absence. Often indeed there is not only no attenuation or shrinking of the gyri, but, on the other hand, the gyri are not infrequently plump and of full size; nay, there is frequently a thickening or pseudo-hypertrophy of them, so that their sides seem to be more closely adpressed towards one another, while the tops of the convolutions are similarly pressed against the cranium (*dura* or *falx cerebri*), giving rise to a flattened or tableland-like appearance of the tops of the convolutions. And the fissures and sulci accordingly do not gape, but are reduced to the appearance of narrow and almost linear markings of the brain surface. These adult cases—at least some of them—without being actually imbecile, are somewhat weak-minded. The predominant character, however, is not the mere deficiency of intelligence (negative state), but the special positive character presented by the epileptic neurosis (positive character). I refer to the explosive condition of the nerve cell and the manner of its discharge of nerve currents. In the cell thus affected the balance between storage of nerve energy and discharge of nerve currents is altered in such a way that a condition is set up of the accumulation of nerve energy at an abnormally high potential (qualitative variation) within the cell, and a liability to explosive and violent discharges from time to time (periodic discharge). This epileptic or explosive condition of the nerve cell is parallel or approximates pathologically to the nutritive impairment of the third degree which I have described elsewhere.³ Etiologically and clinically, such nutritional anomalies are not unfamiliar to us; they may occur apart from epilepsy in some congenital forms of the criminal psychoses, while their later and acquired phases are shown in alcoholism (some types), especially abstinence, and also in some phases of adolescent insanity and of general paralysis of the insane.

I cannot close this part of the subject without referring to one case which I was fortunate to investigate under Professor Horsley in 1891, namely, a case of focal epilepsy in a child, in which the affected area of brain cortex was excised in the operation (after trephining), and the piece thus removed was placed in my hands for further investigation. The specimen had been in methylated spirit for some days before it reached me. This might have been thought to have been a disadvantage—and so it was for studying minutely certain of the nerve changes; but, on the other hand, the sclerotic changes could be well studied, especially after staining with hæmatoxylin and counterstaining with picro-carmin. (Specimens prepared with aniline blue-black were too diffuse in staining, and otherwise a failure to show detail.)

In all the specimens the whole depth of the cortex was pervaded by a fine diffuse sclerotic network, rather coarser and more abundant than the normal feltwork of neuroglia fibre cells; and in two places the cortex was beginning to pucker and shrink slightly as if contracted. Further progress of the disease might, I think, have led to the familiar sclerotic atrophy with microgyria of this part of the cortex, and probably to the development of a "cauliflower"-like patch. There were also two or three minute hæmorrhages beneath the pia, the areas being not more than half a millimetre in diameter. The diffuse sclerosis extended down to and involved the small portion of white substance which was excised with the cortex in the operation. The blood vessels were filled with red corpuscles, but I could find no dilatation, nor any notable changes in the vessel walls. The perivascular neuroglia network seemed rather more abundant than normal.

The nerve cells appeared of diminished abundance, and as yet did not show (with the methods employed) any special destruction or involvement of the protoplasmic processes close to the cell body; the distal parts of the processes could not be seen with the stains used, and therefore nothing can be said of them. The cell bodies, however, showed more free and more diffuse intracellular pigmentation than that of the normal child. (The nuclei seemed to show no special change with the methods used, nor could any vacuolation be demonstrated).

A bird's-eye view of all the cases examined showed that the type of lesion present in the before-mentioned cases was as follows:

(a) A diffuse sclerosis or overgrowth of the neuroglia fibre cells in the brain substance.

(b) A coextensive change in the nerve cells. This change was of two kinds—namely, negative and positive. The negative changes consisted in a defective development (fewness and slenderness) of protoplasmic processes—imbecile type of nerve cell; while the positive changes consisted of an increase in amount and diffusion of pigment throughout the cell body, especially its basal part, and a displacement of the nucleus towards the apex of the cell. Later changes were a gradual destruction and atrophy of the nerve-cell processes consequent upon or coextensive with the further overgrowth of the glia (sclerosis), until whole groups and islands of cells might be so destroyed.

There is thus a common pathogenic basis for epileptic idiocy and imbecility, and for focal epilepsy occurring in the child—namely, anomalies of growth and nutrition impressed upon the growing nerve cell as well as the neuroglia cell, and affecting predominantly this or that area of the brain frequently in territories corresponding to a particular vascular distribution.

