

and is an extremely active and progressive form of the disease in which radical cure is rarely effected by even the most extensive operations after malignant tissue is once present. It is, however, preceded by a very long pre-cancerous stage of simple chronic ulceration which is susceptible of a radical cure, sometimes by minor treatment and always by a plastic operation such as trachelorrhaphy or amputation. Its leading symptom is a persistent, usually slightly offensive, leucorrhea in a woman approaching or over forty. Every such case should be treated. If the leucorrhea is tinged with blood or if bleeding follows any mechanical interference with the cervix the condition is of the utmost importance.

Cancer of the body of the uterus is of a slower type with late metastasis. Its leading symptom is increased catamenial flowing in a woman approaching or over forty; or, more suggestive still, intermenstrual bleeding; and if the intermenstrual flowing is merely serous or sero-sanguinous it is almost pathognomonic, no matter how small its quantity may be.

The general popular impression that increased flowing at the time of the menopause is normal, is to be expected and is unimportant, has perhaps cost more lives than any other false impression of medicine. This is in fact the period in life when flowing should invariably decrease. Increased flowing is not always or necessarily the result of malignant disease, but is never normal. It is always the result of some abnormality in the organ and it always demands prompt and thorough examination. This cannot be too strongly insisted upon.

The treatment is curettage with submission of the curettings to a pathologist, and hysterectomy at the same sitting if adenoma or adenocarcinoma is found. If the pathological examination is negative but the flowing recurs the curettage should be promptly repeated, since the actual malignant process is frequently limited to a very small spot in the uterus and may easily have been missed by the curette.

*Cancer of the Skin.* This form of the disease has been somewhat fully covered by the discussion already and it may suffice to say of it that any persistent crack or ulceration of the surface, especially if near one of the orifices of the body, should be regarded as potentially pre-cancerous and disposed of by minor or operative measures rather than endured. Warts, moles, or birthmarks which enlarge or change color during middle life are usually pre-cancerous and should be immediately treated by the appropriate means.

The American Society for the Control of Cancer has published a monograph on the diagnosis of the cancerous and pre-cancerous stages in all of the many situations in which they occur, which the Massachusetts Health Commissioner is about to distribute to every practitioner in the State. This pamphlet was pre-

pared by a committee of experts, was subsequently revised with great care by the Council of the Control Society, a body composed of surgeons and pathologists from all over the country, and may be regarded as the most authoritative statement of present opinion on the subject of cancer which is now in existence. As I was not a member of the committee which produced it, I may perhaps be permitted to express my opinion that it is a most satisfactory, clear, and concise production. You will receive it shortly from the State Commissioner and I think that you should not only read it but should keep it on your desk for constant reference and guidance, as I myself shall certainly feel compelled to do. Few men, even of those of us who are especially interested, can carry in their heads every sign and symptom of all the less common varieties of this multiform disease.

### CAESAREAN SECTION.

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SOME adverse criticism having been made of an article published by me last year upon this same subject has led me to choose this topic again, hoping thereby a full discussion will be provoked. Further experience only emphasizes all the claims made in the former article, and leads to more positive claims for this operation as well as a wider range for its application. I believe it is the greatest single advance made in civil surgery within recent years. The improvement in the technique in a very short time has carried it almost to perfection, and could reliable statistics be compiled showing the actual saving of life both of mother and child, they would be astounding. To this, if we add the enormous saving of traumatic mutilation, with the subsequent dangers and discomforts of repair, the credit side of this operation is almost incomprehensible. It seems to me that the status of the operation at the present time is very similar to that of the operation for appendicitis before the latter operation was accepted by the profession. Nothing is more vivid in our mind than the constant reiteration of the indications not only of appendicitis but for the operation of the same, and the slow winning of the profession as a whole to the acceptance of the fact that the cure for appendicitis was removal of the appendix. Very few are foolish enough to question this today.

