as its uncertainty of cure, inapplicability in many cases, and impossibility of performance in others, render it rarely worthy of adoption.

Removal of the tumour or tumours with or without the uterus now holds the field as practically the only surgical procedure. This may be performed according to the bent of the operator either vaginally or abdominally. The removal of the tumour alone, when pedunculated, must naturally be the operator's selection, but the removal of sessile fibroids by enucleation is still a much controverted question. From its conservative aspect it has indeed to be favourably considered when the growths are small and comparatively easily reached through the dilated or split cervix. Statistics show the mortality of about 5 per cent. in 1,781 cases collected from various well-known operators.

By the abdominal route, myomectomy is much more dangerous, and shows a mortality of nearly 10 per cent. in 807 cases. Further, it must be remembered how uncertain one must be that no other nodules are left in the uterine wall after the operation is completed. When the mortality and other facts of myomectomy are considered in comparison with the statistics of hysterectomy, it cannot but be apparent that there is much cause for favouring the latter procedure. Indeed, the development of hysterectomy may be said to have revolutionized our treatment of fibromyomata within the last twenty-five years.

Before 1883 there were reports from the various European countries and America of 573 cases collected by Bigelow.³ Of these, 311 recovered and 241 died, so far as could be followed.

As in the development of ovariectomy, the stump was at first treated extra-abdominally, and haemorrhage controlled by wire ligature (*serre-nœud*, Pean), elastic ligature (Hegar), or clamps (Thomas Keith). Schroeder, however, treated the stump intra-abdominally and subperitoneally in the fashion of the present day, with the all-important exception of ligation of the uterine arteries. In his first 25 cases he had 10 deaths. The general mortality from either method was very similar:

Extra-abdominal, 247 cases—mortality 39 per cent.

Intra-abdominal, 84 cases—mortality 39.28 per cent.

Following the development of technique of ovariectomy by intra-abdominal treatment of the stump; in the face of the good results of Bantock and others, secured by the extra-abdominal method, hysterectomy has by the advanced technique of aseptic surgery become an operation of very limited risk. A review of the work of well-known operators of various nationalities within the last five years shows 2,081 cases, with a mortality of less than 5 per cent., and this is rapidly becoming lessened.

My own statistics in this relation show 203 cases by the supravaginal method, with 2 deaths; a consecutive series of 109 cases having been successful. One death occurred on the twelfth day suddenly from embolism. The other took place on the day after the operation on a patient whose blood showed 18 per cent. haemoglobin and 2½ million red cells. Such results cannot be looked upon as other than exceptionally fortunate when one considers the unsatisfactory state of many of the cases operated upon, the result of intense anaemia, and weakened cardiac action. Still, they are sufficiently stimulating in warranting the recommendation of the operation.

Panhysterectomy, or removal of the entire uterus, has been advocated by some operators, but has little specially to recommend it, except in the rare cases in which the cervix is involved by the growth, or some malignant uterine complication is present. It certainly is an efficient bar to subsequent cervical cancer, but this sequel is so seldom met with as hardly to warrant the prolongation of the operation which is necessarily involved, or the increased mortality which is shown by statistics collected from the work of the best-known operators as 8.27 per cent. in 1,668 cases.

CONCLUSIONS.

From what has been said it cannot but be admitted that in the last twenty years our advice to women the victims of fibromyomata must necessarily have materially changed. Instead of commending 90 per cent. to a life of semi-invalidism till the climacteric arrived only probably to relieve their sufferings, we are now able to offer a certain prospect of cure to 95 per cent. at least.

Far be it from me to suggest that every woman the subject of fibromyomata should have to undergo treatment, surgical or otherwise. The excellent summary of Thorburn above quoted is as true to-day as it was when written. Fully half of those having fibroids have no symptoms and should be left alone, for these growths cannot in themselves be considered as a menace to life, or even a barrier to health, happiness, or usefulness.

When, however—as happens in one out of two cases—they cause symptoms from haemorrhage, pain, or pressure, it seems to me reprehensible not strongly to recommend active treatment.

To condemn a woman to a life of inutility and semi-invalidism during the most active years of her existence so that she may possibly spend a comfortable old age surely cannot be considered worthy of our profession when the risk of absolute immediate cure is so slight.

Fibroids are mainly met with in the “well-to-do,” who can afford to rest so many hours daily, spend their “period” times in bed, and go to fashionable spas for change; they thus lend themselves to a temporizing inactivity which is out of the question in the working classes.

