education is the easiest way out of the difficulty but to the student a most serious one—it will be advisable to consider whether some rearrangement or modification of the curriculum is possible.

It is conceivable that with the altered conditions as regards medical practice modifications in the curriculum might in great part get over the difficulty. This implies a correct forecast of the trend of general medical practice. Until this is determined it is impossible to decide how the curriculum should be altered to suit the requirements of the young graduate of to-day who is ultimately going to practise his profession as a general practitioner.

The future of general medical practice lies more and more in the direction of pure medicine, and the general practitioner must be raised in pure medicine to a very high level. He, associated more intimately with the consulting physician, clinical pathologist, and officer of health, is the individual whose assistance will be of inestimable value in advancing medicine. For, as the late Sir James Mackenzie pointed out repeatedly, on the general practitioner must we depend for the early recognition of disease—the field of medicine which at the present moment offers the most promising harvest. Though this will ultimately be the vocation for the general practitioner, it does not mean that he will occupy a less important place in the community, nor that he will be less beloved than the old-time family doctor. The general practitioner as I see him will occupy a more important place, and incidentally he will have an infinitely more interesting professional life. He will be brought into closer relationship with the consulting physician, the clinical pathologist, and the medical officer of health, who also will benefit, for hospital, laboratory, and office work has a tendency to produce a mentality too academic and bureaucratic.

Looked at from yet another standpoint, this co-operation between these different departments is becoming necessary to the teacher of clinical medicine and his students, for, as you are well aware, a number of diseases have been relegated to special hospitals which the medical student only occasionally visits, and in which, therefore, he has few opportunities for clinical study.

Some months ago, in the pages of the *BRITISH MEDICAL JOURNAL*, I had the temerity to refer to this question of the trend of general practice. Let me quote a few lines from the editorial¹ on the subject:

“General medical practice is not, as a fact, developing on lines such as those which Professor Kerr indicates as, in his opinion, desirable. So far from restricting himself to pure medicine, afraid to use a knife or any other surgical instrument, shrinking from responsibility for a maternity case in any of its stages, ante-natal, natal, or post-natal, the general practitioner, in partnership or association with his fellows, is finding it useful to his patients and advantageous to himself to undertake an even wider range of service than was at one time customary; and the results justify the method.”

I am quite prepared to admit that individual practitioners and firms of practitioners find this policy advantageous to themselves. But general surgery and the surgical specialties, including obstetrics, are crafts, and craftsmanship only reaches its highest level when individuals in addition to having a natural aptitude for craftsmanship have continuous practice in their craft. This is not possible in general practice, no matter how large the practice may be. Further, the development of general practice on the lines above indicated introduces an