

Fig. 1.—The author's tenaculum forceps. The blades can be made to pass each other and point outward without unlocking.

## **PLASTIC SURGERY**

OF THE CERVIX UTERI.—BY HENRY PARKER NEWMAN.

A. M., M. D. CHICAGO.

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*The Normal and Pathologic Significance of the Cervix Uteri.*—Thirty years of progress and research in medical science have not shaken materially the theory of Montrose Pallen, who, in 1867, in a prize essay read before the AMERICAN MEDICAL ASSOCIATION, enunciated these propositions: 1. Menstruation, irregular in its character, is always coincident with uterine disease. 2. All uterine abnormalities tend to a deformity of the organ, either in its neck or in its body, or in both. “The healthy functioning of any organism necessitates a healthy condition for its performance,” and, “no unhealthy cause can produce healthy effects; therefore, from a uterus abnormal can no healthy menstrual flux proceed;” and whereas he later qualified these statements by saying that “irregular menstruation may depend upon systemic causes wherein the uterine disease is but functional and symptomatic,”

we ourselves know that these are the exceptions and that the great majority of our cases are of the kind that proves the rule. Even when the cause is systemic, too often its persistence leads to a state of chronic functional disturbance of the uterine system, and we have a condition calling for local investigation and treatment.

At the time Pallen wrote, lesions of the cervix uteri, such as lacerations, malformations and stenosis, were among the most prolific causes of gynecic disease, and many operations and instruments were devised for their correction. Since then there has been great advance in gynecology and obstetrics, and in prophylactic medicine, with the result that many of the factors which brought about these conditions of the cervix have been eliminated from modern life, and the pelvic organs of woman have a better outlook during the developmental period of childhood and puberty, and are more judiciously conserved during childbirth and the puerperium. At the same time, there is still to be found in the faulty methods of education, dress and diet, careless midwifery, and the "strenuous life," too much cause for malnutrition, mal-development, infections and traumatism of the genital tract. Take, for example, the cervix, a delicate organ, whose function is to soften and dilate during menstruation and copulation, to undergo easy and natural changes during pregnancy and labor; too often it is found instead contracted and resistant, setting up a barrier to healthy menstruation, becoming a storehouse of infectious germs, and giving rise to a long train of obstinate evils. Even in a uterus which seems to have a fairly free outlet at the cervix, the hyperemia which accompanies the monthly molimen may bring the cervical walls so closely in apposition that the flow is materially retarded and the secretions more or less retained. Retention of the secretions gives rise to an elaborate sequence of allied diseases, such as endometritis, salpingitis, oöphoritis, etc.

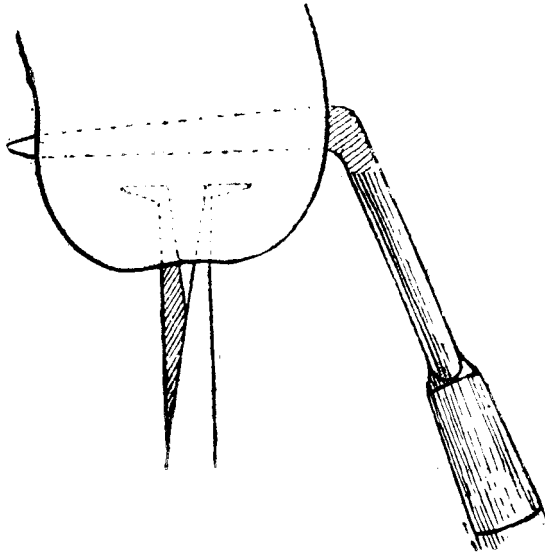


Fig. 2 a.—Cervix transfixed preparatory to making flap; forceps readjusted within cervix.

*Importance of Cervical Function.*—When we have under observation the sufferer from chronic metritis, with her full allotment of general and special ills, her dyspepsia, neuralgia, headache, backache, anemia, nervous symptoms and very natural mental depression, we can not but be convinced of the importance of a function whose disturbance has resulted so disastrously. We realize also that our work should be directed to the one end of re-establishing and maintaining a condition of the tissues which shall permit the regular and normal functioning of this organ.

In the milder cases we may choose between a prolonged course of routine, palliative treatment, and the more radical surgical procedures. In the graver, where there has been extension to the tubes and ovaries, salpingo-oöphorectomy, ovariectomy, or hysterectomy may become necessary to remove the local effects of disease, but not always with hope of bringing back a normal degree of health in a constitution injured and disturbed by long presence of diseased conditions.

*Improved Technique in Operating.*—In selecting a method of surgical repair of the cervix uteri, we should remember that that is most excellent which requires least preparation and after-treatment, and which exacts least in the way of time and patience from patient and physician. And here let me remark that there is a reaction against the tedium of routine local treatment that bids fair, like all reactions, to go almost too far and abrogate it altogether. It is certainly a detriment to the average patient to be subjugated to prolonged topical treatment. It has a tendency to establish the habit of invalidism, and to fix the attention inward which is not a healthy stimulus to recuperation. I have for some years sought to do operative work of such a character that as much as possible may be accomplished at one sitting, and the patient led to

expect prompt recovery and encouraged to consider herself free from bondage to the gynecologic chair. My results have so far been satisfactory. Though my manner of operating differs materially from any so far described it possesses certain advantages which I hope will commend themselves in comparison with existing modes. We have seen the passing or reconstruction of the older methods within very recent times, but as yet there is no unity in choice of technique, and this lack of agreement perhaps lays us open to the sweeping criticism of Dr. von Ramdohr, who remarked that "as long as there are twenty-five methods of doing a thing none of them is good." This has only a measure of truth in it for the progress of surgery is marked by the passing of modification after modification of good methods, and the road still leads on to perfection.

Emmet himself—whose brilliant former work seemed so nearly the final achievement—has so far abandoned his famous operation for laceration of the cervix, that he limits its performance to cases which scarcely exist in modern practice, saying that, "with but few exceptions amputation is the proper means to employ . . . for relief of pathologic laceration of the cervix as it is now met with."

