written"..... "The histories of the patients subsequent to operation are of the greatest importance"..... "The complete histories of a score of such patients would be very valuable."

The cases referred to by Mr. Doran¹⁴ and those I now publish may go far towards establishing amongst the heavy solid primary ovarian growths a higher proportion of ovarian fibromata than has hitherto been acknowledged. I would urge that a hard, heavy, solid ovarian tumour is more likely to be a fibroma than a sarcoma.

Paget¹⁵ alluded to remarkable examples of hard cancers with fibrous structures that he had seen in the ovaries of patients with common hard cancer of the breast or stomach. Last year a patient was under my care with two scirrhous ovaries over three years after the breast operation. I allude to that case and to one of primary sarcoma of the ovary, largely cystic, in a girl, aged 19, as examples of growths far less open to clinical confusion than a dermoid tumour may be, in the diagnosis of ovarian fibroma.

A Case of Fibroma of the Right Ovarian Ligament.—A. J., aged 35, single, a healthy-looking woman, stated that there was no definite onset to her suffering, which consisted of pain in the lower portion of the back and in the upper and outer side of the right thigh. For four years she had consulted doctor after doctor, and for one year she had been unfit for work. The pain was aggravated by exertion, but not totally absent during rest. Menstruation regular, dysmenorrhœa; bladder irritable. Dr. McDougall, of Liverpool, found the tumour during his only examination during the first interview with the patient, a fortnight before her admission to hospital on February 26th, 1892. The tumour was easily recognised bimanually, and found to be independent of the normal uterus. Operation, abdominal section, on March 7th, 1892. A narrow rounded pedicle was easily secured without disturbance of either the tube or the

Fig. 5.—Fibroma of the ovarian ligament.

ovary. The tumour was the size of the closed fist of the adult female. It was composed of dense fibrous tissue. After-history: she is now in the enjoyment of good health.

Note.—The addition of this case to the three (one each from Doran, Doléris, and Penrose) tabulated by Mr. Doran so far increases the pathological and clinical knowledge of a rare form of tumour.

[The microphotographs were kindly taken by Mr. F. T. Paul from my own sections.]

REFERENCES.

- ¹ Jacksonian prize essay, 1847. ² *Pathol. Soc.'s Reports*, 1874. ³ *Ibid.*, 1876. ⁴ *Ibid.*, 1877. ⁵ *Obstet. Soc. Trans.*, 1870. ⁶ *Arch. f. Gyn.* ⁷ Professor Boyce, when examining the sections under the microscope a few days ago, remarked "What a suspiciously sarcomatous structure." ⁸ *Obstet. Soc. Trans.*, 1894, pp. 33-34. ⁹ *Ibid.*, 1896. ¹⁰ *Ibid.*, 1897. ¹¹ Mr. Doran's paper, *supra*. ¹² *Surgical Diseases of the Ovaries and Fallopian Tubes*, second edition, March, 1896. ¹³ *Loc. cit.* ¹⁴ *Loc. cit.* ¹⁵ *Surgical Pathology*, p. 613, edition by Turner.

FOOD IN TYPHOID FEVER: THE VIA MEDIA.

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THE "general belief" that for a typhoid patient the best is a simple, and in particular a milk diet, and that the line of safety lies in a strict adherence to the approved routine, has probably saved many a life from the risks which often arise from too much zeal. Nevertheless, routine based upon a general belief, which itself is derived from exclusively watching the operation of the routine, is not a progressive method

or a convincing argument. A definite assurance that relapses, whilst liable to occur with other diets, never did occur with a uniform and exclusive milk diet, would at once set at rest all controversy. In the absence of any assurance to that effect, it is well that the question of diet should be studied, and that we should bear in mind that clinical improvements, howsoever important, cannot at their inception command the support of large statistics.

With Dr. Barrs's aims and arguments I largely agree, and I admire Dr. West's practical caution; yet I differ from both in my practice, which might almost be described as a resultant of their diverging views. For a considerable time I have taught that, so long as we remain unable to deal with the bacillus, our primary indication is to keep up the vitality of the tissues by feeding the patient according to the very best method. How to do this effectually, with judgment and with safety, and with due regard to the indications in the individual cases, is our daily problem.