When we look back and consider what were the obstetrical teachings and practice of men contem-

porary with myself, and compare them with the brilliancy of the results of the Caesarean operation in competent hands, the mind can hardly attune itself to comprehend the old procedure. Think what it meant to keep in one's armamentarium the craniotome and cranioclast and what it meant to use them. The deliberate sacrificing of the child *in utero*, and the horrible, brutal means of extracting the child, seem today as if they should hark back to the very darkest of all ages, and yet within the memory of no end of men living they were the accepted procedure of the day. The use of these must mean not only the deliberate destruction of the child but almost without exception the deliberate mutilation of the mother and too often fatal results for both. As performed today Caesarean section is one of the most finished of operations. The technique is so simple and rapid and definite that it is without an element of danger in itself, adding nothing to the complications which one is facing. It is such a sure life-saver for the mother,—and if the child is viable, for the child,—and is so beneficent to the woman not only in relieving her of pain which would otherwise be long-protracted, but in otherwise preventing mutilations which are too often accompanying, that I feel sure if the profession would realize just what the operation accomplishes, it would be universally accepted under conditions which would otherwise call for some operative procedure. The safety of the operation in competent hands has been definitely demonstrated under most astounding conditions. Also it will often save a child where the loss of the mother is inevitable and where otherwise the child would be lost also.

The indications, so far as my own observations are instructive to me, are herewith somewhat formulated. A wider experience will no doubt add to these indications in ways which will be generally acceptable, but these are drawn from my own limited experience.

Contracted pelvis has always caused difficulties and often prevented normal labor. If left to nature labor is long and tremendously protracted, with the suffering incident to the mother and with more or less danger to the child from the delay in moulding the head. The alternative has been forceps, which only add to the difficulties because, of course, the forceps in themselves take up some room in coming through the pelvis. Probably some form of

contraction of the pelvis is perhaps the most common cause for the application of high forceps.

Albuminuria and its sequelae, where it is definitely due to the pregnancy and where it has proceeded so that the life of both mother and child are menaced, calls for a termination of the pregnancy, and this can be done so quickly and definitely by a Caesarean that I believe it will be the accepted method of the future.

For puerperal convulsions nothing can compare with this method.

In cases of placenta praevia all other methods should be discarded. Whenever a diagnosis can be made of placenta praevia, no matter what the placement of the placenta, either lateral or central, no other method than a Caesarean should be considered for its relief. The method so long accepted of turning the child and forcibly delivering, by compression controlling the hemorrhage, is simply a last ditch resort, because heretofore we had no other means of offering any form of relief. The danger from a placenta praevia is from a hemorrhage which cannot be controlled by the methods heretofore in use. It is a mechanical condition and the only thing abnormal about it is the location of the placenta whereby it becomes obstructive and must be dislodged more or less before the child can be delivered. If the child can by any method be extracted the uterus automatically takes care of itself without reference to where the placenta may be attached. Therefore, it would seem without possibility of controversy that, in a case of placenta praevia when recognized, the removal of the child, both before the mother is exhausted and before the child is affected, would be not only the most mechanical method but would also be the most commonsense one. As an actual fact, in this operation the location of the placenta is absolutely immaterial. I have several times found it so placed that I have completely separated it from the uterus before removing the fetus and while the hemorrhage was momentarily severe, because the uterus could not contract itself. The removal of the child was immediately followed by a contraction of the uterus and the hemorrhage controlled. Therefore, in any case of placenta praevia the surest method of controlling hemorrhage is by developing conditions whereby the uterus can contract itself, and this is more quickly and safely done by opening the

uterus and removing the child than by any other method devised, and probably better than by any other method which will ever be devised.

Certain cases which are classed under the heads of inertia and atony of the uterus, which to me are rather vague terms, are also better dealt with by Caesarean than by any other method.

Cases of malposition, from whatever cause, are more definitely and safely managed by this method than by any other.

Postoperative intraabdominal complications due to adhesions from some previous operation which was faulty can be dealt with successfully only by a Caesarean operation. Any operation preceding a pregnancy which fixes the uterus in the abdominal cavity, or which prevents its free, untrammelled development, establishes conditions which are fatal to the child unless saved by an abdominal section. One of the three fatal cases in this report died because of the difficulties left over from a former operation. The child was saved but the mother was unable to survive.

An experience which will be more definitely related later, leads me to add certain rare cases where the inability of the labor to proceed is inexplicable, which would be better dealt with by Caesarean than by any other method.

Cases of pregnancy complicated by a fibroid require a hysterectomy. The only chance for the child is to conduct the pregnancy beyond the viable age if possible, and then make a Caesarean to save the child, followed by a hysterectomy. The Caesarean in no way complicates the subsequent procedure.