Doubtless, in the former class, the patient herself, in the majority of instances, supports the line of inactivity, as, from the slow and insidious manner in which she is reduced to inutility, she is unaware of her weakness and inefficiency, and at the same time is but too ready to coincide with any method of so-called treatment which avoids operation. It is pitiable to think that so many women in early middle life are thus encouraged to exist simply to avoid an operation with so little risk. Still more pitiable is it to know that they are encouraged in this almost suicidal attitude by the advice of those who assert that not only are they unsexed, but are liable to become insane. This canard cannot be too strongly denied as being without even the vestige of proof to substantiate it. Indeed, one might argue from the opposite standpoint; I have performed hysterectomy with complete success, simply on account of the mental condition, upon a chronic inmate of an asylum who after the operation regained her usual mental equilibrium.

In conclusion, I have no hesitation in saying that, now that our methods of treatment are so perfected as to reduce the risk of radical operation to the vanishing point, we are warranted in taking a strong position against long-continued temporizing, and if a woman's health and happiness are impaired by reason of a uterine fibromyoma, to urge its removal.

REFERENCES.

¹ One Thousand Cases of Abdominal Surgery. ² Textbook of Diseases of Women, p. 367. ³ American Journal of Obstetrics, vol. xvi, 1883, p. 1269.

A Lecture

ON

DYSMENORRHOEA.

DELIVERED AT CHARING CROSS HOSPITAL.

By AMAND ROUTH, M.D., B.S., F.R.C.P.,

OBSTETRIC PHYSICIAN, CHARING CROSS HOSPITAL, AND LECTURER IN MIDWIFERY AT THE MEDICAL SCHOOL; CONSULTING PHYSICIAN, SAMARITAN FREE HOSPITAL FOR WOMEN.

My lecture is on a subject in which a large percentage of one half of the world's population are personally interested, and for the relief of which you will find you will often be consulted.

Now, let me first say that dysmenorrhoea (*δυσ-μην-ῥέω*) is a symptom, and should not be treated as a disease. It is as much a symptom as toothache is, and though you may temporarily mask or obliterate the symptoms by pain-killing drugs, your constant aim should be to try and find out the cause. If you can modify or remove the cause, the pain will also disappear. In cases where the patient is first seen during the actual dysmenorrhoea, you will have to temporarily treat the symptom by sedatives, but in the three weeks following you must try to discover the cause and so to deal with it that the next “period” may be easier.

If the cause be a general or constitutional one, more

time than the intervening three weeks may be required to entirely relieve. In an unmarried girl, if the cause is apparently local, but associated with some abnormal constitutional state, which may partly explain the pain, you would be wise to avoid local treatment at first, whilst treating the anaemia, the constipation, or whilst regulating the diet or regimen of the patient, and be subsequently guided by the result of your general treatment.

How are we to discover the cause in a given case of dysmenorrhoea?

Probably the first essential is to have a clear idea as to the varieties or types of the pain. Dysmenorrhoea in the sense which we are now assuming is not always caused by painful contraction of the uterus, but may also be due to congestion, inflammation, or other abnormality of the pelvic organs, in which cases the types of pain are different. It is probable, too, that we shall need a third group where the pain is ovarian in origin, dysœstocia, as Robert Barnes used to call it.

Let us, therefore, try to group all our cases of dysmenorrhoea under one or other of these types, which we must now consider in detail, and we will also note the causes of the various types of pain, for, as already stated, we can only cure dysmenorrhoea by removing its cause.

Our types of pain then are:

1. Painful uterine contractions.
 - (a) True obstruction. Absolute, partial, and relative.
 - (b) Spasmodic or nervous.
2. "Congestive" dysmenorrhoea.
 - (a) True congestion.
 - (b) Following pelvic inflammation.
3. Ovarian dysmenorrhoea.
 - (a) Menstrual.
 - (b) Intermenstrual (*Mittelschmerz*).

1. PAINFUL UTERINE CONTRACTIONS.

We have an exact counterpart of these contractions in "after-pains," which may be the result of the uterus trying to expel clot or membrane through a blocked or irregularly contracted cervix, or the contractions may be the still more painful type where there is no foreign body requiring expulsion, and where the pain is spasmodic, resembling cramp, though intermittent in character, and is sometimes called "uterine colic." Such pain may radiate upwards to the breast and downwards along the thighs.

Thus the painful uterine contractions may be:

- (a) Obstructive—due to actual or relative obstruction.
- (b) Spasmodic—or functional, sometimes called "nervous" or "neuralgic."