Milk, the food of foods, and by far the most convenient of all for administration, cannot be improved upon; but might it not be added to? Specially designed for the needs of the growing infant, it can hardly be regarded as also adjusted with perfect nicety either for the wear and tear of adult life or for the wasting effects of continued fevers. The excessive muscular wasting noticed in typhoid does not argue the necessity of a mainly nitrogenous diet; it rather points to deficiency in the daily allowance of fuel, a deficiency which must be made good from some source, even at the expense of so much muscle. In my opinion milk supplies much, but not all that is required; it should, and can safely be supplemented with small and inoffensive adjuncts which day by day will make up the difference. A little more carbohydrate than milk contains and a little hydrocarbon thrown in may save a large and unnecessary waste of muscle. But we can do much more than merely economise weight, if at the same time we are careful not entirely to withhold the fresh vegetable principles which are universally held to be essential to the making of the best blood.

My endeavour has been to supply these additions early, and with that view to restore as soon as possible the digestive function of the upper alimentary tract. Putting aside the few exceptionally severe cases which no treatment and no dieting have hitherto saved, this preliminary indication has been fully attained with the help of Mr. W. B. Wedgwood's¹ valuable method of treatment by mercury and iron, which cleans the tongue, revives the energy, the appetite, and the complexion, and enables the whole pyrexial period after the first week to become a progressive return towards a normal alimentation.

For solid food in the ordinary sense I am no advocate, either during the fever or during the first week of apyrexia. But I do not find in my experience of the last few years any support for the view that supplementing the milk diet with soluble and easily-absorbed food stuffs, which leave little or no faecal residue, does anything but good, so long as the extras are carefully adjusted to the individual indications.

As soon as the "typhoid" condition has been overcome by medication—and this is most often the work of a very few days—maltine is well borne, so is yolk of egg, and a little later the white of egg also, or calf's foot or chicken jelly. Yet later blancmange, custard, honey, which is specially indicated in constipation, or even chocolate may be enjoyed; and, as digestion gains strength, the juice of oranges, the pulp of ripe grapes, and, as first suggested to me by Dr. J. W. Dickson, baked apples supply the grateful and healing fresh vegetable principles.

The patients' steady improvement and well-being generally speak for themselves. In a young female patient admitted after ten days' exclusive but insufficient milk supply in a "typhoid" and somewhat wasted condition, I obtained on this plan a result which I had never noticed before during the continuance of the pyrexia, namely, an ample return of subcutaneous fat.

Dr. West wisely dwells upon the danger of relapse attaching to any abrupt change in a previously uniform and exclusive dietary: nothing is more likely than this result in a patient trained down in his digestive energy and in his stamina by an exclusive milk diet which I regard as imperfectly adapted for the repair of a wasting fever and for the

making of rich blood. This is precisely the risk which the early adoption of a varied and progressive diet seeks to obviate.

At the same time some share in the prevention of relapses has probably been due to the steady continuance of the mercury and iron treatment not only throughout the attack, but for at least a week and a half after defervescence. These views, and further details of treatments, were published in my paper on the Therapeutic Indications in Typhoid Fever in the *Medical Press and Circular* of May 15th, 1895.

In conclusion it is claimed for this modified dietary that it is a distinct improvement on an exclusive milk diet in respect of the nutrition of the blood, of the heart, of the nervous system, and of the bowel; and that it has over the solid alimentation which Dr. Barrs advocates—and of which it supplies the essential constituents—an important advantage in the avoidance of any dangerous stress on the gastric and intestinal digestion, and of any accumulation within the bowel of insoluble and of putrescible residues. Its nutritive success is attested by the aspect and sustained strength of the patients, by their shortened convalescence and greater freedom from sequelæ, and by the absence of that craving which is not only a discomfort but a sign that they are relatively underfed.

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¹ BRITISH MEDICAL JOURNAL, 1894, i, p. 1126.

REMARKS ON METHOD IN SERUM DIAGNOSIS.

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THERE have now been nearly as many ways devised of applying as there have been observers on serum diagnosis. Some are good, others bad; some macroscopic, others microscopic; some simple, but liable to introduce error; others a little more complicated, but far more accurate. For the present, at any rate, the test will generally have to be carried out in laboratories or in hospitals. It is not well adapted for personal application by the practitioner; hence the more accurate and scientific even if a little more complicated processes are to be preferred.

The macroscopic methods may be dismissed in a few words, since they either require a comparatively large quantity of blood if for use in a test tube (Widal¹) or are not completely reliable if applied in a capillary tube (Wright²), and in any case an interval of nearly twenty-four hours must elapse before the diagnosis can be made.