There can be no dissenting from this proposition today, although it may not be out of place to note some of the views of recent writers on amputation as it is generally performed. Early in the history of the operation Pauly is quoted as saying, "Of all surgical operations, the excision of the neck of the womb has hitherto been the most murderous." Dr. A. Palmer Dudley, of New York, objects to the prevailing technique, that is, the older method of Schroeder, Emmet, Pozzi, and others, on the ground that, "in closing the womb one is very apt to narrow the canal to the extent of obstructing the escape of the normal discharges from the uterus, thereby injuring the woman

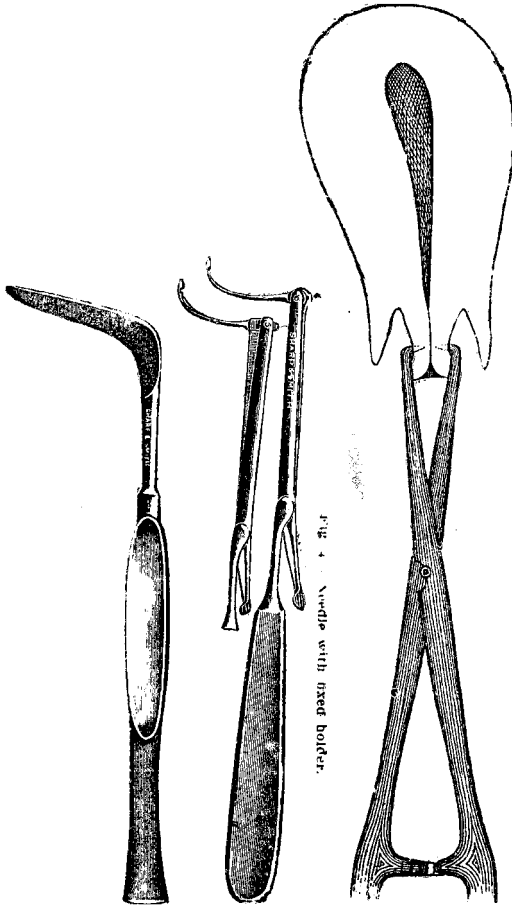


Fig. 4. Needle with fixed holder.

Fig. 2 b. Right-angled or Tracheloplasty knife.

Fig. 3. Formation of flaps. Plug of pathological tissue grasped by forceps and ready for excision with curved scissors just above the tenaculum points.

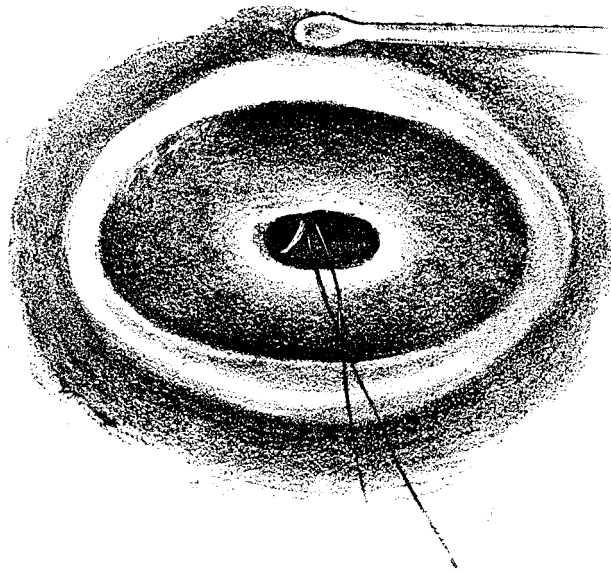


Fig. 5.— The plug of the tissue is removed and flaps falling inward are ready for stitching



instead of benefiting her. Many can recall cases in which before operating for laceration of the cervix they could recognize no disease of the uterine appendages, while afterward disease developed. Why? Simply because in repairing the cervix they closed it, prevented the normal discharge from the uterus, induced continual passive congestion of the endometrium and the disease then traveled up the tubes”.

Hegar and Schwartz claim that the Sims method allows blood and serum to collect behind the sutures, and Thornburn considers the use of stitches unnecessary.

The “American Text-Book of Gynecology” says of amputation by the galvanocautery, which is still used by some, that its only commending feature is its bloodlessness. “Confidence can not be placed in it and it is therefore illegitimate.”

The objection to removal of diseased cervical tissue by the curette is that in this organ, whose mucous membrane differs from that of the uterus in essential particulars, chronic inflammation causes a dense, firm tissue with deep glandular involvement which only a sharp curette thoroughly used can remove. Such removal is apt to result in constriction of the canal amounting to a severe stenosis or even atresia unless followed by tedious and objectionable after-treatment.

In advocating amputation of the cervix for inflammatory conditions, L. Touvenaint (France) says: “The curette, which gives excellent results in chronic corporeal endometritis, is altogether insufficient in cervical endometritis. The operation (amputation) gives brilliant results, preceded by curetting; we say preceded by curetting because it is rarely the case that inflammation of the cervix has not been propagated to the cavity of the body, and the endometritis become general..... Amputation is not done solely for the sake of removing

a part of the organ; it possesses also the advantage of inducing profound modification in the vitality of the entire uterus, so that this undergoes a veritable involution.”

The form of amputation which I practice, I prefer to call by a more distinctly descriptive name.

*Revival of Term “Tracheloplasty.”*—Amputation conveys the sense only of the taking away of the diseased organ, whereas the object of ideal operating is the removal of adventitious tissue only, the restoration of anatomic conditions and re-establishment of normal function.

I had called my work tracheloplasty in reference to its nature and intent before I knew that Parvin had once given the same name to the early work of Emmett. As the latter never accepted it and as I find it most aptly fitted to my use, I have adopted it and shall continue to designate by it the following operation:

*The Author’s Operation.* — The patient, being surgically prepared, is placed in the lithotomy position and the cervix drawn down with a vulsellum forceps, bringing the uterus well into view. The cervix is dilated and the uterus curetted if indications for curettage exist. These are, however, so nearly constant as to make it practically the rule. The cervix being drawn down with the bullet forceps or a double tenaculum, the blades may be reversed and replaced within the cervix so that their points are directed laterally from within outward, but I prefer to use the specially devised instrument which you see here. (Fig. 1.) By using it in this manner traction is made upon the inner area of the cervix, leaving the anterior and posterior walls free for making the flaps. The cervix is now transfixed by this special knife (Figs. 2a, 2b), and a clean cut made from above downward, first in the posterior lip. The anterior lip is transfixed in a

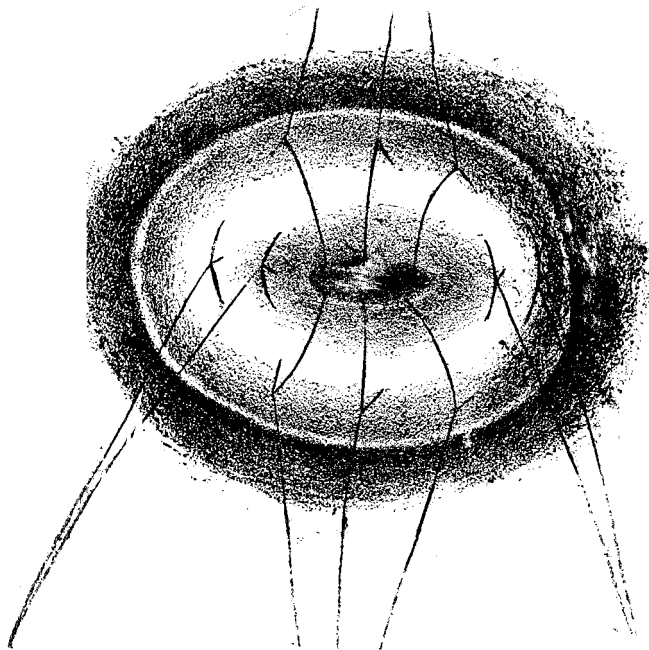


Fig. 6.-- Showing stitches in situ and manner of tying in groups.