In cases of epilepsy supervening in adult life, after the brain cells had attained complete development, the changes found were (as regards the nerve cells) only of the positive kind just mentioned. But, in addition, these very frequently exhibited intranuclear vacuolation of the cortical cells also, an observation of Bevan Lewis which I can fully confirm.

The significance of the changes especially associated with the epileptic neurosis (more particularly when occurring congenitally or in early life, and therefore entailing also a more or less obvious degree of mental impairment) is still more striking when we remember that "in the brains of simple—that is, non-epileptic—idiots and imbeciles, such lesions as the above were generally absent, and the convoluted forms might be and often were plump and well formed, though inclined to simplicity of arrangement." These are to be looked upon as general arrests of development, not complicated of course with the epileptic neurosis. Such arrests might be very pronounced, so as to entail speechless idiocy in the patient. The following case is such a one:

CASE V.—G. W. K., male, congenital idiot, not epileptic. He is speechless, uneducable, dirty, and degraded in his habits. He finally died of pthisis at the adult age of 30. The brain shows a plumpness and rotundity of the convolutions. The convolutions are less complex and sinuous than in a normal person; there is great deficiency of the tertiary and secondary sulci, so that the convolutions are very wide and full-looking. There is no local atrophy or sclerosis, and nowhere any condition like microgyria. Microscopically there is great defect of development of both pyramidal and polymorphic cells (imbecile type of cell).

In the brains of non-epileptic imbeciles sclerosis and microgyria are both conspicuous by their absence. When the epileptic neurosis is present, however, this process is also present. The positive or negative changes in the nerve elements themselves are present in varying degrees. It is in the combination of these two classes of pathological lesions that we find the surest indication, the seal as it were of epileptic idiocy or epileptic imbecility in the brain.

The bearings of these and other observations on the causation, prevention, and on the treatment of the insanities will form the subject of a future communication.

REFERENCES.

¹ A short article appeared in the BRITISH MEDICAL JOURNAL, April, 1895. ² *Lancet*, April 27th, 1895, p. 1059. ³ *Brain* (Winter) 1894, pp. 681-2.

FIBROMA OF THE OVARY AND OVARIAN LIGAMENT:

WITH PATHOLOGICAL AND CLINICAL REPORTS OF A SERIES OF
EIGHT CASES OF FIBROMA OF THE OVARY AND ONE OF THE
OVARIAN LIGAMENT, TREATED BY OPERATION.

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SOME ovarian fibromatous growths are insignificant; these are unimportant clinically, and have been discovered, as it were accidentally, *post mortem*. Dr. Joseph Wigglesworth, more than ten years ago, presented to me the ovary illustrated in section in Fig. 1. The three small central fibromata within

the ovary were associated with large fibroids of the uterus in a woman, aged 44, who died from another cause in Rainhill Asylum. Microscopical preparations from the spirit specimens showed the ovarian growths to be pure fibromata and the uterine fibro-myomata. The occasional concurrence of uterine fibroids and ovarian "fibroids" had been noted, and Safford Lee¹ had described their structure as identical. Virchow has warned us not to structurally confuse so-called "fibroids" of the ovary with fibroids of the uterus.

Fig. 1.—Ovary, in section, showing three small fibromata.

Dr. Wiglesworth's specimen is valuable in so far as its structure harmonises with Virchow's observation. But, in addition, such a specimen is only very rarely met with; Rokitsky described a variety of ovarian fibroma "as originating in the cicatrix of a corpus luteum, and being rarely larger in dimensions than a pea." Rokitsky cited two cases.

Examples of larger growths of pathological interest have been published by Klob and Jenks, by Goodhart,² Walsham,³ Crisp,⁴ and others.

Dr. Edward Crisp, when he exhibited the specimen just referred to, pointed out the ease with which the growth might have been removed during the life of the patient; this was over seven years after Dr. J. L. Martin,⁴ of Melbourne, had removed by ovariectomy a hard fibrous tumour of the ovary which the late Sir Spencer Wells and Dr. Graily Hewitt were unwilling to accept, at the time, as ovarian. In the light of subsequent knowledge Dr. Martin's case was, one might almost say undoubtedly, an example of ovarian fibroma. Dr. Martin, at the time, was able to refer only to the "two cases of rather rare fibrous tumours of the ovary" mentioned in Clay's translation of Kiwisch. The late Sir Spencer Wells operated twice, in the spring of 1872, for what were really fibrous tumours of the ovary.