In many of the conditions above noted the first recourse has been the high forceps operation, noted here only to condemn it. I believe the day is approaching when the high forceps, and especially the axis-traction forceps, will be thrown on the scrap heap. The high forceps is unmechanical, most destructive of the life of the child, almost invariably mutilates the mother, and is a brutal method of overcoming the difficult situation. The exhaustion of the mother cannot be ignored, nor the danger of the life as well as the mutilation of the child. It is usually a tedious performance and if it is hurried and unnecessary force used, it almost invariably means greater laceration for the mother.

With a Caesarean section in view, a certain few precautions should be rigidly undertaken. First, no unnecessary vaginal examinations should be made and when made they should be under the most rigid aseptic conditions. Before the operation the vagina should be thoroughly asepticized.

Also, particular attention should be given when the operation is undertaken, before labor has begun, to see that there is some dilatation of the cervix. Then, of course, every aseptic precaution should be taken as in every abdominal section.

Probably the greatest danger lies in sepsis, and this danger is greater because there are so many ways it can enter a case through negligence of others than the operator. In every case in my own experience sepsis looms up greater to me than any one factor of danger. One of the fatal cases in this report was due to sepsis, the cause of which I do not know as I was not associated with the case. The danger from sepsis cannot be too strongly emphasized. In every case some sort of examination must be made, of course, to determine the nature of the case, and if possible what is complicating it. There is no reason, however, in repeated futile vaginal examinations which do not immediately result in definite conclusions. One should accustom himself to learn by one single examination all that a case requires for its final determination. This examination should be made under complete asepsis, as indeed should every examination under such circumstances, even if delivery is to be left to nature. Repeated examinations which result in no definite action are signs of incompetency. If an operation is decided upon the vagina should be most thoroughly cleansed and as carefully made aseptic as if a hysterectomy were in contemplation. If a Caesarean is decided upon the same rigid precautions should be undertaken as in any other case where the abdomen is to be opened. I am wholly convinced that in these cases where sepsis supervenes upon the operation it is wholly due to the fault in the technique and could have been avoided.

Aside from this, it seems to me the greatest dangers are from delays of one kind or another; at least my observation leads me to this conclusion. If one hesitates under any given condition until a woman is absolutely exhausted, the danger, of course, is very acute, exactly as

it is in a case of appendicitis, neglected until death threatens. In such cases as these the operation only too often fails. Therefore, when there are such difficulties that delay is causing exhaustion, nothing is to be gained by waiting one hour or twenty-four hours before facing the situation which is hourly growing more menacing.

Recently one of my associates lost a case on the table, the third of those recorded in this report, because the woman was so exhausted from hemorrhage that she could not survive the operation. The operation was undertaken only when it was seen that the woman was going to die unless something was done. This was a case of placenta praevia which should have been operated the moment the diagnosis was made. At least some interference should have been undertaken at that time and if a Caesarean was finally to be done it should have been employed at the beginning. My associate was not called into consultation until more than twenty-four hours were allowed to drift by with a constant hemorrhage accumulative in its ill effects and her condition had become desperate. This was a needless failure.

A recent case was so unusually peculiar that it is worthy of record. Asked to see a woman in her first pregnancy at full term we found a healthy woman with a competent pelvis who had been in labor thirty-six hours without engaging the head in the upper straights. Pains were regular and normal in every way so far as one could judge, coming from three to five minutes apart and as strong as one could wish, yet the head floated. It made no effort to engage itself. The woman was becoming exhausted and upon examination I could find no reason why this condition of affairs should prevail and I at once advised an operation. This was refused at first, but after a delay of several hours with no progress it was accepted. The operation found everything normal except the incomprehensible entanglement of the child with the cord. The latter wound from the umbilicus around the body to the left side behind, through the axilla, then turned upward and backward from the shoulder across the back of the neck to the opposite side where it proceeded downward and forward through the axilla and backward to the placenta. This occupied practically all of the slack of the cord and really hung the child *in utero* to the placenta in such a way

that the head could not engage. The only alternative to this operation was a high forceps and if the forceps had successfully engaged the head and brought it down I cannot conceive how delivery could then have taken place unless the cord was divided or else the placenta stripped from its uterine attachment. In either case the delay in extracting the child would probably have been sufficient to cause its loss and if the placenta had been separated with the child *in utero* before it was extracted I do not see how a very severe hemorrhage could have been avoided. At any rate a Caesarean relieved the situation in a very few moments and mother and child did finely.