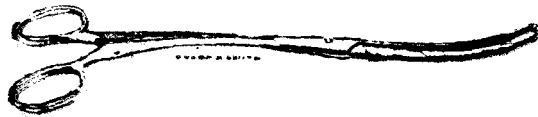


Fig. 7.—The author's tissue forceps and uterine tampon carrier.

similar manner about 1 or 1.5 centimeter in front of the other and cut in the same way.

The intervening plug of diseased tissue is now removed by a single cut or two of the curved scissors, the bullet forceps having been changed to a lower position to allow it. (Fig. 3.) The flaps thus made will now fall together and inward so as to assume the appearance of a normal cervix and will require only the simplest suturing to keep them in this position. (Fig. 5.) The first suture is passed through the center of the anterior flap, a centimeter or more from its cut edge, and brought out about three-fourths of a centimeter within the cervical canal. Two parallel stitches are now placed at each angle of the cervical canal. Silkworm gut is the suture material I commonly use, and the employment of this fixed needle and holder (Fig. 4) renders an otherwise difficult procedure quite easy. The posterior lip is treated in the same manner, except that here it is easier to pass the sutures from within outward, while the reverse is true in sewing the anterior lip. Two sutures are now passed, as in trachelorrhaphy, through the outer angles of the wound, which gape slightly after the turning in of the flap. For nice adjustment of the stitches and for ease in removal I am in the habit of treating them this way. In tying the sutures one end of each is left long and these long ends are grouped by tying them together according to their location. The three anterior sutures form one group, the three posteriors one group, and the two lateral sutures are tied together, a pair on each side, making four groups in all. (Fig. 6.) A uterine tampon of iodoform gauze or wicking is now inserted by means of this forceps and tampon-carrier (Fig. 7), a projecting strand being attached to the vaginal gauze tampon in order that both may be removed without undue disturbance of the parts. If no accessory work is done the usual perineal dressings are applied and the patient put to bed. The external

genitals are bathed with antiseptics after micturition, but no douching of vagina or disturbance of tampons is allowed until the second or third day, when the entire tampon is removed and not replaced. Vaginal douches of 1 to 4000 bichlorid are then used twice daily. The sutures are removed at the end of two weeks, when the patient can be up.

The advantages of this method are: 1. Quickness and ease of operating by the knife here presented, the manner of making the flaps transcending in certainty and safety of execution the ordinary methods of excision. 2. Clean, smooth-cut surfaces, obtained without haggling of tissue. 3. The easy approximation of flaps and the avoidance of all hemorrhage beneath them by deep placing of suture and compression of the flaps. 4. The accurate approximation of mucous membrane to mucous membrane, thus avoiding granulating surfaces, formation of cicatrix and constricting of the canal. (This feature, which also pertains to Schrolder's operation, is of great importance and a decided advantage over trachelorrhaphy, especially where the entire mucous membrane is removed.) 5. The certainty of obtaining a permanently patulous canal and a wellformed cervix with pronounced reduction of the hyperplastic uterus. 6. The simplicity of the after-treatment.

Finally, plastic gynecological work, to be ultimately successful, should not be done piecemeal. The operation I have described is seldom called for alone. The neglect to do necessary complementary operations brings frequent failures. While tracheloplasty will often correct a simple displacement of the uterus due to inflammatory conditions with increased size and weight by correcting the lesion of the cervix and the accompanying metritis and by stimulating involution, its value may be greatly enhanced by such reinforcing work as shortening the

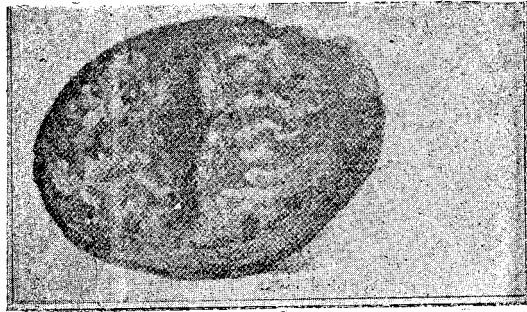


Fig. 8. Excised cervical tissue.

round ligaments or suspensio-uteri where there is displacement of the uterus; divulsion and curetting when disease has extended to the endometrium above; reparation of the pelvic floor when, through relaxation or trauma in childbed, there is hernial condition of rectum, bladder, vagina or superimposed viscera; even opening of the abdomen for plastic work or resection in pathological conditions of ovaries, tubes, etc.

Any one or all of these accessory operations may be necessary to the restoration of the patient, although the diseased or deformed cervix was the essential, perhaps the sole, etiological factor in her case.

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## **TYPHOID FEVER**

IN RELATION TO THE URBAN AND RURAL POPULATION OF  
THE UNITED STATES. BY SENECA EGBERT, A. M. M. D.,  
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In the preparation of a paper (1) several months ago, my attention was attracted by the table (Chart 1) and maps in the United States Census Report on Vital Statistics for 1900, (2), which show for each grand group, or division in the United States, the proportion in that year of deaths from typhoid fever per 1000 deaths from known causes. Had I been interrogated previous to that time as to the relative proportion of typhoid cases in city and country, I probably would have stated as my belief, that the greater proportion of the typhoid fever cases occurred in our urban communities, especially as I already knew something of the very high sick and death-rates from this disease in many of the large cities of the country. That I would ha-

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(1) The Disposal of Dejecta in Small Communities: *Medicine*, April 1904.

(2) Part 1, p. CXLVII and Plate n<sup>o</sup> 14.

ve been much in error will be shown by this paper, as well as, I trust, some other lessons of interest to this assembly.