In the microscopic methods two points are of importance: (1) sufficient dilution, which should be effected without bringing undiluted serum into contact with the bacilli, (2) a time limit. As regards the first point, one observer (McWeeney³) made his tests apparently without any dilution, and others (Widal,⁴ one of the earliest workers in this field, Delépine and Sidebotham,⁵ Wyatt Johnston and McTaggart⁶) dilute from equal proportions to about 1 in 10, with such accuracy as their various procedures permit. That this dilution is insufficient was pointed out in my first communication on the subject,⁷ and Stern,⁸ Du Mesnil de Rochemont,⁹ Bates Block,¹⁰ and others have confirmed my statement. Of course the number of normal serums which react well in a dilution of 1 to 10 is small; but it introduces a source of error, although, some may think, on the right side.

I have not yet come across a case in which the serum would not react at some time in the course of the disease in the dilution of 1 to 32—namely, diluting the serum to 1 to 16, and then mixing a drop of diluted serum with a drop of the culture; and even the most enthusiastic observer, Widal, in his earliest communications, remarks that if the reaction does not succeed on one day, it must be tried again during the following days, and that a negative result does not therefore exclude the diagnosis of enteric fever. On the other hand, I have not yet met with a serum other than that of a typhoid patient which would react in this dilution. A few observers have come across such cases, without, however, positively excluding a previous attack of enteric fever. It is

of course obvious that a day longer may elapse before the serum will react 1 in 32 than for 1 in 10, but in the latter case it may be only a normal reaction. The question therefore put shortly is, Is it better to make a positive diagnosis of enteric fever, which in a small percentage of cases may be wrong, or to postpone the diagnosis for a few days, with the nearly absolute certainty of having it right? It appears to me that the latter alternative is preferable from the standpoint of both practical and scientific medicine.

The question of time limit has, curiously enough, not received much attention. It is, nevertheless, of some importance; for in the course of twenty-four hours a good number of serums will show the reaction, especially in a warm room.

It is desirable to use an attenuated culture of the typhoid bacilli, since it seems to be less often affected by normal sera. Also an emulsion from an agar culture presents some advantages over a bouillon culture, especially for comparative and quantitative experiments.

Capillary tubes of not too fine a bore rather than capillary pipettes are advisable for collecting the blood since they can be centrifuged if desired (and this is always to be recommended), or, after a short time, the string of clot and serum can be blown out on to a glass slide, and the serum, containing however some corpuscles be taken up in graduated capillary pipette and suitably diluted. Capillary tubes are perhaps rather more easily broken than capillary pipettes, but this disadvantage care in use can easily obviate.

The method here recommended is, I claim, at any rate not inferior to any other proposed: it is almost as simple, and considerably more accurate, and this opinion is endorsed by its having been adopted for purposes of serum diagnosis in the Johns Hopkins Hospital at Baltimore.¹⁰

Finally it may be as well again to emphasise the fact that, owing to the inherent agglutinative power of the serum of many normal individuals, it is more easy to obtain a positive than a negative result unless suitable precautions are taken, so that it cannot be assumed, as Professor Delépine¹¹ would have us do, that negative results or quantitative estimations imply inferiority of method.

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A CASE OF RUPTURE OF SPLEEN; SPLENECTOMY; DEATH.

BY

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A. B., aged 51, a labourer, was brought to the Hampstead Hospital at 10.30 on the morning of March 8th. About half an hour before admission, whilst driving a cart, he was caught between the shaft of his own and the wheel of a passing wagon. He stood up and was taken to a neighbouring inn, where brandy was administered, and he was then driven to the hospital.

On admission, he complained of pain in the abdomen, especially on the left side, and looked extremely ill. His face was pale, his lips blue, respirations rapid, and pulse very collapsing. There was no evidence of fractured ribs. The abdomen was almost motionless, and the left side was exceedingly tender, there being distinct dullness in the flank, which did not alter with change of position. The right flank was resonant except towards the extreme back. He passed urine which did not contain blood, and the bowels acted twice naturally.

He seemed to be in great pain, and to alleviate this tincture of opium $\text{m} \times$ was given. A diagnosis of internal hæmorrhage with probable rupture of spleen was made.

At 11.30 the condition of the patient was decidedly worse.