Section of General Practice

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[*December* 19, 1956]

DISCUSSION ON THE AFTERMATH OF HYSTERECTOMY AND OOPHORECTOMY

Dr. Katharina Dalton: Not all hysterectomies end in tragedy, but a great deal can be learnt from those which do. The sooner the after-effects of this radical operation are fully understood the more will the importance be realized of considering every possible alternative treatment before the final decision to perform a hysterectomy is reached. To study the long-term effects of this operation a questionnaire was used to follow up all cases in my practice. This practice is not representative of general practice, but is overloaded with sufferers from premenstrual syndrome and menopausal disorders. It is, therefore, not possible to compare this series with controls and no claim is made in this respect. In this series, of the 43 women 6 were single and 3 widowed. Of the 34 married women 3 have since obtained divorces and a further 12 have sought the advice of a marriage guidance counsellor in an effort to prevent marital disruption. Thus in 44% of married women in this series hysterectomy has been followed by marked loss of marital happiness. Undoubtedly in many cases marital discord may have been evident before hysterectomy, but this vital event in the lives of a married couple may possibly prove the last straw. The husband, who cannot and knows he never will be able to enjoy sexual satisfaction with his marriage partner, has a greater temptation to seek the company of another woman. Nevertheless the marriage may have been on an even keel prior to hysterectomy.

The three divorced women all reported normal intercourse before operation, but intercourse had not been attempted since. Before operation 76% of the married women experienced normal intercourse, and the remainder reported unsatisfactory intercourse due to dyspareunia or infrequency. However, after the operation only 22% reported normal intercourse, 36% reported unsatisfactory intercourse and in the remaining 42% there had been complete abstention. This question was often answered by a look of surprise or such statements as "I didn't know I could" or "I thought I was all sewn up". One replied "Oh no, my husband is too thoughtful", but alas! one year later the thoughtful husband was enjoying the company of his secretary. Surely there is a failure here in pre-operative preparation and post-operative guidance in omitting discussion on this very important subject with husband and wife.

When asked if they were pleased with the result of the operation 23 of 43 women replied "No". Some amplified their statement with such remarks as "I feel pain more now", "I worry over trifles", "Never really well", "Don't like company", "It made me hard", "I always wanted children" or even "I've a lovely scar, but my health has never been the same since". In contrast the reason given by those who were satisfied was always the same "No worries about becoming pregnant". This suggests an insufficient knowledge of contraceptive measures and possibly too little faith in them, or that while believing it is morally wrong to use contraceptives, they are conscience free if gynæcologists render them permanently sterile.

Analysis of those who were satisfied with hysterectomy showed that they were equally shared among the married, single and widowed, but there was a marked difference in satisfaction according to the time that had elapsed since the operation. Thus, less than one year after operation 83% were satisfied, but between one and five years only 41% were

satisfied. The figure dropped to 33% for those six to ten years, and rose to 50% after ten years. These figures may account for the impression among gynæcologists that their operation has been successful, for they often see the patient for a final examination two to six months after leaving hospital, at a time when she is still happy with her recovery from a major operation but before she has returned to the full stresses and strains of everyday life, and before intercourse has been seriously attempted.

The age of the patient at the time of hysterectomy appears to affect the success of the operation. Of those who were under 40 at the time of operation 70% were satisfied, between 41 and 45 years only 43% were satisfied, dropping to 25% for those between 46 and 50, and 40% between 50 and 55 years. It is only those over 55 who give the pleasing figure of 100% satisfied with the result of the operation. This suggests that Nature objects most to interference by hysterectomy when this is performed at the time of the natural menopause.

Analysis of the extent of the operation revealed that 55% of those who underwent simple hysterectomy were satisfied, 50% of those who had hysterectomy with removal of one ovary were satisfied, but only 20% of those who underwent hysterectomy with bilateral oophorectomy were satisfied. This confirms the recognized teaching that the ovaries should be preserved if at all possible. Only two women underwent subtotal hysterectomy, so no comparative figures for this and total hysterectomy can be given.