In order to make clear the meaning of the charts and data to be referred to in the discussion, it is necessary to perface a few remarks concerning the so-called "grand groups" into which the country has been arbitrarily divided by the Census authorities. Quoting from the Report,— "differences in climate, occasioned by metrological conditions, latitude, altitude and topography have a marked influence on the mortality in different localities; which is also affected by the density and distribution of the population, by color or race, age, sex and occupation, as well as by the liability to certain diseases in epidemic form. States however, are political divisions only, and their boundaries are not fixed with reference to any of the agencies affecting the health of the population. The peculiar physical characteristics of different sections of the country, which influence the mortality are, therefore, best shown by taking the county as the unit and grouping together the countries in each state having similar characteristics, forming what are specified as "State Groups" State groups of generally similiar physical characteristics are then grouped together forming "Grand Groups" making a total of 21, as indicated on the accompanying maps and charts". (3)

Naturally in determining the solution of the problem before us, the most satisfactory factors to employ would be the death-rates in relation to the actual populations of the respective areas, but in the Census Reports "death-rates in relation to the population are only given for the (so-called) registration areas" for the reason that "the enumerators returns are too incomplete to afford any reliable conclusions as to the death-rates in relation

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(3) Part 1, p. XCIX.

to population”, and that “the record of deaths obtained from registration sources (the records of various states and cities) supplied the only data that are sufficiently complete for the preparation of reliable mortality statistics”. (4)

In fact, the “registration area” includes only the localities and districts “where the deaths obtained from registration sources constituted 90, or more, per cent. of the total (registration plus additions from enumerators) and the additions from the enumerators returns did not exceed 20 per cent. of the number reported by them.” The registration area, as thus defined, for 1900 included all the New England States, New York, New Jersey, Michigan, the District of Columbia and 153 cities of 8,000 or more population in other States; or, as far as the “grand groups” indicated on our charts are concerned, “1 and 5 consist wholly of registration counties, 7, 8, and 19 are partly of registration counties, and in the other grand groups the only registration areas included are the registration cities located therein.” (5) In the non-registration localities “the only comparable data are those derivable from the incomplete returns of deaths made by the enumerators,” but these “have a certain value in indicating the relative frequency of deaths from different causes” (6) and it is upon these that we must largely rely, since 86% of the total rural population of the United States and 13.3 per cent of the total urban population (those living in cities of 8,000 or more) is embraced in the non-registration area, or 62.1 per cent of the total population of the country.

Considering now the question as to where Typhoid Fever is most prevalent, we find by referring to Chart. I

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(4) P. XI.

(5) P. XCIX.

(6) P. XCIX and XI.

that the incidence of this disease is apparently greater in districts essentially rural and not in those which include the great cities, many of which latter are known to have high death-rates from typhoid fever and all of which have water supplies which may, if not properly cared for, serve as common carriers of infection to their enormous populations.

The demonstrations of this fact is made more striking by the graphic representations of Charts II and III, in the latter of which the grand groups have been somewhat changed in their order so that there may be, for our purpose, a more logical and compact geographical arrangement and a better balancing of populations.

Note.—Grand group 7, including, as it does, the area along the shores of the great lakes, might apparently have been included in class C, just as well as in class A, but it will be evident that such change would not affect our deductions while the arrangement adopted keeps the largest three cities in the same class.

Combining the grand groups into four main classes (as indicated in Chart III.) certain facts are at once evident, viz: 1, that in Class A, comprising the North and Middle-Atlantic and Central Appalachian regions, the North-eastern hills and plateaus, the Great Northern Lake region and the Interior plateau, has a lower death-rate from this disease than that for the entire country, although it contains many of the great cities, including New York, Chicago, Philadelphia, Boston, Baltimore, Pittsburg, etc.; 2, that Class B, comprising practically all of the States of the South and South-west and with an essentially rural population, has a high death-rate, averaging more than twice, if not three times that of Class A, and that in certain of the Grand Groups in this Class the rate is excessively high; 3, that Class C,—which takes in the Ohio, North Mississippi and Missouri River belts, the Central and Prairie region and that of the Western Plains and the heavily timbered region of the

North-West, has a death-rate but slightly greater than the average for the country, though higher than that of Class A, and 4, that Class D, the far west, has also a fair rate, though Map No. 2, shows that there is an area in the newly settled farming section of the State of Washington that threatens to be a focus of danger for the surrounding territory. Chart IV shows the relative population of the respective grand groups and classes, and Chart V the relation of the urban to the rural population in each, this being also illustrated for the respective classes in Chart VI.

It should be remembered, however, that the population indicated as urban on Chart V represents only that of the registration cities; but as the population of the non-registration cities (of 8,000 or more) is less than 4.4 per cent of the total population of the country, Chart V fairly represents the relationship between the urban and rural populations. And even if all of the non-registration cities were embraced in Class B, the latter would still have the rural population preponderating over the urban to a greater extent than any of the other classes.

Lastly, Chart VII shows, for males and females respectively, the difference in the incidence of typhoid fever, as shown by the number of deaths from it per 1,000 deaths from known causes, in the urban and rural population in each of the grand groups. The data thus graphically presented unmistakably demonstrate that the disease in question, common as it is in many of our cities, is a far more serious scourge to the rural population, which embraces two-thirds of the total of the entire United States.

Should anyone raise the objection that a comparison based upon the number of typhoid deaths per 1,000 deaths from known causes is not the same as one considering the typhoid death-rate per 1,000 of population and that,

if it were possible to determine the latter with sufficient accuracy for each district, it might show a heavier incidence of the disease in the areas comprising the large cities with their enormous populations, I would note that the variation in the number of typhoid deaths per 1,000 deaths from known causes cannot differ much relatively from that of the typhoid death-rate per 1,000 of population, since less than 4 per cent of the deaths occurring during the census year were due to unknown causes and also, because the preponderance of total population in Class A over that of Class B is not sufficient to over-balance the great difference in the two classes as to the number of typhoid deaths per 1,000 deaths from known causes. Thus, while the latter rate is 35.4 for the whole country, it is only 19.2 for the registration area and considerably less than this for the registration states which, as stated, are comprised in grand groups 1 and 5, and in parts of grand groups 7, 8 and 9.