(a) Obstructive Dysmenorrhoea.

Though I begin with obstructive dysmenorrhoea, I may say at once that in my opinion it is the rarest form of all the varieties.

In my student days I attended lectures by Dr. Graily Hewitt at University College Hospital, and he attributed most cases of dysmenorrhoea to obstruction, believing that uterine flexions could so impede the flow of menstrual blood past the uterine bend that pain and secondary organic conditions resulted. We now know that such flexions, *per se*, do not cause dysmenorrhoea, but that pain in such cases is either due to an absence of normal uterine polarity, causing a deficient cervical relaxation like the rigid os in the first stage of labour, or to a super-added congestion, which may be due to a prolapse of the organ, but is certainly not due to a kinking of the arteries or veins of the uterus as was then taught, for those vessels lie outside the uterine muscle and are not influenced by flexion. A flexion may produce a *relative* obstruction if clots are formed *in utero*, for these have to be expelled by increased muscular effort (relative obstruction).

Absolute obstruction, whether congenital or acquired, is a very rare condition. It leads to the product of menstruation being retained, resulting in hematocolpos, hematometra, or even in cases of long standing, hematosalpinx. The dysmenorrhoea is due to the increased tension present in the organs respectively distended or to ineffectual muscular contractions. Such obstruction may either cause a continuous, cramp-like pain, or an intermittent colicky pain, owing to the efforts of the uterine muscle to expel its contents; or if the blood is retained in the vagina, there will be a bulging of the hymen or other obstructing membrane, causing a "forcing," pain and a strong tendency to bear down and strain.

Partial obstruction may be due to a partially-occluded cervix, the result of an imperfectly-performed amputation of the cervix, or to cautery or caustic applications to the endocervix or vagina.

Relative obstruction is seen where clots are present in cases, for instance, of subinvolution and retroversion where there is a bulky uterine body with a dilated cavity and poor powers of tonic contraction. In such a case there is often menorrhagia, clots may form *in utero*, and be passed with some difficulty through the internal os uteri.

The most typical example, however, of relative obstruction is "membranous" or exfoliative dysmenorrhoea, where the detachable portions of the endometrium come away, entire or in pieces, and severe pain is produced during expulsion through the relatively small internal os. This pain is partly due to a painful contraction of the body of the uterus, but partly also to the mechanical dilatation of the sensitive fibres round the internal os. Sometimes there is no pain till the blood or membrane is passing the relatively narrow internal os; sometimes there is a preceding "spasmodic" pain, which Matthews Duncan suggested might be a mechanical cause of the gross detachment of the membrane.

In all cases the pain steadily increases till the membrane is expelled past the point of obstruction. This usually occurs about the end of the second day, and is immediately followed by a sudden gush of blood previously pent up. The pain then at once ceases. Secondary or compensatory hypertrophy of the uterus almost invariably follows obstructive dysmenorrhoea.

(b) Spasmodic Dysmenorrhoea.

In these cases the pain comes on usually a few hours, sometimes a day or two, before the flow. It is usually intermittent in type, more rarely continuous. In severe cases the patient's suffering may be intense. It is often preceded by frontal, or orbital, or facial pain. Vomiting often accompanies the paroxysm, and exhaustion may be experienced for some days afterwards.

The patient will often tell you that the pain is relieved by hot applications to the abdomen, by hot drinks, especially if alcohol or ginger be added. The "spasm" passes off as the flow comes on owing to the resulting physiological relaxation of the cervical sphincter. Indeed it is probable that the pain is really due to absence of the normal uterine polarity, for at the menstrual cycle the cervical fibres and the circular fibres of the lower zone of the uterine body should tend to relax, whilst the uterine body fibres contract. A failure in this action produces a rigid cervix as in the first stage of labour.

Undeveloped uteri, usually those showing persistent infantile characteristics, such as conical cervix, small round external os uteri, shortened length (2½ in.) with ante flexion, are often functionally imperfect, and liable to irregular painful contractions of this type.

A pelvic examination may not be advisable in many of these cases owing to their youth or virginity, but if decided upon should be made in the first instance per rectum or under anaesthesia. As a rule in early cases, except in undeveloped uteri, or when a complicating pelvic disease is present, the physical signs are negative, but if the patient has had well-marked spasmodic dysmenorrhoea for many years, the body of the uterus gradually both dilates and hypertrophies (compensatory hypertrophy), as if the dysmenorrhoea were obstructive, and the organ has to be clinically distinguished from subinvolution, a congested uterus or a small fibroid. Such secondary hypertrophy is usually associated with a flabby supravaginal cervix, somewhat simulating Hegar's compression sign in early pregnancy.