Was the incidence of neurosis high after hysterectomy? 74% of the women were troubled by recurrent headaches. In half of these women headaches had been noted to occur premenstrually before operation, but the post-hysterectomy headaches were increased in intensity, often accompanied by vomiting, photophobia or blurred vision. Vertigo was a recurrent symptom in 60%, hot flushes occurred in 68%, rheumatism in 50%, lethargy in 57% and depression in 62%. Thus the presence of six common neurotic symptoms occurred in over half the women. Charts of some members of this series showed how these neurotic symptoms recurred cyclically at the time of the menstrual equivalent (Fig. 1).

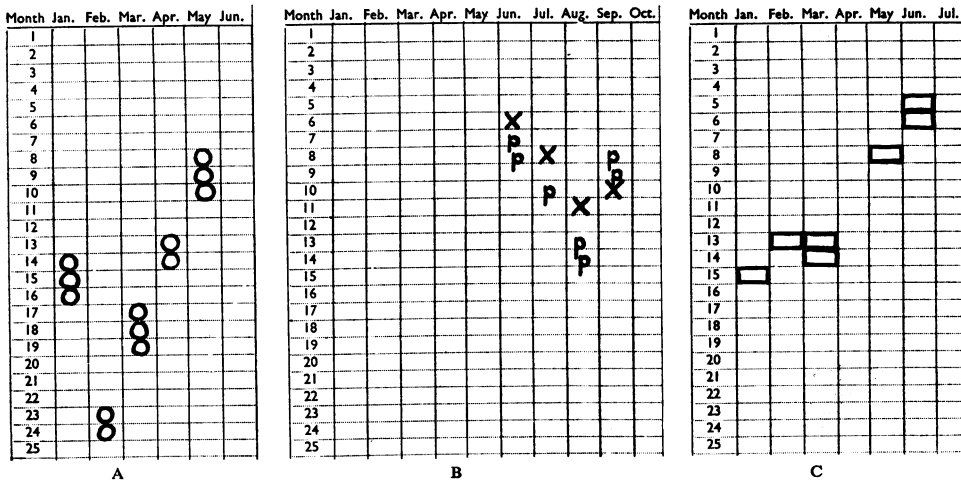

FIG. 1.—A, Patient aged 50, para-1; hysterectomy for fibroids at the age of 45. O = headache. B, Patient aged 48, single; hysterectomy and bilateral oophorectomy at age 45. X = giddy; p = abdominal pain. C, Patient aged 47, para 5; hysterectomy five years ago for menorrhagia. Bilious attacks occurred with periods. ▭ = bilious attacks.

Headaches and vertigo occurred at twenty-four to thirty days' interval and were accompanied by lethargy, depression and tension. Fortunately these cases of cyclically recurring symptoms respond excellently to progesterone or ethisterone, and in this series 22 women were so treated. The dosage of progesterone required to render these patients symptom-free is on the whole higher than among normal sufferers from premenstrual syndrome. One professional woman with heavy responsibilities is to-day leading a life filled with social engagements on a dose of 75 mg. progesterone daily; previously she was afflicted with migraine and depression and lived only for the day when she could retire at 55 years

and spend her whole day resting. Hot flushes are recognized as a menopausal symptom which responds to œstrogen therapy, and again, the late Dr. Joan Malleson (1955) reminds us that relatively large doses of even synthetic œstrogen preparations may be needed to correct the hormone balance. In the light of these facts it would appear that these multiple symptoms are due to endocrine imbalance rather than neurosis.

Excessive weight gain is another troublesome symptom. In this series 50% noted a gain of 1 stone within a year of operation, and 35% noted a gain of 2 or more stones within this space of time. Increases of 3, 4, and even of 5 stones during the first post-operative year were recorded. An acute weight gain occurs during the first two or three months and is followed by a gradual but persistent rise. The obesity is chiefly of the water retention type responding rapidly to fluid and salt restriction, diuretics and dieting. This regime should be instituted as soon as post-operative weight increase is recorded. Green-Armytage's (1955) advice is for a low fat diet following hysterectomy as "the incidence of coronary atherosclerosis in castrated females approximates that in males, a ratio normally in the region of one in ten".