What, then, are the conclusions to be derived and the lessons to be learned from these statistics that we have been considering and that relate to the entire population of the nation? In endeavoring to determine the reasons for the predonderance of this disease in the essentially rural groups or area, we must remember that all cities and towns of less than 8,000 population are classified with, and that they collectively make up a large, if not the greater, part of the so-called rural population. It may also be asserted as a general rule that the probability of a community having a pure and well-cared for public water-supply will be in direct relation to its size, and that the chances are that in the smaller hamlets and villages the aqueous needs of the inhabitants will be supplied from private shallow wells or cisterns, rather than from a common reservoir, artesian well or spring. And though we do have at times impressive examples of the liability to danger from large public water supplies

not properly safe-guarded, as occurred recently at Ithaca, N. Y., and Butler, Penna., yet the risk is still greater and the actual danger is more persistently at hand where the members of a community are taking almost the entire supply of water from shallow wells which are receiving the drainage from neighboring cess-pools and other sources of pollution. For almost as certainly as we find a household using a private well located in convenient proximity to the house, so too do we find the familiar out-house with its reeking abominations also conveniently located, and thus too near the well.

Moreover, the danger is multiplied as the village increases in size, for then wells and cess-pools are brought closer one to another and the entire body of ground water supplying the wells is increasingly liable to be polluted beyond the safety limit or to become at any time the common carrier of infection.

We know now that many persons, recovering from typhoid fever, may carry the infective germs about with them for a long time, even many months, disseminating them daily in the urinary as well as faecal discharges. And we know also that typhoid fever is so universally prevalent throughout the entire country that, as Prof. Vaughan of the University of Michigan, stated in his Oration on State Medicine before the American Medical Association in 1900, "the chances are that if a regiment of 1300 men should be assembled in any section and kept in a camp the sanitary conditions of which are perfect, one or more cases of typhoid fever would develop within eight weeks after assembling". Nor should we lose sight of the fact that 3 cases occurring simultaneously in a town of 1,000 population is just as grave an epidemic as 3,000 cases at one time in a city of million inhabitants, with the danger of extension the greater and the means of controlling infection the less in the former community.



I would not have you believe that I am endeavoring to cast undue blame upon the parts of the South and South-West where the charts show this disease to be most prevalent. Conditions differ only in degree there from those in the North, East and West. Comparatively, there are more small communities and fewer large ones and the people have not as yet learned so well the lessons of modern Hygiene. Charts VII shows that, with one or two exceptions, there is a greater incidence of the disease in the rural portion of every grand group. Moreover that portion of the country, which is included in Class B and part of Class C has not yet appreciated the reflex influence of a thorough system for the registration of vital statistics. It is interesting to note that according to the Census Report "In comparison with 1890, there was a decided decrease in the death-rate from this disease in all the registration areas, the decrease being most marked in the cities in the non-registration states, where it amounted to 25 percent." This is probably because the registration states had already achieved considerable success in preventing the disease before 1890. One thing, however is certain and that is that the experience of the last two Census periods shows that the adoption of proper registration methods will be quickly followed by a decided improvement in the sanitary status of the district concerned.

Nothing has been said of the liability of dwellers in isolated rural homes to typhoid infection, for although most of us are aware that the water supply of the great majority of such homes throughout the country is particularly liable to organic pollution at all times and to the special reception of the germs of typhoid fever whenever a more or less recent patient from the disease inhabits or visits any one of such dwellings, I have no data nor statistics that will show the relative incidence of the disease in these single dwellings and in the towns and

villages, whether large or small, of the rural populations. However, the sanitary principles involved are the same in one case as in another, and the relationship just referred to cannot seriously affect the result of our investigation.

Having thus considered the facts and the problem before us, may we not agree upon the following conclusions:

1. That, although proper education in sanitary matters is essential and necessary throughout the whole country, it is especially important in so far as it relates to the causation and dissemination of typhoid fever in the localities particularly indicated by the charts.

2. That it is the duty of the medical profession in these particular localities not only to do all they can to educate the public along these lines, but also to impress their typhoid patients with the necessity of the utmost care as to disinfection both during the illness and long after the convalescence.

3. That the medical practitioners should not only join hands with all progressive citizens, but be the first to urge the improvement, purification and care of public water supplies, and should likewise use every reasonable means to induce those depending upon private sources, whether in town or country, to protect themselves against the danger of infection.

4. That it is likewise the duty of the members of the profession to help to secure for their respective localities and states, uniform and satisfactory methods and laws governing the registration of vital statistics, not only because these are direct agents for the increase of sanitary information and knowledge, but because they also always react to bring about marked improvement in the sanitary conditions of the people supplying the statistical data.

Finally, although my remarks have of necessity been confined to the consideration of certain conditions in my own country, and though I am not informed as to the extent of similar conditions in the other countries here represented, I trust that the conclusions stated above are capable of general application and that they may serve to forward the crusade against this preventable disease which, as experience shows, can be effectually lessened in its prevalence and dissemination by the careful systematic and thorough application of well-known and well-tried sanitary principles.

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## ***PARANOIA AS SEEN IN CRIMINALS.***

DOCTOR J. W. PUTNAM OF BUFFALO.

DISCUSSION BY DOCTOR A. E. MACDONALD OF NEW YORK.

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Dr. Putnam's paper is not only a very interesting but a very timely one, and must serve a most useful purpose in impressing not only upon the members of the medical profession to whom it is primarily addressed, but upon judicial officers, and other likely to come in contact with them the importance of caring for and controlling Paranoiacs before their impulse and opportunity for doing mischief culminate. The cases cited presented long before the crisis came, quite sufficient evidences of aberration and danger to have properly led to their apprehension and confinement in their own interest and for the protection of others. Yet little or nothing, certainly nothing effective, appears to have been done, and they are typical of hundreds of other patients who are at large and liable at any moment, under the necessary conjunction of conditions and incentives, to commit acts of violence.

The Paranoiac more than the sufferer from any other form of insanity is apt to conceal or plausibly explain the evidences of his disease in such a way as to deceive, or secure the sympathy of, the ordinary layman, serving as a juryman for example, or even public officials or physicians, and so escape the sequestration that his condition and the public safety demand. And even after he has been happily put under restraint, where that is done, he is, more than others, apt to stimulate restored sanity, make an impressive appearance before official examiners, or perhaps, under a habeas-corpus, upon a Jury, and so secure his release, with, in the latter case, very likely a reprimand for the Hospital Superintendent who has sought to detain him. No other class of inmates gives the officers of Hospitals for the Insane more concern than do the Paranoiacs, and I know of more than one act of violence and of at least one act of homicide committed by them when after being once safely lodged in an asylum they were discharged through the mistaken action of Courts and Juries, against the advice and warning of the physicians in charge. In the case which ended in homicide the victim was a physician, an officer of the Hospital in which the patient had been confined, and the motive of the latter's action was based upon insane delusions of persecution at the hands of the former.