No comment was made on the independence of the corresponding Fallopian tube in relation to solid ovarian tumours until Leopold's paper was published in 1874.⁶

Leopold administered the clinical stimulus in 1876, when he alleged that solid ovarian tumours as a class were more frequent than had been previously believed. The ground for this opinion was his laborious and valuable collection of fifty-nine cases, including fibromata, sarcomata, and carcinomata. Only hypercriticism could stamp Leopold's collection as incomplete.

Nineteen of the 59 had been described by their respective authors as fibromata. Leopold inferred that some of the 19 were probably sarcomata. It is true that there is no sharp line between the fibroma and the sarcoma. When spindle or mixed cells have been conspicuous features in structure, a sarcomatous, or suspiciously sarcomatous, tumour has been the almost invariable verdict. This is exemplified in many instances, amongst the mostly isolated records of cases found in the *Transactions* of societies, and in the medical journals, too often reported within days or weeks of the operation.

In the museum of University College, Liverpool, there are two solid ovarian tumours (from Case III in my Table). I removed the tumours at the one operation, 4½ years ago, and soon afterwards, as the result of my own microscopical examination of the growths, the museum label was written "sarcomata of the ovaries."⁷ The patient still lives, and the freedom from recurrence in her case and in the cases of all the others (see the Table), induced me a year ago to completely change my opinion; accordingly, in November, 1895, I advised the postponement for two months of the operation of ovariectomy in Case VI in my Table.

My own operative practice has supplied me with eight cases of fibroma of the ovary, and one of fibroma of the ovarian ligament. With the one exception already referred to (Case III) the ovarian growth was confined to one ovary. The uterus in every case was free from fibroid growth.

CASE I.—E.K., a widow, aged 55, in whom the menopause was established two years ago, was sent to Liverpool by Dr. Henry Lloyd, of St. Asaph, because of the discovery by him of a collection of ascitic fluid and a solid ovarian tumour. The uterus was underneath the tumour; it was small and unconnected with the tumour. She was in fair health; a multipara. The tumour she first detected "the size of an egg" in May, 1891. In the next five months, she stated, it grew rapidly. There was a little pain on exertion only. Ovariectomy, on October 21st, 1891, there were four or five pints of ascitic fluid. The only difficulty was with the broad and vascular pedicle, secured in four sections for the sake of safety. Right ovary normal. The tumour contained one superficial cyst distended with clear fluid, otherwise (that is, in nearly the whole of the extent) it was solid and hard, uneven on the surface. When cut into, the solid portions were almost uniformly tinted, pale-pink, yellowish-white. The minute structure as seen under the microscope, in the section before you, is either a pure fibroma with spindle cells or a fibromyoma. Its character is simple, and its structure doubtful, as to the presence or absence of involuntary muscle cells. There are some slightly wavy, very long spindle cells, which, to follow Virchow and others, it is very difficult to identify as either the cell elements of connective tissue or involuntary muscle. As to the presence of involuntary muscle in ovarian fibromata, in the affirmative are Virchow, Birch-Hirschfeld, Klob, and Klebs; in the negative, Leopold, Fritsch, and Spiegelberg. After-history of patient: excellent health in October, 1896.

CASE II.—Dr. Newington, of Rock Ferry, advised B.A., a single woman, a florid, healthy-looking housemaid, aged 22, to come to the Hospital for Women on June 20th, 1892. She had a large solid tumour and a little peritoneal fluid in the abdomen. The uterus was small, underneath the growth, and independently movable. The patient had first discovered her tumour three months previously, and according to her account it had grown rapidly. Menstruation every four weeks, duration seven days, natural until the period, ending May 7th, was scanty. Menses suppressed in June, 1892. On cross-examination she afterwards stated that the menses had diminished in quantity since an attack of flatulence and palpitation in November, 1890. There was no complaint except of dysuria suggesting "anything wrong within her." Ovariectomy June 24th, 1892, uncomplicated; a thick and wide pedicle. The tumour had a smooth and even surface, with numerous vascular areas; on section, within, several mucoid patches, surface of section pale pink and dull white colour. Microscopically examined, a cellular fibroma with mucoid patches. After-history: patient living and in good health.