Sometimes spasmodic dysmenorrhoea is caused by the presence of a small fibroid in the uterine wall, which seems to act as a foreign body and to cause irregular painful contractions. A rectum loaded with scybala will similarly act as a local irritant, and so also will a full bladder in a "nervous" patient.

The constitutional state in spasmodic dysmenorrhoea is usually one of two conditions. In the one group the girl is anaemic, perhaps plump but flabby, or in poor general nutrition from phthisis, Bright's disease, or diabetes, with lessened menstrual loss, or she has recently recovered from some serious illness, such as enteric, scarlatina, or acute rheumatism. In all these cases the dysmenorrhoea may

be of recent onset, and is more or less relieved by constitutional treatment. In the second of the constitutional groups into which these cases fall, neurosis is a prominent feature. The patient is highly strung, emotional, excitable, clever, a pleasant companion, though liable to depression. Such cases have pain from puberty, have frontal or orbital headache, and vomiting, as well as local pain. The pain will sometimes be entirely absent if the patient is living an energetic or personally interested life at the moment. City women lose their pain when holiday making in the country; rural women when enjoying a round of amusement in London.

2. CONGESTIVE DYSMENORRHOEA.

In this section I would place two somewhat distinct groups, those due to:

- (a) True pelvic congestion;
- (b) Following pelvic inflammation.

(a) True Pelvic Congestion.

The type here is different to that of spasmodic dysmenorrhoea though it is not always easy to differentiate, for the two may co-exist. The pain is often merely an exaggeration of intermenstrual pelvic discomfort. The pain suffered from is mainly in the back, hypogastrium, groins, and thighs; is usually a continuous one, and takes the form of weight, bearing-down or "forcing," with backache and fullness in the pelvis, and a desire to unduly strain at defaecation or micturition, with subsequent increase of pain. There is often leucorrhoea between the periods, the bowels are constipated, the urine high-coloured, and the breasts are swollen and tender for some days previous to the period. The menstrual flow is scanty for the first two days, but is then followed by increased, often profuse, loss, with relief of all the pelvic pain. There is usually associated with the pelvic pain a congestive headache, chiefly over the parietal or occipital bones.

This pelvic congestion may be due to displacement of the pelvic viscera, to tumours of the uterus, ovaries or tubes or other viscera pressing upon the large venous plexuses in the broad ligaments, or it may be the result of venous engorgement of cardiac, pulmonary or hepatic origin. It may also be caused by certain harmful modern methods intended to prevent conception, and by venereal excesses.

As a result of such congestion, there is an excessive increase of the normal vascular tension during menstruation, with increased pressure upon and increased hyperaesthesia of the terminal nerve elements. The subjects of this type are constitutionally quite distinct from the "spasmodic" cases. They are usually heavy, dull, uninteresting women, of lethargic habits, often obese, with cold extremities, mottled skin, subject to chilblains; such patients will tell you that their pain is not relieved by alcohol, and that the pain only leaves them when the flow is well established.

If a pelvic examination be made in these cases, the rectum is probably loaded, the uterus bulky and tender, and through the speculum the cervix would be bluer than the vaginal mucous membrane. There may be a mucopurulent discharge from the os with perhaps a granular erosion, if, as a result of the uterine congestion, an endocervical catarrh or hypertrophic fungous endometritis has developed, and menorrhagia—often metrorrhagia—may be an associated symptom. The physical evidence of definite displacement or tumours would be easily recognized. It is evident that if there be much engorgement of the uterine mucosa a relative obstruction may be produced, which would be relieved only when the established flow had lessened the vascular swelling of the mucous membrane. Thus "obstructive" and "congestive" dysmenorrhoea may be combined, and the respective "types" be merged.

(b) Pelvic Inflammation.

This is the second subdivision under this "congestive" group. There has been preceding pelvic inflammation, as a result of which either the venous return of blood is interfered with by persistent adhesions, or the uterus is displaced by contracting bands or rendered immobile by plastic adhesions or by cicatricial bands to surrounding structures. In many such cases the uterus, which was probably itself an infected organ at the outset, remains tender. In all these cases the uterine function is im-

paired by its impeded circulation and its hampered muscular contractility. The resulting pain is mainly congestive in type, for the circulation of the whole pelvis is impeded; but it is so often complicated by the fact that the uterus itself is tender and its muscular contractions therefore are painful, that the type of pain is often mixed and confused.