The Paranoiac at large is always a source of danger, the more so, as I have said, from the good appearance he makes and the consequent reluctance of laymen, and officials too, to interfere with his liberty. A particularly trying class, and by no means insignificant in numbers, is made up of individual patients who present in the main very uniform characteristics. They conceive an affection for some member of the opposite sex and conceive also the idea that that affection is returned, and thenceforth the lives of the lady and her family are made miserable. The idea that only the opposition of members of the latter keeps

the principals apart soon follows upon the other ideas, and herein lies danger for the persons suspected. As a rule the lady upon whom the insane attentions are lavished is prominent in some way, as an Actress, a Philanthropist, or in frequent mention in the newspapers. Miss Mary Anderson and Miss Helen Gould have been especially unfortunate in being made the target of such undesirable ambitions, and by the time we return Mrs. Chadwick will probably be to the fore. The newspapers again, and more particularly the yellow ones, see their opportunity and the annoyance of daily sensational articles and illustrations, with quite possibly delicate insinuations of encouragement given by the victim, or of the truth of the Pananoiac's stories as to the attitude of her friends toward him, are added to the danger of violence. Many prominent families are to-day put to the necessity of employing detectives to keep guard over women members and watch the movements of insane and irresponsible men whose frenzied fancy they have been so unfortunate as to unintentionally attract.

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## **COMPARACION**

ENTRE LA RUTA ABDOMINAL Y LA RUTA VAGINAL PARA LA  
EXTIRPACIÓN DE LOS TUMORES FIBROSOS DEL UTERO.

POR HENRY T. BYFORD, M. D. DE CHICAGO, ILL.

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Para elegir entre la Ruta abdominal y la ruta vaginal hay tres cosas que tomár en cuenta á saber: el peligro que corre la enferma, la posibilidad de terminar la operación por la ruta vaginal con éxito y la experiencia quirurgica del operador. Así es que el cirujano de conocimientos generales en cirugía optará el método supra-púbico en el cual está bien versado, mientras que el ginecólogo elegirá el vaginal por haber tenido más práctica en las operaciones infra-púbicas.

La rapidez y facilidad de ejecución con la posibilidad de operar con la ayuda de la vista son grandes ventajas de la vía abdominal.

Por otra parte, los peligros de choque, del traumatismo intestinal y de infección de la cavidad peritoneal con la



subsiguiente parálisis ú obstrucción de los intestinos son desventajas que tienen mucha importancia para el operador que no dispone de los mejores medios para la práctica de la técnica aséptica.

La oposición de tantas pacientes á la incisión abdominal es una desventaja que debe tenerse en cuenta.

Las ventajas de la vía inferior son principalmente lo opuesto á las desventajas de la vía superior, á saber; la poca importancia del choque, la mínima disturbación á las entrañas, y el carácter localizado de cualquiera condición adversa que pudiera resultar de las imperfecciones de la asepsia ó de la falta de habilidad operatoria. Por eso en los casos propiamente escogidos hay menos peligro para la vida.

También son las desventajas de la vía inferior lo opuesto á las de la vía superior, tales como la larga duración de la operación y la imposibilidad de guiarse por la vista. A esto debe añadirse no solamente la dificultad para obtener un campo de operación enteramente desinfectado, y de operar á través de la limitada entrada vaginal, sino también lo expuesto que á surgir están, dificultades inesperadas que van en compañía de muchos peligros. Quizás la necesidad de una habilidad especial para este método vaginal debe considerarse como una desventaja desde que los cirujanos han adoptado la cirugía pelviana. Es difícil concebir como el cirujano puede ocuparse de todo el dominio de la cirugía y al mismo tiempo adquirir la destreza y juicio en la ejecución del *sectio-vaginale* que ha adquirido el ginecólogo por haber dedicado su vida entera al estudio y á la práctica de la cirugía pelviana y á las condiciones de demanda que le han llevado por ese camino.

Como hemos indicado, el método que se emplee en el tratamiento de los tumores fibrosos del útero debe elegir-

se de acuerdo con las ventajas y desventajas yá enumeradas. En los primeros tiempos la cirugía de los fibromas de la matriz que no proyectaban en su cavidad fué casi completamente abdominal. Pero con el desarrollo de la ginecología, como una especialidad, se hizo de moda el evitar los peligros de la incisión abdominal, operando en estos casos por la vagina. Se practicaba la histerectomía vaginal para los tumores grandes, sacrificando muchas pacientes por razón de las dificultades inesperadas é inapreciadas que se encontraban. Las operaciones duraban frecuentemente tres ó cuatro horas, mientras las enfermas sangraban hasta que sucumbían pocas horas después de anemia, de la cual era imposible reponerla. Con frecuencia llamaban á esto erroneamente choque quirúrgico.

Otros veces era imposible acabar por la vagina, y la operación se completaba por medio de una incisión abdominal, si la enferma sobrevivía hasta el fin.

Mientras tanto algunos ginecólogos y cirujanos de buen juicio (al frente de los cuales se encontraba el doctor Baldy de Philadelphia) permanecían fieles á la ruta abdominal en todos los casos, y demostraban á los entusiastas partidarios de la ruta vaginal, que sus trabajos estaban produciendo malos resultados. Esta preferencia desrazonable por la vía vaginal como método de rutina ha sido abandonado por todos, fuera de unos pocos Vaginalistas, y ahora hemos llegado al punto de elegir imparcialmente y precisar con inteligencia los casos propios para cada ruta.

Creo que la manera más segura de precisar el terreno de cada método es discutiendo las restricciones de ambos. Hasta ahora la costumbre ha sido de elegir según el tamaño de la masa fibro-uterina y decretar que las de un cierto tamaño deben extirparse por la vagina, mientras las más grandes se atacaban por el vientre; e aun dos operadores se ponían de acuerdo acerca del tamaño que determinaba la ruta. No se tomaba el tamaño en conección con

la forma, ni con las adherencias, ni con las condiciones complicadas de la masa fibrosa. A mi parecer el procedimiento más racional y exacto es el de limitar la histerectomía vaginal á los casos en los cuales el tamaño y configuración de la parte inferior de los tumores ó del útero son tales que el cuello puede ser traído hacia abajo y tan cerca de la vulva, que el operador pueda alcanzar sin tardanza las arterias uterinas de cada uno de los lados del cuello, así como las arterias hemorroidales de atrás.