For what reasons was hysterectomy performed? Or, more important, could hysterectomy have been avoided? This series undoubtedly included a few examples where this operation could have been avoided, or should have been the last resort after other methods of treatment had failed. The causes in this series were fibroids 17, menorrhagia 14, ovarian cyst 9, endometriosis 4, missed abortion 3, post-menopausal bleeding (Stilbœstrol) 2. Multiple causes were noted in 5 cases. The fibroid was an accidental finding in 4 cases, while attending for infertility 3 and for contraceptive advice 1. In exactly half the cases of menorrhagia no alternative treatment had been tried or suggested. There are occasions where hysterectomy is undertaken because of a low hæmoglobin, but iron deficiency anæmia due to malnutrition can, and does, occur in menopausal women as well as in other ages. Nor must it be forgotten that a lay person, who has only seen her own individual menstrual loss, is often unsure how to answer the question "Are your periods heavy?" To enquire into the amount of sanitary towels used is fallacious, merely giving an index of the fastidiousness of the patient. It is the degree of soaking of sanitary towels which is significant, and in these days of cheap polythene bags it should be possible to inspect personally all towels used in cases of suspected menorrhagia. A plea is also made for the more universal use of menstrual charts to verify the patient's statement as to duration of loss and length of cycle. Nor should a single hæmoglobin estimation suffice for the diagnosis of anæmia due to menorrhagia. Indeed, the hæmoglobin may be down premenstrually, due to water retention causing hæmodilution, and rise after menstruation. Water retention can be demonstrated by weight gain, and this premenstrual water retention will respond to the use of diuretics and progesterone (Fig. 2). Can one justify a diagnosis due to blood loss if the anæmia improves after the blood loss?

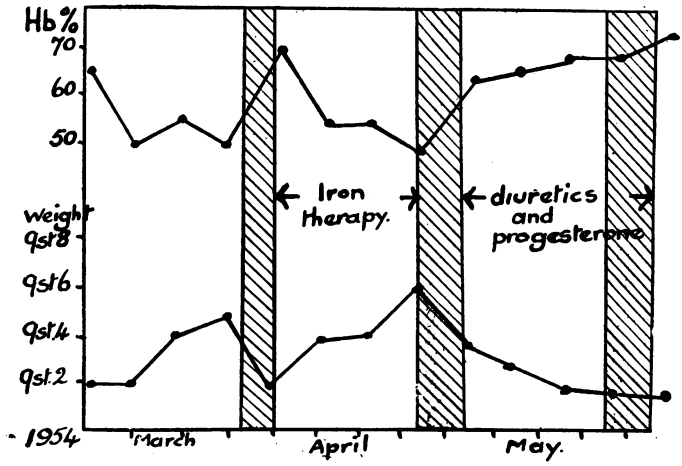

FIG. 2.—Aged 42 years. Para 6. ▨ = menstruation.

Can the aftermaths of hysterectomy be avoided? It is suggested that if their presence is

anticipated and appreciated then they can be avoided. There should be a careful selection of cases by attempts at alternative treatments. It is for the gynæcologist to decide in individual cases whether radiotherapy could be a possible alternative. Myomectomy still has a place in surgery. Curettage should not be forgotten. Hormone therapy and psychotherapy also have their uses. Utriculoplasty is of interest. This consists of resection of a portion of the uterus; uterine function is maintained and bleeding is reduced as the area of the endometrium is reduced.

When the decision to perform a hysterectomy is reached the pros and cons of the operation should be impartially presented to both husband and wife. The patient should know which symptoms she may expect to be alleviated by this operation. Floodings will cease; dysmenorrhœa will go; sterilization will be permanent. Headaches, depression and other accompaniments of menstruation will continue to occur cyclically; hot flushes will become more acute. There may be a weight gain of 1 or 2 stones within a year. Dyspareunia will not improve, but hysterectomy may be a convenient excuse for total abstention.

Post-operatively the path of the artificial menopause will be eased by discussion and simple psychotherapy, while the alleviation of unpleasant symptoms with hormones may be necessary. The weight gain should be noted, and, when required, advice on dieting given. The reference of patients after hysterectomy to an endocrinologist for observation is worthy of consideration. But primarily, let us recognize that there are aftermaths and that prevention is always better than the cure.

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Dr. G. J. V. Crosby: I have recently been considering some of the disturbing effects of oophorectomy in a short sequence of patients observed in my own practice. My indignation reached its acme, when I listened to the history of a single woman of 52 living alone. In 1934, at the age of 30, this patient complained of irregular and profuse bleeding suggestive of uterine fibroids and this diagnosis was ultimately made. At the time, she was engaged to be married and all seemed "set fair". The implications of operation were put to her and to her fiancé and it was pointed out that she might well have to lose her uterus, though nothing seems to have been said about removal of the ovaries. At operation, the fibroid uterus was completely removed. Her ovaries were considered suspect and bilateral complete removal was performed. The histological report was to the effect that there was no sign of malignancy.