When the type of pain is not definite enough to enable you to place the dysmenorrhoea in one or other of our groups, you must rely more upon the physical signs present. In such cases as we are considering it is not, however, always easy to recognize evidences of past pelvic inflammation. The history of the case and the ripened experience which will soon be yours will tell you all that you need to know.

3. OVARIAN DYSMENORRHOEA.

Occasionally the maturation and escape of the ripened ovum from the ovary is accompanied with difficulty and pain. This is especially the case where the ovary has a thickened capsule, or where its investment of modified peritoneum is covered by recent lymph, or is adherent to another organ.

In such a case there is a tension-pain due to the non-yielding character of the ovarian covering. The pain is in one or other ovarian region, or may be so diffuse that it cannot be distinguished from that due to ordinary congestive dysmenorrhoea, except that, unless the ovary is prolapsed into Douglas's pouch, there is rarely any bearing-down or "forcing" pain. Ovarian dysmenorrhoea is sometimes present when the uterus is either absent or so undeveloped that menstruation is absent—primary amenorrhoea. In most of these cases the patient's intellect is dull, and other neuroses beside the dysmenorrhoea are present. Such cases are very difficult to relieve. I refer later to one such case, complicated by epilepsy, which was recently in Golding Ward. In all these cases of ovarian dysmenorrhoea, if the ovaries are palpable, one or other, or sometimes both, are found tender and swollen during the pain. If ovulation should occur at some cycle not identical with the menstrual cycle, this ovarian dysmenorrhoea causes an intermenstrual dysmenorrhoea called "Mittelschmerz." Whether this pain is always due to ovarian dysmenorrhoea, as I think probable, or may sometimes be due to one of the many other causes assigned to it, such as uterine fibroids, salpingitis, vaginal cysts, etc., is uncertain. "Mittelschmerz" occurs more or less regularly on a definite day—usually about the tenth or twelfth after a period. It is spread over two or three days; is paroxysmal, like spasmodic dysmenorrhoea, each paroxysm lasting from five minutes to half an hour or more. In rare cases the pain is continuous; but even then there are exacerbations of severity. There is one variety of "Mittelschmerz" which is particularly distressing. The pain comes on at a definite date after the period, and as it passes off a more or less profuse muco-purulent or watery discharge comes away. In some such cases the Fallopian tubes are found to swell during the pain, and the watery discharge may be from the emptying of an evanescent hydrosalpinx. The muco-purulent discharge is preceded by the uterus becoming tender and swollen. I believe both these conditions to be the result of a determination of blood to a chronically-inflamed organ during an ovulation-cycle asynchronous with the alternating menstrual cycle.

TREATMENT OF DYSMENORRHOEA.

As already stated, the treatment consists in the removal or modification of the constitutional or local cause, and until this can be done in masking or alleviating the pain itself. Cases of dysmenorrhoea need attention both during the pain itself and during the intermenstrual three weeks. I will deal with the treatment under the various types of pain, in the order in which we have already grouped them, but I will discuss the general treatment suitable to nearly all cases, and the indications for giving the many useful sedatives under the head of spasmodic dysmenorrhoea.

Taking our types of dysmenorrhoea as already grouped, the true "obstructive" cases must be treated by temporary relief of the symptoms during the period by sedatives, and endeavours should then be made to remove the cause of the obstruction before the next period is due.

Broadly speaking, complete obstruction to the menstrual

flow requires to be relieved by incision, partial or relative obstruction by dilatation. For the latter I prefer rapid dilatation under anaesthesia, followed by either plugging with gauze or the introduction of a glass stem of suitable size to be kept in only whilst the patient is in bed. In a few cases bilateral or posterior cervical incisions are required. Slow dilatation by tents is preferred by some, and if both the patient and the tents are suitably prepared, there is no real risk in these days of antiseptics. The chief objection to tents is the discomfort to the patient during the process of dilatation.

In *relative obstruction*, due to the difficulty of expulsion of clots as in retroverted subinvolved uteri, replacement of the uterus, with iodized phenol applications to the endometrium, or curettage may be required, and ergot should be given between the periods to encourage involution. Ergot should always be discontinued three days before the period is due if pain is usual. In these cases there is often much congestion present, which should be treated as stated later.