Fig. 2, Case II, a cellular fibroma with mucoid patches

CASE III.—M. E. W., aged 48, the mother of five children (youngest aged 16 years), first consulted Dr. Billing, of Blackpool, a fortnight before her

I.—*Fibroma of Ovary (one double).*

Date.	Operator and Previous Medical Attendant.	Initials of Patient.	Age, Social State, W., M., S., Children, and Abortions.	Symptoms.	Physical Signs.	Operation.	Structure of Tumour.	After-History.*
1891 Oct. 21	Dr. Briggs Dr. Lloyd, St. Asaph	E. K.	55 W. 0 children 0 abortion	No pain, except on exertion. Tumour "as large as an egg" when found in May, 1891. Menopause 2 years ago	Uterus small: large tumour independent of it. Ascites	Long incision, tumour ($7\frac{1}{2} \times 6\frac{1}{2}$ in.) solid, except one superficial cyst. Pedicle broad and thick, secured in 4 sections. Right ovary unaffected	? Fibroma ? Myofibroma (See text)	In good health, 5 years afterwards.
1892 June 24	Dr. Briggs Dr. Newington, Rock Ferry	B. A.	22 S.	No pain. Tumour discovered by patient 3 months ago. Bladder slightly irritable. Menstrual history normal, except scanty in May, omitted in June, 1892	Uterus small: large tumour independent of it. Ascites	Tumour ($7\frac{1}{2} \times 6\frac{1}{2}$ in.) solid with several mucoid patches. Opposite ovary healthy	Cellular fibroma with mucoid patches	In good health, $4\frac{1}{2}$ years afterwards.
July 22	Dr. Briggs Dr. Billing, Blackpool	M. E. W.	48 M. 5 children (youngest 16 years old)	No symptoms, except enlargement of abdomen, noticed 14 days before admission into hospital. Menopause 6 years ago	Uterus 3 in.: large and small tumours. Ascites	(Double ovariectomy) Large tumour (7×7 in.), small tumour (2×2 in.), 3 pints ascitic fluid	Myxofibroma	In good health, $4\frac{1}{2}$ years afterwards
1894 June 15	Dr. Briggs Dr. Morrish	A. S.	30 M. 2 children 1 abortion	No pain (sometimes the tumour felt sore). 18 months ago she first found the tumour "the size of an egg"	Uterus $2\frac{1}{2}$ in.: heavy solid tumour independent of it	Tumour ($7\frac{1}{2} \times 5\frac{1}{2}$ in.). Right ovary normal. Ascites	Spindle-celled fibroma	Borne one child since operation. In good health, $2\frac{1}{2}$ years afterwards.
Sept. 14	Dr. Briggs Dr. Tisdall	A. G.	68 S.	No pain. 3 months ago she accidentally discovered the tumour, which has grown rapidly since	Uterus $2\frac{1}{2}$ in.: cervix elevated	Tumour (11×7 in.) (weight $7\frac{1}{2}$ lbs.), adherent to sigmoid flexure, cæcum and appendix also to pelvic peritoneum	Fibroma with spindle cells	In good health, $2\frac{1}{2}$ years afterwards.
1896 Jan. 10	Dr. Briggs Dr. H. T. Shaw	Mrs. W.	32 M.	Married July 11th, 1895. Pain at intervals for 4 months, always relieved by rest	Uterus small: solid tumour independent of it. Ascites	Tumour (4×3 in.). Left ovary normal	Spindle-celled fibroma	In good health, 10 months afterwards.
Aug. 20	Dr. Briggs Dr. Robinson, Runcorn	A. H.	39 M. 11 children 9 abortions	Pain occasionally on exertion for 1 year. Bladder irritable	Uterus 3 in.: solid tumour independent of it. Ascites	Tumour (2×2 in.). Right ovary normal	Spindle-celled fibroma	In good health, recent.
Sept. 16	Dr. Briggs Dr. Cowe	M. H.	29 M.	Pain for 12 months. 4 months pregnant	Stony hard tumour independent of uterus	Tumour (3×3 in.). Right ovary normal	Almost structureless, a calcified fibroma	In good health recent.