We all of us appreciate the physical and the psychological phenomena of the natural climacteric. Perhaps it is not so usual to recognize the devastating impact of an acute onset of menopausal symptoms in a woman below 45 years of age; symptoms which we know to be directly attributable to an endocrine imbalance due to loss of ovarian hormones. This leads to uncontrolled and increased secretion of the gonadotrophic hormones which are thought to be the cause of flushing, sweating, increase of weight and ultimately hyperthyroidism and hyperadrenalæmia (hypertension and hirsutism).

The group of symptoms directly attributable to loss of œstrogens and resulting in vulval and vaginal atrophy, take longer to make themselves felt, but pruritus vulvæ and dyspareunia can be particularly distressing. These are probably more easily controlled by the administration of ovarian hormone, especially œstrogen. In the "classical" case which I am describing, there was apparently a rapid appearance of symptoms which not only made life thoroughly uncomfortable, but which also induced a psychological disorganization exhibited by bad-temper, irritability, loss of sexual interest and libido; and this, in spite of regular administration of œstrogens—in those days in the shape of monthly courses of Menformon, the dose of which is unfortunately not recorded. The engagement was ultimately called off; alcohol was taken in toxic quantities with all the significant and depressing results to be expected therefrom, and a promising happy life was utterly broken.

The effects of oophorectomy are not entirely reversible by hormone therapy and there may be some danger that this is overlooked when removal of the ovaries has to be considered. Therefore, every step should be taken to save as much ovarian tissue as possible, even to the extent of submitting the patient to a second operation (the first being a simple biopsy)—a procedure which may at the time seem drastic if not unjustifiable. I

understand that the small warty excrescences ("papillomata") so often seen on ovaries of normal or near-normal size are seldom, if ever, malignant.

In the United States two very long series have been analysed during the past six years. Doyle (1952) investigated a list of 546 patients from whom as many as 704 normal ovaries had been removed. Of these victims, only 5·1% were found to be carcinomatous. 56·8% had fibroids, 20·5% cystic ovaries, 8% so-called endometriosis and the remaining had lost their ovaries for reasons ranging from ectopic pregnancy to dysmenorrhœa and functional bleeding.

The total ablation of the ovaries must be followed by the disabilities of a natural menopause, but these are always intensified and more distressing the younger the patient. It is only too easy to assume that, in these days of hormone substitution therapy, the easy course of bilateral extirpation may be adopted without serious results. This is always a fallacious assumption and it is the general practitioner who sees the proof; but as general practitioners, the treatment of these symptoms by the administration of hormones is our responsibility. The symptoms must be divided into two classes: (1) those due to loss of the œstrogenic substance, including pruritus, dyspareunia, kraurosis and (when the uterus is retained) vaginal discharge and irregular bleeding; and (2) those due to hyperfunction of the anterior lobe of the pituitary, including flushing, sweating, and obesity—with the more distant possible effects of hyperthyroidism and hyperadrenalæmia. Obviously, the first of these groups requires the exhibition of œstrogens (and personally I like ethinyl œstradiol in small doses) while the second class demands the addition of testosterone which, I believe, the endocrinologists claim has a "braking" effect on the anterior pituitary. I might here mention a recent case, a woman of 42 who has had bilateral oophorectomy for carcinoma, but who has retained her uterus because there were abdominal deposits which made hysterectomy useless. Her most trying complaint has been that of vaginal discharge. Testosterone has had absolutely no effect upon this, though her other symptoms have recently improved. In view of the malignancy, administration of œstrogens has been discouraged, but I feel that otherwise this would probably be the rational approach.

Obesity may well yield to dietetic measures and in this it is, I think, strictly comparable with the obesity of the normal climacteric. In the same way, water retention and migraine probably demand progesterone plus salt and fluid restriction.

