TOTAL HYSTERECTOMY

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THE advance of surgical pelvic technic in abdominal hysterectomies has changed the ratio of subtotal to total operations considerably in recent years. In former times subtotal hysterectomy was generally chosen for all benign conditions necessitating an operation, and the total form of surgical treatment was applied exclusively in malignant cases. Complete hysterectomy is performed also for benign disturbances of the uterus, and is gaining lately more and more ground in the treatment of benign conditions of the uterus. The pioneer work was done in large institutions as University, State and County hospitals, where diagnosis indicating operation was under direction of a closed staff utilizing strict principles. In the larger private institutions, where a great number of surgeons do their work according to their own ideas and principles, differentiating substantially from each other, the switch toward total hysterectomy has not reached the right acceptance which it should have.

Nelson and Weisberg in a collected series of cases from the literature combined with their own series summing up 14,591 hysterectomies in all, have reported the ratio of total to subtotal operations as approximately 1:2. This ratio is to be considered recommendable. But in private hospitals the ratio is till 1:4, 1:5 and even 1:6. A ratio in which total hysterectomy is performed more frequently than subtotal, with excellent end results, is reported by Harris and by Masson. The attitude toward total hysterectomy amongst various authors varies still to a great extent as can be seen in Table 1 collected from the recent literature.

The difference in the mortality rate between one form and the other is almost negligible, as evident from this table and other reports, but only as long as the operation is performed by an expert hand. The untrained and unexperienced will, of

TABLE 1
ABDOMINAL HYSTERECTOMIES

Authors	Abdominal Hysterectomies	Subtotal	Mortality, Per Cent	Total	Mortality, Per Cent
Nelson and Weisberg	14,591	9,606	3	4,985	3.56
Tyrone	453	316	1.9	137	2.2
Harris	1,145	314	0.6	831	0.6
Masson	2,542	766	0.9	1,776	1.2
Phillips and Sears	173	141	1.41	32	0

course, have a considerably higher mortality in total hysterectomies. Nelson and Weisberg observed that the greater the number of total hysterectomies done in any one series, the lower the mortality. In other words skill is the most important factor in the performance of total hysterectomy.

TABLE II

	Number and Per Cent	Average Age in Years	Morbidity (Days in Hospital)	Mortality, Per Cent
Subtotal	141 (73.82)	38.0	13.1	1.41
Total	32 (16.75)	41.7	12.5	0
Vaginal	18 (9.43)	56.6	13.2	0
Summary	191	40.6	13.1	1.05

In our own series of 191 consecutive hysterectomies performed by different surgeons of the active and courtesy staff at St. Joseph's Infirmary, Houston, we had as Table II shows, 141 subtotal (73.82 per cent), thirty-two total (16.75 per cent) and eighteen vaginal (9.43 per cent) hysterectomies. Without any doubt, the number of total hysterectomies is far below the desirable percentage. But St. Joseph's Infirmary is a foremost private institution, where the indication of one type of opera-

tion or the other is determined individually by every surgeon without commonly outlined principles and with a widely varying background as far as training is concerned.

The average age for all hysterectomies was 40.6 years, for subtotal 38.0, for total 41.7 and for vaginal 56.6 years. The stay in the hospital until discharge was on an average of 13.1 days. There was no marked difference of morbidity between one form and the other; the morbidity in total hysterectomies was even slightly lower. However, it must be mentioned that such an estimation of morbidity is incorrect, as the difference of the financial status of different patients changes not inconsiderably the surgeon's advice, at least as to the minimum stay in the hospital. Out of 191 operations we had two deaths (1.05 per cent), both after subtotal hysterectomy which brought the mortality of the latter up to 1.41 per cent. The thirty-two total and eighteen vaginal hysterectomies were without fatality.

The attitude toward total and subtotal hysterectomy is still in many points controversial. Many physicians are hesitating to perform a complete hysterectomy because of higher risk, increased shock, higher mortality and higher morbidity, as they claim. But statistics of competent surgeons eliminate these fears, because they show clearly that the morbidity in total hysterectomies is not increased, often decreased, and that the end results are by far better.

If the only purpose of total hysterectomy would be to avoid the possibility of later developing cancer in the stump, as advocated by Jones, the utilization of this operation would be greatly limited, because the incidence of cancer in the stump after subtotal hysterectomy in benign cases is only about 1 to 2 per cent. But we all see patients coming back after subtotal hysterectomy stating the operation gave them only temporary or partial improvement. They complain of arthritic and myositic disturbances, and upon examination we find a well developed cervicitis with leukorrhea, which eventually makes a later surgical intervention necessary. Many of these patients change their doctor because they think the first operation was not successful, therefore making it an impossibility to follow up the postoperative results. If a perfect follow-up after subtotal hysterectomy were possible, we are inclined to believe that the incidence of unsatisfactory end results would be much greater.

