exploratory nephrotomy has proved negative—one has the uncomfortable feeling that an early case of malignant growth might be overlooked. The operation in itself is not a serious risk; it may disclose some curable condition which otherwise might have been missed until it had reached an advanced stage, and even should it prove negative it allows one to regard without alarm any future recurrence of the haematuria.

In conclusion let me again emphasize the great importance, when called to a case of symptomless haematuria, of treating the patient rather than the haemorrhage, and of not attempting to arrest the bleeding until, by means of cystoscopy, it has been traced to its source.

An Address

ON THE

PERNICIOUS VOMITING OF PREGNANCY.*

BY

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FOR more than twenty years I have been of the opinion that all cases of pernicious vomiting of pregnancy are neurotic in origin, and I have treated the condition accordingly. During this period I have met with about 35 cases, but for the purpose of this address I am considering only 29 of them, as the others remained at home for treatment. Of these 29 cases, 5 were in-patients under my care at the Leeds General Infirmary, 17 in the Hospital for Women and Children, Leeds, and the remaining 7 were in nursing homes. All the patients recovered, and in only one case was abortion induced. The advantage of the treatment that I carry out is that the vomiting usually ceases immediately, and induction of abortion is seldom or never necessary. Indeed, I do not know of any grave illness such as this is which responds to treatment so suddenly. By contrast the usual methods of treatment, multitudinous in variety and well known to you all, are prolonged and dissatisfying, and often end in the induction of abortion, which in this disease is attended by a serious risk to the life of the mother.

I will state exactly what I do; nothing could be more simple. The patient is admitted to a hospital or nursing home and put on ordinary diet at once. The nurses are told, if they have not nursed similar cases of mine before, that the vomiting is due to neurosis, that a bowl must not be provided even if the patient should vomit, and that the words "vomit" and "sickness" must not be mentioned in the presence of the patient. They must just expect her to take her food like other patients in the ward, and must not try to persuade her to do so. As a rule the patient will at once take the full ordinary diet and retain it, but sometimes only a small portion is taken for the first day or two, part of which may occasionally be vomited. If any vomiting occurs the patient is assured that it will soon stop and that she will soon be quite well. In most cases a rectal infusion of 4 per cent. glucose is given, and, as a rule, continuously by the drop method. This relieves the thirst and the feeling of exhaustion, and, by diminishing the acidosis, I think it lessens the tendency to vomit. No drugs are used, except a purgative when it seems desirable. There is no necessity for psycho-therapy as ordinarily carried out in medical and surgical cases. Hospital and other cases do much better when they are in a ward than in a separate room.

Simple though this treatment is in principle and in practice, difficulties sometimes occur, and some of these I must mention. It may seem strange to you, but the patients are sometimes reluctant to go to a hospital or nursing home. If induction of abortion, which the doctor often suggests, were advised, there would probably be no difficulty in persuading the patient to leave home; but when an operation is not necessary it is not always easy to convince her of the advantage of institutional treatment. In the severest cases, however, there is seldom any difficulty when the patient and her friends are assured that she will bear the journey satisfactorily.

In August, 1921, I saw a primigravida in consultation with her doctor in a town about thirty miles from Leeds. She was about eight weeks pregnant and had been vomiting for about three weeks. For two weeks she had been under treatment for pernicious vomiting and for several days had not retained any food. Vomiting and retching had been almost incessant for three

or four days. Various medicines had been tried and glucose given by the rectum. The urine had given a strong reaction for acetone when tested a week previously. Her face was drawn, her eyes sunken; she was exhausted and distressed. The pulse was 120 a minute. Her doctor had arrived at the conclusion that nothing but induction of abortion would save her. Her friends were very reluctant for a while to allow her to be taken to Leeds, but after being told that the journey would not harm her, that the vomiting would cease when she arrived there, and that she would soon be better, they agreed to take her. She vomited once on arrival and had a meal of tea, bread-and-butter, and stewed apple as soon as she was settled in bed. She kept it, slept all night, and took coffee, bacon and egg, toast and marmalade for breakfast next morning. Ordinary diet was continued during the ten days she was in Leeds and the vomiting did not recur. When she went home the patient looked and felt quite well.

I will now narrate a case which illustrates the advisability of the patient being placed directly under the daily charge and observation of the obstetric surgeon who advises the treatment. With the exception of this all the cases were treated in Leeds, where I can obtain nurses who have entire faith in the treatment.

The patient was a primigravida, aged about 30, who had been ailing and had had albumin in her urine for four or five years. She was eight weeks pregnant. She had vomited severely for two weeks, and had been in a nursing home in a neighbouring town for about a week and fed with small quantities of Benger's and similar food. This was usually returned, and so were water and tea. She looked very ill, and I pressed her husband and her doctor to send her to Leeds. As they refused, a trial was given to ordinary diet, to the obvious amusement of her incredulous nurses, and glucose enemata were ordered. The vomiting persisted, and when I saw her again three days later she was no better. I noticed at once a capacious bowl still remaining at the bedside, which, in my opinion, was a contributory cause of the persistence of the vomiting. I again expressed my conviction that she would soon be well if she came to Leeds, and advised against induction of abortion, but she remained where she was, and was treated by glucose infusion given continuously and by semi-starvation diet. Sugar, diacetic acid, and albumin were present in the urine. Vomiting continued in varying degrees for some weeks, and eventually she recovered, but the sugar in the urine persisted until after the labour at full time, when she was safely delivered of a weakly child weighing 4 lb. It is my belief that if my advice had been accepted this patient would have recovered much sooner and the life and health of herself and child would have escaped the serious dangers through which they passed.