II.—*Fibroma of Ovarian Ligament.*

1892 March 7	Dr. Briggs Dr. McDougall	A. J.	35 S.	Pain 6 to 7 years, not totally relieved by rest	Hard tumour of irregular outline, independent of the uterus	Tumour the size of the closed fist of the female adult. Ovaries and tubes not disturbed	Dense fibroma	In good health, $4\frac{1}{2}$ years afterwards.
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* The after-histories are brought down to March 31st, 1897.

admission into the Hospital for Women on July 19th, 1892. She had no pain. She had noticed "herself getting larger." Her general health was unimpaired. Menses natural till cessation at the age of 42 years. Dr. Billing observed the ascites and a solid tumour. On a more complete examination after her admission into hospital I was able to find the uterus, low down to the front, on the left side, a large and a small solid tumour, both free from the uterus. Ovariectomy, on July 22nd, 1892, was easy; both broad ligaments were readily tied. The tumours and over 3 pints of ascitic fluid were removed. The tumours were smooth and globular; pale pink tint on section. The same structure was found in each; numerous cells, myxo-fibroma. After-history, October, 1896: she now enjoys excellent health.

Fig. 3, Case III, right ovary, $2\frac{1}{2}$ ozs.; left ovary, 1 lb. 15 ozs.; myxo-fibromata. Reduced to one-fifth natural size.

CASE IV.—Dr. Morrish, of The Dingle, advised A. S. to go to hospital. She was a married woman, in good health, aged 30, the mother of two children aged (1) 3 years and (2) 3 months. On the day of her admission

June 11th, 1894, she told me that after an abortion at the third month, one and-a-half years ago, she detected "a lump the size of an egg." The lump, she said, was movable in the abdomen, and sometimes felt sore. A subsequent pregnancy and full term labour were not inconvenient by the lump. It was some time after the full term labour (three months ago) that Dr. Morrish was consulted, and he acquainted her with the presence of the tumour and the necessity for having the tumour removed. Menstrual history unchanged. Ovariectomy June 15th, 1894. Large solid tumour, also ascitic fluid, removed; opposite ovary healthy. Tumour solid, fibrillated on section, a spindle-celled growth, a fibroma. After-history: she has since borne a child and is in excellent health.

CASE V.—The laundry matron of a charitable institution, A. G., a single woman, preserving an exceptionally vigorous constitution at the age of 68, was admitted under my care on the recommendation of Dr. Tisdall. Since she first noticed the tumour three months ago, she said the growth had been rapid. The tumour was large and felt solid; it was fixed in the pelvis and lower abdomen. The uterus, which measured $2\frac{1}{2}$ inches, was elevated, so that the portio vaginalis was barely tangible *per vaginam*. The uterus was movable on the front of the mass of growth fixed behind it. These relations of tumour and uterus were carefully confirmed, with the patient under deep anaesthesia, before operation was contemplated. Dr. Tisdall informed me that the tumour had rather rapidly encroached on the patient's health and capacity for work, and urged an operation for the removal of the growth. The consent of the patient was obtained, and the risk from the adhesions explained to her friends. Ovariectomy, on September 14th, 1894, was completed in little under 1½ hour. Adhesions to the whole of the sigmoid flexure, to the cæcum and vermiform appendix and to the pelvic peritoneum had to be dealt with, and numerous patches of bleeding vessels on the walls of the separated intestine were undermined with a needle and fine catgut, and tied. The left broad ligament was secured. Haemorrhage, in the form of a free oozing, from the depths of the pelvic cavity, was controlled by an intraperitoneal packing of superimposed strips of cyanide gauze. The gauze and the glass drain tube were left *in situ* for two days. Our efforts were rewarded, for she made a steady recovery. Her tumour weighed $7\frac{1}{2}$ lbs.; it was a pure fibroma; its spindle cells were not very numerous; they were connective-tissue cells, shorter than the cells of involuntary muscle. After-history: she remains in good health.

CASE VI.—The patient was the newly-wedded wife of the captain of an ocean-going steamer. In November, 1895, I saw her with her doctor, who told me that she was suffering from pelvic pain, relieved by rest. The pain was first complained of very soon after marriage, four months ago. She was aged 32 years. Menstruation unaffected. There was a solid hard round tumour, the size of a large orange, in the pelvis, unconnected with the uterus. The diagnosis of ovarian fibroma was made, and on this opinion of the innocence of the tumour, I relied entirely on my own personal experience in the five cases I had previously treated by operation. I felt that conscientiously I could advise the postponement of the operation until the husband returned in two months' time. Immediately after the return of the husband in January, 1896, I again visited the patient. In the meantime the tumour had increased in size, and a little ascitic fluid had collected in the peritoneal cavity. Ovariectomy on January 10th, 1896, was an easy operation. The tumour had a pale, reddish-pink colour. It was a spindle-celled fibroma. It lay within the capsule of the ovary, and carried two-thirds of the normal ovary on its surface. After-history: she has gained 10 lbs. in weight; she is in excellent health, and the opposite ovary is not enlarged.