"*Membranous*" dysmenorrhoea should be treated by rapid dilatation and curettage, followed by the passage of a few bougies and the application of iodized phenol to the endometrium a week before each period for some months, otherwise the membrane will begin to be again expelled as before. Medicines recommended for the relief of spasmodic dysmenorrhoea should be given two or three days before the period is due.

In the nervous form, usually called spasmodic dysmenorrhoea, the treatment is also, to a great extent, necessarily prophylactic, but is usually more medical than surgical.

You are probably called in first during the actual paroxysm, and, after masking the pain by sedatives, you devote the next three weeks to discovering and treating the cause. In all cases general treatment is indicated. Among the most important are physical and physiological rest, moderate exercise in the open air, unless contraindicated; carefully-regulated diet; the bowels and skin should be attended to by purgatives and bathing; clothing should be of wool, yet loose and cool; the mind should be pleasantly yet fully occupied; and some occupation involving practical sympathy for others is particularly beneficial.

In the anaemic group you can do much to improve the general state. I have found the following an excellent prescription, to be taken after food thrice daily:

R Liq. ammoniae acetatis, ℥ij.
Ferri et ammoniae citratis, gr. vij.
Tr. calumbae, ℥ xxx.
Liq. arsenicalis, ℥ iij.
Mag. sulph., quant. suff.
Aq. chloroformi ad ℥j.

M. Fiat haustus.

Enough Epsom salts should be given to open the bowels once or twice daily. A week before the period is due 10 gr. of bromide of potassium may be added to this combination, or salicylate of soda if a rheumatic tendency be present. If the dysmenorrhoea should, nevertheless, ensue, there are many drugs which are useful. I have found the following prescription act well for the relief of the pain:

R Tinct. cardamomi co., ℥ ss
Tinct. zingiberis fort., ℥ v
Liq. ammoniae acetatis, ℥ iv
Antipyrin, gr. v
Pot. bromid., gr. xv
Aq. caryophyll. ad ℥j

M. Fiat haustus.

A dose to be taken when the pain is present, and repeated if need be in two hours. If stronger sedatives are required, a cachet, taken with sal volatile and water, containing 3 gr. each of antipyrin, phenacetin, and citrate of caffeine, usually answers better than larger doses of the same drugs separately.

Aspirin, 10 gr., in a cachet, is especially useful during the paroxysm if there be a rheumatic or gouty diathesis. Antikamnia, exalgine, acetanilide, and other coal-tar derivatives, are often useful. Apioi capsules, in three to five drop doses, thrice daily, commenced three days before the period is due, will often greatly relieve. If the extremities are cold, or the patient feels chilly, prompt relief may be afforded by the inhalation of amyl nitrite (℥ iij), or by taking nitro-glycerine (gr. 1½). Where the

pulse is small and hard these last two drugs are especially useful.

You should be particularly careful to avoid giving alcohol, opium, or chloral in these cases, especially in the neurotic type of woman, lest a habit of the drug be acquired.

If the above treatment fail, the empirical one of dilatation of the cervix uteri by the rapid or the gradual method will relieve the pain for some months and in some cases cure. It is especially indicated where the woman is married, and sterility is a feature of the case also requiring attention.

In cases of long standing, when compensatory hypertrophy is present, or in other cases when the cause of the colic is an intramural fibroid, or where these cases are complicated by other pelvic lesions, local treatment must of course be directed differently.

In connexion with these nervous cases, much has been written on the subject of their treatment by cauterization of the so-called "genital points" in the nose. This treatment originated from the well-known fact that, in the few days preceding menstruation, women may feel pain or discomfort in distant regions, amongst which may be noted frontal headache, pain in one or both eyeballs, facial neuralgia, twitching eyelids, tinnitus, toothache, etc., and nasal discomfort. These are vaguely called reflex phenomena, and are due to the increased vascular and nervous tension affecting specially some nerve or organ which is liable to be easily influenced.

The nasal "genital points" are stated to be the inferior turbinated bone and the tubercle of the septum. I only mention this subject owing to the statements of Lehmann, Fliers, Schiff, and others that they have successfully treated spasmodic dysmenorrhoea by applying cocaine or caustics to these "genital points." Linder has, however, conclusively shown in thirty cases experimented upon that the majority of such ameliorations are due to "suggestion," and are at the best very temporary in their effect. They take the patient's attention away from the pelvis, and so relieve the subjective pelvic neurosis.¹ I cannot recommend this form of treatment.