Pero el tamaño y forma de los tumores ó del cuerpo de la matriz deben ser tales que despues de la ligadura de las arterias uterinas, y la ablación del cuello y de la parte inferior de la masa, lo restante puede ser traído abajo hasta un punto de facil alcance, ó pueden reducirse por cortadura (morcellement) de suerte que las artérias ovaricas puedan ligarse sin tardanza. Es la pérdida de tiempo al cortar en pedazos éstas grandes y duras masas colocadas y retenidas en la altura del pelvis mientras continúa una hemorragia constante, aunque no siempre profusa, la cual hace tan peligroso este método. Por otra parte, cuando todo el útero puede ser arrastrado cerca de la entrada de la vagina, no solo se puede hacer la operación con la debida rapidez, sino la extensión de las<sup>e</sup> vasijas sanguíneas, incidente á la tracción, limita la hemorragia. Haciendo la miomectomía por la vagina, las fibromas subperitoneales é intramurales menos de diez C. C. de diámetro pueden presentarse por entre una incisión vaginal delante ó detrás del cuello, por medio de una anteversión ó de una retroversión del utero, naturalmente sea de tamaño moderado. En tal caso el tumor se trae dentro de la vagina, ó entero ó despues de cortadura, llevando consigo la pared anterior ó posterior según la posición del tumor, y como esta está extirpado, su lecho se cierra con catgut fino. De la misma manera pueden extirparse los demás hasta el último tumor. En caso de que las neoplasmas sean numerosas viene á ser una cosa de experiencia y buen juicio para

determinar de antemano si se puede emplear este método con ventaja para la enferma.

Cuando uno ó más tumores proyectan en la cavidad uterina, es decir cuando son submucosos ó sesiles, y el cuello no puede extenderse lo bastante para su extracción, se hace una incisión transversal delante del cuello y se separa la vejiga del útero. El cervix ya estando dilatado lo más posible, la pared anterior se taja en la línea mediana del ostium externum hácia arriba hasta el punto necesario para permitir la extirpación, y la incisión se cierra al punto por catgut.

Para que esto sea factible la matriz debe ser bastante pequeña para traerse abajo al alcance del operador. Cuando sólo es cuestión de miomectomía el operador puede disponer de más tiempo que para la histerectomía, porque las grandes arterias y venas no están cortadas, y largas superficies sangradas no quedan al descubierto por mucho tiempo. En tales circunstancias la cantidad de la hemorragia es insignificante.

Empero si el cuello no se puede bajar hasta la vulva, ó si la masa uterina es tan grande que no pueda bajarse después de la ablación del cuello y de la parte inferior, entonces el método vaginal no debe emplearse. Si un tumor se desarrolla debajo del peritonéo y llena un lado del pelvis, no solo es difícil alcanzarlo por debajo, sino que dejaría un lecho sangrado que podría traer graves consecuencias.

Una pequeña entrada vaginal con una vagina estrecha en una paciente de edad avanzada prohíbe el empleo de la ruta inferior excepto para muy pequeños tumores. A menos que la masa uterina sea muy pequeña, adherencias de los anejos muy arriba en el pelvis constituyen una contra-indicación al método vaginal, aunque el cuello mismo sea relativamente bajo.

La dificultad que se encuentra en la debida desinfección de la vulva y vagina no es insuperable, y no debe in-

fluir en la elección de la ruta. Ya que el terreno operativo es debajo de la cavidad peritoneal, los antisépticos fuertes pueden también emplearse durante la operación y en seguida un abundante drenaje. Aun cuando hay una imperfección en la técnica, el sepsis subsiguiente suele localizarse, y acumulaciones de pus se evacuan fácilmente por la incisión vaginal.

Se debe por supuesto recurrir á la ruta abdominal en todos los casos no adoptados á la de la vagina, es decir, para todas las fibromas grandes, para las pequeñas que se bajan cerca de la vulva, y para las complicadas con adherencias de los anejos muy arriba en la pelvis.

Si se puede disponer de las mejores facilidades para la cirugía antiséptica es mejor optar por esa ruta superior para los casos dudosos. Esto se refiere particularmente á las ancianas Anémicas quienes no soportan bien la pérdida de sangre incidente á una histerectomía vaginal de larga duración. Si empero faltan estas facilidades para el antiseptis, y si la paciente es bastante fuerte para soportar una larga y más ó menos sangrada operación, el operador debiera fiarse más en su destreza, y operar por debajo.

La posibilidad para la cirugía conservativa es quizás una de las mayores ventajas de la ruta abdominal. Muchas y grandes fibromas pueden extraerse del útero, incluyendo las variedades submucosas, sin sacrificar las funciones uterinas y ováricas. Eso determinará también la elección de esa ruta en casos dudosos.

Para terminar, quiero señalar que cada ruta tiene sus ventajas distintas y evidentes, y es posible juzgar de antemano cual de las dos se debe emplear. En todos los casos adaptados á ella la ruta vaginal se empleará por la razón de haber menos peligro. Pero en los casos dudosos, sobre todo en aquellos que exigen la cirugía conservativa, la vía superior debe elegirse.

Pudiera citar muchos casos de mi propia experiencia para sostener cada uno de estos dictámenes, pero no quiero abusar más de vuestro tiempo precioso con tales detalles. Bastaría sin duda que ustedes consultasen su propia experiencia para juzgar sabiamente.

## **COMPARISON**

OF THE ABDOMINAL AND VAGINAL ROUTES FOR THE REMOVAL OF UTERINE FIBROIDS.—BY HENRY T. BYFORD.—CHICAGO.

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Whether a uterine fibromyoma or a fibromyomatous uterus should be removed by the abdominal or vaginal route depends largely on three things, viz: the relative danger to the patient, the possibility of completing the operation in a satisfactory manner, and the surgical training of the operator. Other things being equal the general surgeon would prefer the abdominal route as the one most familiar to him, while the gynecologist would select the vaginal, for which his training has given him especial aptitude.

The rapidity and ease of operating as well as a possibility of working under the direction of the sight give the abdominal method decided advantages. On the other hand the dangers of surgical shock, intestinal traumatism and infection of the peritoneal cavity, with sub-

sequent intestinal paralysis or obstruction, constitutes disadvantages that must be taken into consideration by all who have not the best facilities for the practise of aseptic technic. The objection of so many patients to the abdominal incision constitutes a practical disadvantage that cannot always be slighted.

The advantages of vaginal section are mainly the opposite of the disadvantages of the abdominal route, viz: the insignificance of the shock, the minimum of disturbance of the abdominal viscera and the comparatively localized nature of any untoward conditions that might result from possible imperfection of sepsis and lack of manual skill. In other words, there is in properly selected cases, less danger to life.