In three or four cases in which the vomiting has persisted after admission to hospital I have suspected that the patient wished to get rid of her pregnancy. One of them acknowledged, after spontaneous abortion at the sixth month of pregnancy, that she was "determined not to go through with it," and that she had produced the vomiting by putting her finger into her pharynx. In some other instances I have spoken seriously to the patient, and have pointed out the danger of the persistent vomiting and of induced abortion, and afterwards, with one exception, the symptoms have soon cleared up. In the exception, however, abortion was induced. She was sent to the Hospital for Women and Children, Leeds, by her doctor, who told me and the patient that induction was necessary to save her life. She improved after admission, but relapsed again after her friends had visited her and told her that their family doctor said she must have induction of abortion or she would die. She was alternately better and worse for two weeks, the bad turns always following visiting days, and in the end I gave up the struggle and evacuated the uterus.

I trust that I have explained clearly and fully enough the treatment carried out and the difficulties met with, but I would like to emphasize the necessity of having nurses who believe in the treatment. I am occasionally asked if my results are good in toxic cases. My reply is that most of my cases are toxic, but I regard the toxæmia as a result and not as a cause of the vomiting. Many have been seriously ill and emaciated and have had bile-stained conjunctivæ and bile in their urine. Such cases recover as quickly as the less severe and their recovery is more dramatic.

Perhaps I ought to say a word or two about the pathology of this condition, although I am mainly concerned with its treatment. Tweedy¹ thinks that the pernicious vomiting of pregnancy is due to food poisoning; Hirst² that abnormal secretions of the corpus luteum cause it. These theories are highly speculative and have little evidence to support them. Most authorities appear to favour the view that some toxic substance is absorbed from the developing ovum. This seems a more reasonable hypothesis, because there is no condition, apart from pregnancy, like pernicious vomiting. One of my cases, however, seems to offer evidence against it, for the vomiting continued, although the ovum was almost

* Abridged from the valedictory presidential address at the North of England Obstetrical and Gynaecological Society, January 20th, 1922.

completely decomposed. Pathological investigations, which have been carried out extensively, have been mostly concerned with the character of the metabolic disturbance rather than with its primary cause. Some workers³ have concluded that the chief disturbance is one of carbohydrate metabolism, others of nitrogenous metabolism. Amongst the latter is Whitridge Williams,⁴ who, in 1905 and 1906, expressed the opinion that the ammonia coefficient is valuable in the diagnosis of the severity and the variety of the disease and also as a guide to treatment, more particularly with respect to the question of induction of abortion. In a later paper⁵ he admits that he overvalued the significance of the ammonia coefficient. He also says: "In my experience neurotic vomiting is the variety most frequently encountered,"⁶ and mentions a case in which the vomiting ceased at once when he decided to induce abortion. He believes, however, that in some cases a primary toxæmia is the cause of the vomiting, but to my mind his arguments in favour of this view are not convincing. Pathological investigations into the changes in the urine have not been made in my cases, chiefly because the work seemed unnecessary for purposes of treatment and prognosis, and also because the vomiting has usually ceased before the investigations could have been carried out.

My clinical experience leaves me in no doubt that all my cases are of neurotic origin, and I believe that all cases of pernicious vomiting of pregnancy are of this variety, and that the more severe cases are later or advanced stages of neurotic vomiting.

CONCLUSIONS.

1. Vomiting of pregnancy can be cured quickly as a rule and with a high degree of certainty by the removal of the patient to a hospital or nursing home and by feeding on ordinary diet.
2. Induction of abortion is seldom or never necessary.
3. The so-called toxæmic cases are usually, if not always, a later stage of neurotic vomiting.

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² Hirst: *Amer. Journ. of Obstet.*, 1919, lxxix, p. 327. ³ Harding: *Lancet*, 1921, ii, p. 327. ⁴ H. us, Hofmann, and Givens: *Journ. Amer. Med. Assoc.*, 1920, lxxiv, p. 777. Whitridge Williams: *Amer. Journ. Med. Sciences*, 1906, cxxxii, pp. 343-354. ⁵ Whitridge Williams: *Journ. Obstet. and Gyn. Brit. Empire*, 1912, xxii, p. 251. ⁶ *Ibid.*, p. 250.

SOME COMMON DEFECTS OF DIET AND THEIR PATHOLOGICAL SIGNIFICANCE.

ABSTRACT OF THE OLIVER-SHARPEY LECTURES DELIVERED
BEFORE THE ROYAL COLLEGE OF PHYSICIANS,

BY

E. MELLANBY, M.D.

LECTURE I.