In *congestive dysmenorrhoea* the pain does not yield readily to antispasmodics, but will sometimes yield promptly to ext. cannabis indica (gr. ½) or to a combination of hydrastis, belladonna, and bromide of potassium or sodium. Our efforts should be directed towards encouragement of the flow (for the pain passes off when the period is properly established), and to relieve the congestion by acting on other excretory organs, especially the liver, bowels, kidneys, and skin. If one of these "congestive" cases is first seen at the onset of the menstrual period only, a hot sitz or foot bath with mustard in it, and a hot bran poultice or rubber bottle over the hypogastrium will encourage the flow and relieve the pain. A dose of calomel (gr. ij to v) should be also given if indicated, and the skin encouraged to act by rest in bed and a few large doses of liq. amm. acetatis (℥ss to ℥j) with two or three drops of tincture of aconite. In cases of pelvic congestion with cold extremities and cold skin over the body nitroglycerine is remarkably effective. Ten grains of pulv. ipecac. co. is often very useful with 30 gr. of bromide of potassium if the patient is seen towards night-time.

To reduce the pelvic congestion, you must prepare the patient beforehand by manual rectification of any uterine prolapse or retroversion, and introduce, if need be, a suitable pessary. Order hot (110° F.) vaginal douches containing borax or tincture of iodine. In each case 4 drachms to 6 pints should be ordered and the douche should be used slowly. In bad cases the cervix may be punctured, or leeches applied once a week to relieve the venous engorgement of the uterus. Instead of this or in addition to it, glycerine tampons, or a gelatine (℥ss) and glycerine (℥jss) pessary should be inserted by the patient at bedtime to encourage a profuse watery exosmosis. The genu-pectoral position for ten minutes at bedtime, or when the patient is tired, is very useful as a means of emptying the pelvis of venous blood. Its value is much assisted by allowing air to enter the vagina whilst in this position. A patient can do this by inserting an enema nozzle into the vaginal orifice. Thus both gravitation and atmospheric pressure are brought into play and much relief is felt. The bowels should be freely relieved by cholagogues, such as calomel or blue pill or jalapine;

followed by salines, and a mixture containing magnesia sulphate, acetate of ammonia, and sal ammonia, to act on bowels, skin and liver, is often useful.

Where the pain is due to old uterine or perimetrial inflammation, rest and other suitable means must be adopted to promote absorption of the inflammatory products and return of uterine mobility, but as some of these cases require surgical treatment, either by vaginal or abdominal section, I cannot go into details now.

The treatment of *ovarian dysmenorrhoea* is more difficult, but when the pain is due to pre-existing perioöphoritis much may be done to lessen discomfort on the lines laid down for congestive dysmenorrhoea. The actual pain is relieved by many of the drugs alluded to under spasmodic dysmenorrhoea, but the bromides of potassium and sodium and nitroglycerine are particularly indicated. Turpentine stupes or hot bran poultices over the abdomen are very soothing.

Operative treatment is unsatisfactory, and, in my opinion, is not justifiable except when this form of pain occurs in women with absent or undeveloped uteri. Some of you will remember a typical case of this in Golding Ward about five months ago. She was a woman of 28 years of age, who had true epileptic seizures and dysmenorrhoea once a month, with absolute primary amenorrhoea. On examination under anaesthesia the vagina was found to be short but patent, no uterus could be felt, but what appeared to be an ovary was felt on one side. It appeared to be a case of ovarian dysmenorrhoea with absent uterus. At the urgent request of the patient and her friends I opened the abdomen, and found that each ovary (one was inside the inguinal canal of its own side) was attached to a small solid muscular nodule which represented one half of a double uterus, and on each side there was a much hypertrophied round ligament. I removed these structures. The patient had no dysmenorrhoea at her next period, but had an epileptic fit of lessened severity, with little or no subsequent coma. Since then she has only had one slight fit, and is much improved mentally.

The treatment of "Mittelschmerz" is most unsatisfactory. I cured one case by removing a vaginal cyst which became tense and caused pain on the tenth day after each period. Cases due to chronic salpingitis have also been cured by operation. Cases due solely to the ovulation cycle occurring at a different time to the menstrual cycle, are relieved somewhat by a blister over the ovarian region, but as a rule sedatives have to be given, and nothing short of removal of the offending organ will cure. Needless to say, this is not often to be recommended.