Often surgeons will not perform a total hysterectomy, because they believe in opening the vagina the danger of infection is increased. We agree with Masson, who states that by applying a meticulous technic including surgical preparation of the vagina the danger of infection is less, because "in subtotal hysterectomy the cervical glands are cut across and often transversed by sutures," thus forming a focus of infection if the cervix was previously inflamed. Also cauterization and conization of the cervix cannot prevent infection as "those procedures leave a sloughing region continuous with the operative field and peritoneum." Tyrone's opinion in regard to this is as follows: "We are now performing the complete operation more often, not only because of the danger of malignancy in the remaining stump, but because a diseased cervix produces definite and annoying symptoms, whether the uterus is in or out of the patient." We, ourselves, might add that we do not know what purpose a cervix serves without the body, especially in women near or at menopause. Richardson reported that in follow-up examinations of women who have borne one child or more, unsatisfactory conditions of the cervix or the lower birth canal were found in 50 to 75 per cent. Why then preserve a cervix, unless for some important reason?

The objection that following total hysterectomy, sortening of the vagina, diminished secretion of the vaginal mucosa, and prolapse of the vaginal vault—all causes of dyspareunia—do not infrequently occur, is not tenable if the proper technic is employed. Experienced operators, who

did total hysterectomies on a large scale deny these occurrences so well as injuries to ureters, bladder and bowels; the latter occur in unexperienced hands, also in subtotal operations. Furthermore, if the surgeon possesses the necessary skill, the slightly greater technical difficulty of the total operation should be no hindrance to the performer. Only in very obese women and in patients who have an unusually deep pelvis do we encounter some difficulties.

Also the time factor is not a sufficient argument to reject complete hysterectomy, because the duration of the operation is usually estimated to be prolonged from three to ten minutes (three more minutes according to Nelson and Weisberg; five to seven more minutes, according to Tyrone).

Therefore, we would advise total hysterectomy in the following cases: (1) In women who had one or more children by vaginal delivery, requiring hysterectomy for conditions of the corpus uteri; (2) in women near or at the menopause with uterine pathology requiring hysterectomy; (3) in all cases necessitating operation for conditions of the uterine body, in which the cervix is also diseased: (a) lacerations, (b) inflammation (cervicitis), (c) benign cervical tumors (polyps, cysts, etc.); (4) in all malignant cases.

For the advisability of subtotal hysterectomy we like to quote Richardson who considers the following cases as suitable for this operation: (1) Women requiring hysterectomy for benign conditions, who possess perfectly normal cervices (mostly young women and nullipara); (2) instances in which the operative hazard compels the execution of conservative surgery; (3) cases in which for good and sufficient reasons it is of paramount importance to preserve menstrual function; (4) most cases requiring hysterectomy during pregnancy.

A word might be said about the adverses. Usually in performing a total hysterectomy we also remove both tubes. In that way the toilet and peritonization are greatly facilitated. There is less likelihood of pelvic inflammation; the blood supply to the ovary is improved since there is not the increased strain of nourishing the tube. However, we try by all means to preserve one or at least a part of the ovary corresponding to the pathological involvement of the ovaries whether the woman has passed menopause or not, as long as complete atrophy of the ovaries has not taken place. Caution should be observed not to fix the ovary to the vaginal vault because this often causes dyspareunia, but instead to bury it between the folds of the broad ligament.

We usually make use of Masson's technic for complete hysterectomy, and this with good results. Here we can only briefly emphasize the most important steps of the operation. The operation is performed in the same way as for subtotal hysterectomy, only that in addition the bladder is freed way down from the cervix and the vaginal vault. The cervix should be enucleated from the vaginal vault. As soon as the vagina is opened and the cervix enucleated, we insert an iodine sponge which is removed after the operation. The vaginal vault is closed with a continuous mattress suture in two rows rolling the cut edges of the mucosa into the vaginal canal. Then the peritoneum and the uterosacral ligaments are brought upward and placed over the vaginal vault. After that the round ligaments are approximated and overlapped and secured to the vaginal vault, to the tissues in the base of the broad ligament, to the stumps of the uterine vessels and to the uterosacral ligaments. Peritonization of the raw surfaces completes the operation. No drains are used. Employing this technic, an injury to the ureters, bladder and bowels as well as shortening of the vagina can be relatively easily avoided.

Concluding, we believe that with proper technic the risk of total hysterectomy is not much greater than in subtotal hysterectomy. The satisfactory end results should make this operation much more popular than it actually is at the present time.

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Constant rales at the lung bases are never found in the normal pregnant woman. When they appear in a Group 1 cardiac, they constitute the most reliable and earliest sign of heart failure.
From—"The Heart in Pregnancy and the Childbearing Age"—by Burton E. Hamilton and K. Jefferson Thomson (Little, Brown and Co.).