Fig. 4.—Case VI. Spindle-celled fibroma of ovary.

CASE VII.—Dr. Robinson, of Runcorn, sent A. H., aged 39 years, to the Hospital for Women. The patient looked pale and sallow, but, as a rule, she enjoyed good health. She had been pregnant 20 times; 11 children and 9 abortions resulting. The bladder was slightly irritable. Menstruation regular up to 18 months ago; since then the menstrual interval has often been only 14 days, several times 3 days, and once 21 days. Four years previously she had a "bad confinement," the child was born by the breech. Pain had been experienced for 12 months; walking aggravates the pain. She was always most comfortable when she lay on the left side, and if she turned over to the right something dropped from left to right and caused pain. She had a solid ovarian tumour as large as a medium-sized orange. Ovariectomy, on August 20th, 1896: no difficulty. Tumour, pale pink colour: a spindle-celled fibroma.

CASE VIII.—M. H., aged 29, was a delicate-looking woman. She had been married four years, and was last unwell on June 17th, 1896, when this, her first, pregnancy commenced. For quite twelve months there had been pain in the lower abdomen, and recently, since she became pregnant, she had been very sick, and suffered more acute pain. Hence she called in Dr. Cowe, with whom I saw her. She was a nervous woman, and unconsciously resisted examination. Under the influence of an anæsthetic was found what practically resembled a large loose stone, mostly of rounded outline, and quite free from the pregnant uterus. Ovariectomy, on September 21st, 1896, at the fourth month of pregnancy. There was no ascitic fluid. Tumour hard, enclosed in a capsule formed of the remains of the ovary, which could be stripped off the growth, which was so completely calcified that it had to be sawn. After decalcification the portion of the tumour examined showed an almost structureless fibroma.

A summary of the pathological structure of the tumours might be the following (see the Table): In (1) and (5) there was a large proportion of fully-formed fibrous tissue; in (1) the spindle cells were unusually long and wavy; in (5) the spindle cells were shorter. No one has suggested, after an examination of the microscopical sections, that the cells in (5) are anything else than connective tissue cells, but the long, wavy spindle cells in (1) are thought by Professor Boyce to belong to involuntary muscle; hence I have labelled the structure myofibroma(?) or fibroma(?). In the others, (2) a cellular fibroma with mucoid patches, (3) a "sarcomatous-looking" myxofibroma, (4) and (6) spindle-celled growths, (7) spindle-celled growth (recent). Degeneration was shown, partial mucoid in (2) and complete calcification in (8). Now, as to the question of fibroma *versus* sarcoma, the evidence from my cases is largely, if not altogether, in favour of fibroma in heavy, solid primary ovarian

growths. This year, during the treatment after operation of Case VI, where a spindle-celled growth was removed, and where I had previously diagnosed ovarian fibroma and postponed operation for two months, I was anxious to obtain some confirmation of my opinion as to the non-malignant character of the spindle-celled growths.

Microphotographs—the numbers refer to the cases in Table I.

Microphotographs—the numbers refer to the cases in Table I.

Dr. Cullingworth's remarks on Dr. Dakin's specimen before the Obstetrical Society in 1894⁸ were encouraging. Mr. Alban Doran has recently very kindly lent me the original copy of the paper he read before the Obstetrical Society in June, 1896.⁹ Dr. Dreschfeld's original description of the ovarian growths from a former patient of Dr. Cullingworth's¹⁰ has been since upheld.¹¹ Mr. Bland Sutton¹² is of opinion that "ovarian fibromata are very rare; many specimens described as such have turned out on careful re-examination to be typical spindle-celled sarcomata." Mr. Bland Sutton¹³ adds: "It is very difficult to obtain reliable and complete records of a sufficient number of cases to enable a satisfactory description of the clinical aspects of ovarian fibromata to be

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, Dolérís, 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