Another most satisfactory case was one of marked albuminuria. The patient was in competent hands and closely watched. Shortly after rising one morning she complained of headache and faulty vision, and more rapidly than I have ever observed before she lost sight and consciousness. By noontime she was helpless and her condition serious. A Caesarean at mid-afternoon interrupted all unfavorable symptoms, saved a beautiful baby, and the mother improved at once and made a fine recovery.

The time consumed in the operation is something of a factor in its success. After the initial incision everything should go on smoothly and efficiently to the end, and it will be a very rare and complicated case which cannot be completed in half an hour. The average time consumed should be not over 25 minutes.

The following summary takes the place of one published with a former article on this same subject and includes all of the cases therein listed with the addition of those which have occurred since that was published. It must be distinctly understood that these cases were not all performed by myself. They include all of the cases I have ever done together with all the cases that have been done in our hospital up to the present time by whomsoever they were operated. This should make more convincing and interesting whatever claims are made for the operation. It does not mean the summary of cases by some individual who has attained exceptional cleverness. Some of the cases were done by operators who are not especially competent abdominal operators. To our mind this means that the operation is a safe one and the technique is so simple that the man of ordinary surgical abil-

ity and training can make himself competent to undertake it. To undertake it, however, he must make himself absolutely competent in his operative technique to avoid sepsis. The danger from the occasional operator is that he does not sufficiently keep in mind all the time the danger of infection. It is only when one has had sufficient experience to know that every time the abdominal cavity is opened a possibility of infection is also offered requiring the most absolutely rigid compliance with every detail of operative technique to protect the patient.

When every possible precaution has been undertaken by the most competent operators there will be then failures from infection from sources so insidious that they cannot be foreseen and therefore forestalled, nor can they be detected afterwards. I know of no widely experienced abdominal operator who has not met with his inexplicable failures. Therefore, it is most incumbent that he who operates on cases as serious as those under discussion should observe every possible precaution to avoid infection through the operation.

## SUMMARY OF CASES.

DIAGNOSIS	OPERATION	NO. OF CASES	NO. OF OPER.	CURED	DIED	REMARKS
Albuminuria .....	Caesarean section	6	6	6		One foetus a monstrosity
Breech presentation .....	" "	4	4	4		
Cicatricial contraction of cervix uteri ....	" "	1	1	1		
Contracted pelvis .....	" "	33	33	33		
Double vagina .....	" "	2	2	2		
Dystocia .....	" "	30	30	30		
Dystocia; hydramnios .....	" "	1	1	1		Foetus a monstrosity
Eclampsia .....	" "	8	8	8		
Epilepsy .....	" "	1	1	1		
Foetus dead .....	" "	4	4	4		5 m., 5½ m., 7½ m., 9 m.
Hernia, vent. p. o. ....	" "	1	1	1		
Metrorrhagia gravidarum .....	" "	1	1	1		
Mitral insufficiency; exhaustion .....	" "	1	1	1		
Myomata uteri .....	Caesarean section, hysterectomy	1	1	1		
Myomata uteri .....	Caesarean section, myomectomy	1	1	1		
Occipito-posterior position .....	Caesarean section	2	2	2		
Placenta praevia .....	" "	6	6	4	2	
Post-operative adhesions .....	" "	1	1	0	1	
Spondylitis .....	" "	1	1	1		
Suspension in utero of foetus by cord	" "	1	1	1		
Toxaemia .....	" "	3	3	3		
Transverse presentation .....	" "	2	2	2		
Uterine inertia .....	" "	9	9	9		
<b>TOTAL</b>		<b>120</b>	<b>120</b>	<b>117</b>	<b>3</b>	

Total number of cases, 120; total number of deaths, 3; death rate, 2½%.

## THE NEXT STEP IN THE CAMPAIGN FOR INFANT WELFARE. THE EDUCATION OF THE WOMEN OF THE NATION FOR MOTHERHOOD.

BY ISAAC W. BREWER, M.D.,

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It has always seemed to me that the infant welfare campaign begins too late in the life of the child. The welfare stations receive children up to the age of two years and teach the mother how to care for the child. However, very few mothers apply to the stations until the health of the child has already been

injured and it needs rebuilding. In other words, the mother is taught to care for her child at its expense. The ideal for which we should strive is an efficient course in the care of the child to be an integral part of the education of every woman. It is far more important for the nation that a woman should be proficient in the care of her child than that she should have a knowledge of many of the subjects taught in the public schools. Much as this is to be desired, it is doubtful if the necessary instruction can be added to the school course for some years to come. It therefore seems that we should as a substitute do the