You will see that the treatment of dysmenorrhoea depends not only upon the recognition of pelvic diseases and abnormalities, but also upon a due regard being paid to constitutional or general conditions. The practitioner who devotes all his attention to local causes, to the exclusion of the general state, is as little likely to relieve complex cases of dysmenorrhoea as he who neglects to adequately investigate pelvic conditions, and who treats such cases by sedatives, which merely mask the symptoms without curing the condition which causes them.

REFERENCE.

- ¹ BRITISH MEDICAL JOURNAL. EPITOME, August 30th, 1902, No. 121, and October 25th, 1902, No. 255.

A SERIES OF FIFTY CONSECUTIVE ABDOMINAL SECTIONS.*

By R. P. RANKEN LYLE, M.D.,

LECTURER IN MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN,
UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.

In December, 1902, the Samaritan Hospital was instituted in Newcastle-upon-Tyne for the practice of gynaecology. There are six beds, including one emergency bed, for patients, and an out-patient department, which is open two days a week. All the operations are performed in an ordinary attic, under the most restricted conditions, and it has not been specially fitted up in any way. Since its opening I have performed a large number of major and minor operations, and my object now is to show you the result of the first 50 abdominal sections, and to draw certain conclusions therefrom.

The period during which they were performed extends

* A paper read before the British Gynaecological Society.

from October 1st, 1903, to January 18th, 1906, and the conditions necessitating them were as follows:

Ovarian cystomata, including dermoids	...	18
Fibromyomata of the uterus	...	11
Ectopic gestation	...	6
Broad-ligament cyst	...	3
Adherent retroversion	...	3
Pyosalpinx	...	3
Tuberculous disease of the peritoneum	...	2
Malignant disease of the cervix uteri	...	2
General abdominal carcinosis	...	1
Parovarian cyst	...	1
Total	...	50

The actual operations were:

Ovariectomy	...	17
Supravaginal hysterectomy	...	8
Salpingectomy	...	5
Salpingo-oöphorectomy	...	4
Enucleation of cyst	...	4
Coeliotomy	...	4
Myomectomy	...	3
Ventrifixation	...	3
Panhysterectomy	...	2

I have, unfortunately, to record one death. The case will be fully described.

THE TECHNIQUE ADOPTED.

The technique adopted in all these operations was of the simplest nature, as I am of opinion that complicated technique or elaborate preparations are not only unnecessary but may be even a source of danger to the patient, inasmuch as minor essentials may be sometimes accidentally overlooked when the preparations are too elaborate.

Antisepsis was very carefully carried out, the hands and forearms were thoroughly washed in hot lysol solution with a nailbrush, then turpentine and methylated spirit were used, and the hands and forearms well washed in 1 in 1,000 corrosive solution. The instruments were boiled and placed in 1 in 40 carbolic solution. The sponges, which were of gauze, were boiled for twenty minutes, and were then wrung out of hot saline. All buried ligatures were of catgut, which was prepared by ether, methylated spirit, and corrosive sublimate solution. Silkworm gut was used for all superficial sutures. The abdomen was prepared the night previous by washing with soap and water, then sponged with turpentine and methylated spirit, and the application of a corrosive pad over night, and washed with 1 in 1,000 corrosive sublimate solution just previous to the operation. No vaginal antisepsis was carried out even in cases of panhysterectomy. The abdominal incision was restricted to the smallest dimensions consistent with the proper performance of the operation, and there was consequently a marked absence of shock following the operation, and a diminished risk of ventral hernia in later years. All cut surfaces of peritoneum were properly adjusted—such as suturing the anterior and posterior layers of the peritoneum after hysterectomy and the removal of broad ligament cysts, and suturing the peritoneum over the pedicle in cases of ovariectomy and salpingectomy.

The abdominal wall was carefully sewn up in three and sometimes four layers, care always being taken to properly adjust corresponding structures. A small strip of plain sterilized gauze wrung out of hot saline and covered with plain absorbent wool was used as a dressing to the wound. The dressing was kept in position by strapping and flannel bandages. Ether, with one or two exceptions, was the anaesthetic. In three cases of pyosalpinx, in which a small amount of purulent material escaped during the operation, it was carefully mopped up and did not cause any further trouble. In those cases where a large wounded surface of peritoneum occurred, for example, ventral fixation for adherent retroversion, as much saline solution as possible was left in the abdomen to float the intestines from the wounded surface and so prevent adhesions.

After-treatment.

The patient was given a drink of hot water with a little bicarbonate of soda in it (which is often effectual in relieving bilious vomiting) about three hours after the operation. This was freely continued in addition to barley water until the following morning, when she was given a cup of tea, followed during the day by milk diluted with barley