Unilateral ablation and even partial removal may be performed with far greater facility than that of total extirpation—for a cyst, for painful ovary (possibly simulating appendicitis, when both appendix and ovary may be improperly removed), for an ectopic pregnancy, in fact for a large variety of reasons. Even here we should press for the most extreme degree of conservatism which is safe and possible. It seems to be generally accepted that as long as some ovarian tissue remains, all will be well; I am not so sure. I recently saw a woman of 35 whose gain in weight following a simple unilateral oophorectomy for a small cyst was quite unbelievable—well over 30 lb. in just over a year. At the same time, menstruation had become irregular. Béclère and le Corvaisier (1953) suggest that the initial general reduction of ovarian secretion stimulates the pituitary to excessive gonadotropic hormone production with ultimate œstrogenic hyperfunction of the remaining ovary. This combined pituitary and ovarian action might well produce a syndrome such as I have described. The patient, in this case, is taking off some weight by diet alone. I suppose the administration of testosterone or progesterone would be the next rational step, but I doubt their clinical value. In this I find myself in agreement with Bishop (1956) who has largely discounted the importance of glandular substitution in the treatment of obesity generally—including that associated with the menopause.

Even unilateral oophorectomy may have a profound psychological effect. Knowledge of interference in any shape or form with the ovaries may well produce a fear of sterility. As a case in point, a woman of 34, recently married, in possession of the left ovary only, failed to become pregnant at as early a date as seemed desirable to her and her husband. A search for a cause for this assumed sterility was instituted, with negative results up to the time of a salpingogram which showed the left tube to be blocked and the right tube patent. These findings caused extreme despondency, the patient coming to regard herself as no longer of any use as a woman. However, continued effort has resulted in pregnancy and the fact that only one ovary is available is now forgotten.

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Mr. John Beattie: Gynæcologists are still divided on the subject of removal of healthy ovaries when a hysterectomy for innocent conditions is performed at the age of 40 and onwards. Although removal of both ovaries during pelvic surgery in women over 40 would save a few cases of carcinoma developing later on, the disadvantages of castration in these cases are enormous and I am emphatically in favour of preserving ovarian function whenever possible and at least up to the age of 50 or over. Richards (1951) and Bancroft-Livingston (1954) have shown by different methods that if a hysterectomy is done with preservation of the ovaries by a careful technique, menopausal symptoms need not occur for a long time afterwards and in some cases a normal menopause occurs years later. It is most important to preserve the ovarian blood supply and not to drag the ovarian pedicles into the centre of the pelvis with a purse-string suture. Figures show that removal of both ovaries before the age of 45 produces hot flushes in 98% of cases. This figure is reduced to 52% when one ovary has been removed and to 27% when both are retained.

Hysterectomy should always be total unless there are complications present which make a subtotal operation safer. The subtotal operation has an aftermath of its own. If carcinoma develops in the cervix after subtotal hysterectomy it is difficult to deal with. A multiparous cervix is often infected or eroded and discharge continues after a subtotal operation. Cervical polypi may arise in the cervical canal and cause bleeding and discharge. The aftermath of total hysterectomy is as follows: (1) The occurrence of dyspareunia if the vagina has been shortened. (2) The development of granulations at the vault of the vagina which produce bleeding and discharge, especially after coitus. The treatment is by one or more applications of silver nitrate to the area. (3) A patient who develops vaginal prolapse after total hysterectomy may require a special operation to cure this and to support the vaginal vault. (4) Occasionally a patient complains that loss of the cervix has affected her libido during coitus but an assurance that a possible cancer-bearing area has been removed should be enough to satisfy her.

Hysterectomy is now more often advised than some years ago because: (1) An artificial menopause produced by X-rays or the insertion of radium into the uterus does not protect the uterus from the development of carcinoma later on. (2) A patient who bleeds excessively at the menopausal age is often suffering from an endometrial hyperplasia, and if this is present carcinoma of the body of the uterus is more likely to develop in later life. (3) An irradiation menopause as an alternative to hysterectomy may lead to the sudden onset of hot flushes and other symptoms which may be severe and prolonged. (4) Despite intensive research on hormone therapy in relation to irregular menopausal bleeding, the results are extremely disappointing in patients who are in the late 40's.

It is essential when a hysterectomy is advised to spend some time explaining in detail to the patient and her relatives: (1) what the sex glands are in relation to the uterus; (2) that the uterus only has two functions, i.e. for the purpose of childbirth and if fertilization does not occur to cast off the lining each month; (3) that intercourse will proceed as before; (4) that the patient should have the same sexual feelings as before.