PROFESSOR MELLANBY began by saying that up to a few years ago the subject of nutrition was completely dominated by German ideas and German work, more particularly the very great work of Ruebner, whose point of view, briefly, was that if a person ate enough to give rise to sufficient energy that was all that was necessary. Ruebner put forward the generalization known as the theory of isodynamic equivalents—that is to say, that most foodstuffs were equally good so long as they provided sufficient energy for a man's body. That, obviously, was to treat a man like an engine, and to some extent it was justifiable. Almost the only qualification in Ruebner's theory of isodynamic equivalents of foodstuffs was that the food must contain a small quantity—about 4 per cent.—of protein. This theory of Ruebner was completely demolished by F. G. Hopkins in his Huxley lecture,¹ in which the subject of nutrition and dietetics was treated from a more or less philosophical standpoint. Hopkins showed that Ruebner in stating that the energy given by food was its only limiting factor was quite wrong. The energy was the limiting factor in a diet only when that diet was complete—that is to say, when it was a perfect diet—but there could be all kinds of imperfection in diets, such as insufficient carbohydrates, ill-balanced protein, and so on. Hopkins put forward the theory known as the theory of the minimum, which simply meant that every food in order to produce perfect health must have at least a minimum amount of certain constituents.

Lesson from the Eskimo.

In his own two lectures Professor Mellanby intended to approach the subject, not from the philosophical point of

view of Hopkins, but by way of practical demonstration of certain errors in modern diet and their pathological consequences. Take, in the first place, the primitive Eskimo. This man had perfect teeth, perfectly arranged in very hard, well-formed jaws. His limb bones also were very strong. His diet consisted of muscle tissue and fat. When he killed his animal to eat he saved the blood in order to get sodium chloride in that way. He regarded the glandular structures of the animals he ate as dainties; he ate bone marrow and also the softer parts of the bones, such as the epiphyseal ends and the ribs. But, on the other hand, the modern Alaskan, whose diet depended upon stored goods, such as canned products, both cereals and meats, had teeth which were poorly calcified, and he was just as susceptible to caries as the man in a more highly-civilized community. The same thing was found if one took the African or the West Indian negro in his natural habitat, where his diet consisted of fruit and vegetables and fresh natural products, and compared him with the negro in American cities. In the one case he had beautiful teeth and hard bones; in the other he was apt to show bad teeth, rickets, and general physical deterioration. The Icelanders, again, up to the middle of the last century were free from caries; their diet had consisted of milk, mutton, fish and fowl, and eggs of wild fowl. Now they had a modern dietary, with cereals, sugar, and so on, and had got caries and other degenerative conditions.

One other fact might be pointed out, although, perhaps, it was a digression. The Eskimos, living in their natural habitat, before the introduction of modern diets, got no cancer, and the same was true of the Icelanders. It was only with the introduction of these modern diets that cancer was becoming common in Iceland, and was now found actually among the Eskimo. This was an interesting observation, because here they had two diseases which were really diseases of growth—namely, rickets and cancer—and in one case certainly there was a relation to diet, while in the other it was just possible that there might be a similar relation. He did not mean that cancerous growths might not be forthcoming with a perfect diet, but it might be that the malignancy was due to wrong diet. That, however, was purely supposition, and without experimental basis.

The Change in Modern Diet.

It was necessary to ask why modern dietary had changed. Largely it was because people were taking more and more to urban life; fewer were actual food producers. The food had to be brought into cities from considerable distances, and preference was given to those foods which could be easily transported and were not readily destroyed by bacteria. Economic conditions were such that recourse had to be generally made to foods which could be easily and abundantly produced at comparatively small cost. The cheapest foods compatible with life were cereals, pulses, foreign meat, and vegetable margarines. But it was not only those who could not afford richer diets who suffered; people who were able to have a certain choice suffered also. It must be agreed that taste was not a very reliable guide to a proper dietary. Some people had a strong belief in physiological aesthetics, which meant that if a person liked a thing it was good for him. The believer in physiological aesthetics would point to the fact that the average man preferred butter to margarine. But, on the other hand, it could also be pointed out that the average man preferred the fat of bacon and pig fat generally to the fat of beef or mutton, and there was no doubt at all that beef fat and mutton fat were very much better, while probably the best fat of all which the laboratory worker came across was cod-liver oil, which the average man disdained. It might also be argued that the average man liked cereals, and ate large amounts of bread and also of sugar, and the value of these things as foods seemed to justify his taste; but how many people as a matter of choice drank milk as a beverage? Those who drank milk did so more or less as a duty, yet it was difficult to think of a food which had greater value.

Altogether, with regard to taste and appetite, it must be said that something had gone wrong. Nature had overdone things. Nature had seen that there were some things which were essential to life, like carbohydrates in the diet, and had laid so much stress on those constituents as to appear to forget that there might be other things which were equally important. The habit of rather excessive meat-eating was another instance. Most people liked meat to an extent which was hardly justified by the part it played in nutrition. An instance of taste going wholly wrong was the desire of many