The disadvantages of vaginal section are also the opposite of the advantages of the abdominal method, such as length of the operation and impossibility of having the guidance of the sight. To this must be added not only the difficulty in securing a thoroughly disinfected field of operation and of working through the limited vaginal entrance, but also the liability of encountering unsuspected difficulties and their accompanying dangers. Perhaps the requirement of special skill in this method of operating should be considered a disadvantage, now that general surgeons are including pelvic surgery in their domain. It is difficult to conceive how the general surgeon can cover the field of general surgery and at the same time acquire the skill and judgment in the performance of vaginal section that has been acquired by gynecologists whose lifetime has been entirely taken up with the study and practise of pelvic surgery and the conditions calling for it.

As already indicated, the method to be employed in the surgical treatment of uterine fibroids must be chosen largely in accordance with the advantages and disadvan-



tages enumerated above. In the earlier days the surgery of those uterine fibroids that did not project into the uterine cavity was almost entirely abdominal. But with the development of gynecology as a specialty it became the fashion to evade the dangers of the abdominal incision by operating, whenever possible, upon pelvic conditions by way of the vagina. Fibroid uteri of large size were taken out by the lower route and patients were often sacrificed because of the unexpected or unappreciated difficulties that were encountered. Operations often lasted three or four hours while the patients slowly bled to death, dying a few hours later of the anemia from which they could not be made to rally, and which was often erroneously called surgical shock. In other cases it was not possible to complete the operation per vaginam and it was finished through an abdominal incision, if the patient survived through it.

While such work was going on a few level headed gynecologists and surgeons, foremost among whom was Dr. Baldy, of Philadelphia, remained faithful to the abdominal route and proved to the vaginal enthusiasts that their work was bearing poor fruit. The unreasonable preference for the vaginal method as a routine procedure was given up by all but a few trained vaginalists, and now we have come to select impartially, according to our knowledge and skill, the proper route for each case.

Perhaps the best way to indicate the field of each method is to discuss the limitations of each. It has been customary to select according to the size of the fibrous uterine mass and say that fibroid tumors of and below a certain size should be removed per vaginam and the larger ones per ventrum, no two operators agreeing however as to the exact determining size. Nor was the size made dependent upon the shape, connections or complicated conditions of the parts. A much more rational and accurate plan, it seems to me, is to limit vaginal hysterecto-

my to cases in which the size and shape of the lower part of the tumors or uterus are such that the cervix can be pulled down near enough to the vulva to enable the operator to secure without delay the uterine arteries on either side of the cervix, as well as the middle hemorrhoidal arteries behind.

But the size and shape of the tumor or uterus above must also be such that after the uterine arteries are ligated, and the cervix and lower part of the mass are cut off, the remainder can be brought down within easy reach, or can be rapidly reduced by morcellement, so that the ovarian arteries can be ligated without much delay. It is the delay in cutting up these large hard masses, held back and high up in the pelvis, while constant even though not always profuse bleeding is going on, that renders the method so dangerous. On the other hand when the whole uterus can be pulled well down toward the vaginal entrance, not only can the operation be done with comparative rapidity but the consequent stretching of the vessels incident to the traction limits the bleeding.

In the performance of myomectomy per vaginam, subperitoneal or intramural fibroids less than ten c. c. in diameter can be made to present at an anterior or posterior vaginal incision by means of an anteversion or retroversion of the moderate sized uterus. The tumor can then be pulled into the vaginal canal either entire or after morcellement, bringing with it the anterior or posterior uterine wall, according to the location of the tumor, and as it is removed the bed be sutured with fine catgut. The other fibroids may be attacked in the same way until all are removed. In case the neoplasms are numerous, it becomes a matter of experience and nice judgment to determine beforehand whether or not the work can be done in this way to the patient's advantage.

When a tumor or tumors are submucous or sessile

and the cervix cannot be sufficiently dilated to remove them, a transverse vaginal incision may be made in front of the cervix, the bladder be separated from the uterus and, after dilatation of the cervix, the anterior uterine wall can be incised from the external os upward as high as necessary to expose the tumor and the anterior uterine incision be sutured by catgut. To do this successfully the uterus must be small enough to be pulled down within reach. The operator may of course take more time for the performance of myomectomy than of hysterectomy because large bloodvessels are not severed and large bleeding surfaces are not left exposed for a considerable length of time. Under these circumstances the amount of the bleeding is, as a rule, comparatively insignificant.

If, however, the cervix cannot be pulled down or forward near to the vulva, or if the upper part of the uterine mass is so large that it cannot be brought well down even after the lower parts have been removed, then the vaginal method should not be attempted. If a tumor is developed subperitoneally and fills one side of the pelvis, not only will it be difficult of access from below but it will leave a bleeding bed that may become a source of great danger.

A small vaginal entrance and narrow vagina in patients well along in years renders an attack per vaginam of any but the smallest tumors inadvisable.

Unless the uterine mass be very small, adhesions of the adnexa high up in the pelvis constitutes a contra-indication to the vaginal method although the cervix itself be comparatively low.

The difficulty of thoroughly disinfecting the vulva and vagina is not insurmountable and need not influence our choice of routes. Since the operative field is practically below, the peritoneal cavity, strong disinfectants can be used during the operation and active drainage after-

ward. But even when there is an imperfection in the technic, subsequent sepsis is apt to be localized, and pus accumulations readily find an exit through the vaginal wound.

The abdominal route must of course be employed in those cases not adapted to the vaginal, viz: for all large fibroids, for small ones that cannot be pulled well down toward the vulva and for those complicated by adhesions of the adnexa high up in the pelvis. If facilities for modern aseptic surgery are available this route should also be employed in doubtful cases. This is particularly true of cases in old or very anemic women who cannot bear well the loss of blood incident to a vaginal hysterectomy of long duration. If however the facilities for antisepsis are lacking and the patient is quite strong, then the operator might better trust a little more to his skill and operate from below.

Perhaps one of the chief advantages of the abdominal route are the possibilities for conservative surgery. Many and large fibroids may be removed from the uterus, including the submucous varieties, without sacrifice of the uterine and ovarian functions. This will also determine the choice of the abdominal route in doubtful cases.

In conclusion I would say that each route has its distinct and evident advantages and we can usually judge beforehand which to employ. In all cases adapted to it, the vaginal route should be preferred on account of its comparative safety. But in doubtful cases, particularly in those in which conservative surgery is called for, the abdominal route should be given the benefit of the doubt.

I might cite cases from my own practise in which these various assertions are sustained by the difficulties and dangers encountered, as well as by successes obtained, but I have not considered it necessary to take up

your valuable time with such details. It will undoubtedly suffice for you to consult your own experience in order to be able to judge.

**Fin del Tomo Primero**