Removal of the uterus in certain circumstances can have a most fundamental and deleterious effect upon a woman. This particularly applies to the patient who is nulliparous or unmarried at whatever age the operation becomes essential. The effects are likely to be more serious if hysterectomy becomes necessary in the 30–40 age group but may also be profound even in the late 40's. The serious psychic consequences occur because a woman has been deprived of her capacity to bear children even if there has been no opportunity of doing so in the past and even if the woman has reached an age when childbearing is impossible. This feeling of potential capacity for childbearing does play an immensely important part in a woman's life.

The ill-chosen case and the hysterectomy performed without every effort being made to avoid the operation if possible may well lead to a mental upset which varies widely in type from a mild neurotic state characterized by anxiety and depression to hypochondriasis with aches and pains, and fears about the body, accompanied by severe depression.

There is a particular complication associated with hysterectomy which seems to have been unrecognized previously. Dr. Ida MacAlpine (personal communication) found that women complaining of intractable pruritus vulvæ, alone or in combination with pruritus ani, almost invariably revealed a history related to accidents in childbearing, such as miscarriage and stillbirth or to abdominal operations including hysterectomy. In over 80 cases thus investigated during psychotherapy these factors played a far more important part than lack of sexual satisfaction, to which pruritus vulvæ is commonly attributed. In 28 cases of most severe pruritus vulvæ a hysterectomy had been performed in 7 (25%).

There is no doubt at all that hysterectomy with conservation of the ovaries when carried out for the relief of severe symptoms untreatable by other methods is a great success. If the patient is in the fourth decade of life, is well adjusted but greatly inconvenienced by her symptoms she will welcome the removal of the uterus. It is important to be extremely conservative in the younger age group and avoid hysterectomy unless it becomes absolutely necessary. Hormone therapy should be persevered with in cases of functional uterine bleeding, myomectomy should be done for fibromyomata whenever possible, and conservative surgery adopted for the treatment of endometriosis.

The aftermath of oophorectomy.—Conservative ovarian surgery in the childbearing period of life is essential. Even in the late 30's and early 40's removal of both ovaries is a disastrous step. Only in the case of malignant disease should this be done. In cases of endometriosis and inflammatory disease in the pelvis, if operation is essential, as much ovarian tissue as possible should be preserved.

At the natural menopause about 75% of women will have some, if minor, symptoms but less than one-third of these will require œstrogen therapy. A much higher incidence of menopausal symptoms will follow removal of the ovaries or a castration dose of X-rays or radium before the natural menopause has occurred. These symptoms will be much less severe in the energetic and active extrovert who has never had time to dread the change of life and who may even look forward to the cessation of menstruation. The opposite to this is the woman who dreads the menopause as the end of everything. Such patients will be irritable and suffer in an exaggerated form from the fear of growing old, from a contracting social circle and from the death of relatives and friends, the children growing up and leaving home; there may also be anxiety over the economic background to their lives. All these troubles can be analysed and controlled by the stable and intelligent woman but they assume overpowering proportions in the unstable person. The main symptoms of an exaggerated menopause comprise the sympathetic storms of hot flushes and perspiration, the amenorrhœa and the atrophy of the genital organs. This triad may produce a severe psychological upset if the woman who is growing old does not develop fresh interests. She feels she is no longer attractive, the best of life is over, tension and anxiety develop and fear aggravates the autonomic instability of the menopause. With this dysfunction of the mind and body, obesity, peripheral pain, hypertension and osteoporosis may develop.

Before œstrogens were used in clinical medicine women who had menopausal symptoms were treated with bromides and valerian or small doses of phenobarbitone, and sooner or later the hot flushes and sweats were relieved. Œstrogens are not always entirely successful in curing patients of menopausal symptoms. It is most important to administer œstrogens in cyclical doses and never continuously and an effort should be made to find the minimum dose which will relieve the symptoms.

Bilateral oophorectomy is being done in increasing numbers for cases of carcinoma of the breast, relying upon the fact that a certain number of such carcinomas are hormone-dependent. Menopausal symptoms following this treatment are better alleviated by the male hormone than by œstrogens.

The use of a combined dose of œstrogen and androgen is often advocated as the two probably have a synergistic effect in controlling secretion from the pituitary and the androgen may act as a deterrent to the possible carcinogenic action of unbalanced œstrogens. The doses suggested are ethinyl œstradiol 0·01 mg. and methyltestosterone 5 mg. to be given in a cyclical manner.

Weight reduction is important from both the psychological and physical point of view and in this small doses of thyroid will be of help in the hypothyroid patient. A reduction in fluids and salt intake often helps to lessen the retention of fluid which may occur in the early days of the menopause and when œstrogens are being administered.

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Mr. Aleck Bourne was surprised to hear of the large number of serious disabilities which followed hysterectomy, as reported by Dr. Dalton. He has always regarded the operation, when performed for adequate indications and with conservation of the ovaries, as one of the most successful in surgery for restoring a woman's health. He emphatically endorsed

the opinion of Dr. George Crosby on the malign effects of removal of both ovaries before the age of 45, or even later, where there was no destruction thereof by serious inflammatory or malignant disease. Enucleation of simple cysts and dermoids was nearly always possible with retention of normal ovarian tissue.

Professor W. C. W. Nixon emphasized the importance of conservative surgery in gynæcological conditions. He agreed with Dr. Dalton that even after a hysterectomy, with conservation of the ovaries, psychological disturbance of varying degrees of severity might follow. A recent anatomical investigation by a Swedish gynæcologist had shown that the ovaries in a number of patients receive their blood supply mainly from the uterine artery. Thus a hysterectomy in such patients might interfere with the blood supply to the ovaries and ovarian atrophy would follow. He reminded the meeting of the success that Mr. Aleck Bourne had had in the operation of utriculoplasty for the treatment of menorrhagia of emotional origin.

Mr. Frank Musgrove said that when the operation of hysterectomy and oophorectomy was contemplated, the gynæcologist, whenever possible, should interview both husband and wife together pre-operatively.

At this interview, he should point out what the operation entailed, viz. an absence of the menstrual period and the onset of symptoms of the menopause, at the same time explaining that marital relationship should not be interfered with and that the effect of the loss of the ovaries can be replaced by oral administration of specific hormones.

In the summary of investigations and treatment sent to each general practitioner on the discharge of the patient, advice should be given that œstrogen-substitution therapy should be prescribed for all patients, in definite courses, for a period of at least six months, provided that malignancy has been excluded.

In following up several hundred cases of hysterectomy and oophorectomy, it was noted that in only 2% of cases was post-operative œstrogen-substitution therapy given by the general practitioner concerned.

Dr. E. Robert Rees completely disagreed with the very tragic picture that had been presented by the opening speaker. Were this a true reflection of the effect of hysterectomy, surely it would long ago have become a terrifying prospect to anyone. He firmly believed that these dreadful consequences could be prevented. It was insufficient merely to tell the patient that she would not be affected by this operation; it was essential that she be convinced of the truth of this. He adopted the attitude that unlike other forms of surgery, the patient losing a uterus, loses something that is not essential to her day-to-day metabolism or other body processes—unlike those others who have to lose their gall-bladder or some other essential structure.

He then pointed out to them that coitus in the common domestic animal was chemically controlled and therefore confined to ovulation times. This was not so in the human where the emotional factor was all-important. He pointed out to them that coitus took place during the early months of pregnancy in about 70% and usually continued after the menopause when the uterus ceased to be an actively functioning organ. These arguments nearly always succeeded in convincing the patient that the uterus was merely a box where a new lining was prepared each month and that when it caused distress or discomfort, its removal resulted in relief, with no disadvantages.

In conclusion, he stressed that it was the gynæcologist's duty not only to give the reasons for hysterectomy but also to make it quite clear to the patient that there should be no dreadful consequences from this operation. And he added that it was equally easily understandable that such consequences could and did result if the patient was not convinced to the contrary.

Dr. A. R. L. Abel drew attention to the possibility of using male hormone in cases of secondary carcinoma of the mammæ in very much larger doses than had been mentioned. It was not always possible to tell which cases were going to be suitable for such treatment, but laboratory tests were now being evolved which would show exactly in whom some improvement could be expected, and doses of up to 1,000 mg. of testosterone might be given with most startling and satisfying regression of secondary deposits in a very few cases.