GYNECOLOGIC DISEASE IN THE INSANE

AND ITS RELATIONSHIP TO THE VARIOUS FORMS
OF PSYCHIOSES *

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The influence of gynecologic disease in the causation and prolongation of insanity among women in the past has been the subject of the most extravagant statements. Even yet we hear, usually from those with limited experience, that most of these women can be cured by operation. I am particularly struck with the lack of judgment displayed by some of the writers abroad. Professor Bossi of Milan, who devised the well-known uterine dilator, recently published an article on the relationship of suicide to gynecologic disease based on half a dozen observations and many hypotheses. Professor Schultze of Jena, a month later agreed with Bossi's assumption that a large percentage of psychoses in women could be cured by operation. He referred to the work of Hobbs of Canada, but seemed entirely ignorant of the important work of Manton of Detroit, and Leroy Broun of New York. It is primarily to Manton and Broun that we owe our present knowledge of this subject. Their work has extended over a long period of years and is characterized by carefully drawn, conservative conclusions. It was primarily concerned with the results of operative treatment and the character of psychosis most favorably influenced thereby.

A question of perhaps equal importance has as yet hardly been touched on; it is that of the percentage and exact character of gynecologic lesions found in insane women, and above all, the relationship of such lesions to the different forms of insanity.

EXAMINATIONS

As gynecologist to the St. Louis City Sanitarium I have examined personally, during the past year, 537 out of about 900 women inmates with a view to making a complete gynecologic diagnosis. The violent patients and those suffering from paresis were in great part omitted, but otherwise patients were taken in regular order without selection. The patients could usually be quieted easily; some here and there — approximately one in ten — would offer resistance. The attendants were instructed to watch the patients for a day or two after examination to note if the psychosis was in any way unfavorably influenced by the examination. Only in very rare instances was a temporarily increased excitability observed.

Patients examined in the observation ward of the St. Louis City Hospital before being transferred to the sanitarium were usually very difficult to manage and the gynecologic examination was most unsatisfactory. Even after they had been at the sanitarium for some time it was by no means easy to make a complete bimanual examination. For this reason I preferred to make all the examinations personally, while Dr. Keim and the nurse reassured and quieted the patient. By such means I was often enabled to obtain the necessary relaxation, when it seemed almost impossible to accomplish it otherwise. Let me say at this point, that the report of Dr. J. K. Mitchell of Philadelphia on postoperative and

postanesthetic insanity convinced me that only in cases of emergency would an anesthetic for diagnostic purposes be justified; so far, I have not employed it. In several instances when the patient at first resisted, I was able later, as the psychosis improved, to obtain complete relaxation.

RESULTS OF EXAMINATIONS

As a result of these examinations, 252 of the 537 women were found to have some lesion in the pelvic organs sufficient either to cause symptoms or to be in a position to cause them sooner or later in their lives. Minor abnormalities such as are found in practically every woman (small cervical tears, tears of the perineal body only, slight discharge, movable retroversions of the first degree), I classified as normal. In about one-fifth of the women showing gynecologic disease more than one lesion was found. There were altogether 319 pathologic conditions in the 252 women (Table 1).

TABLE 1.—CLASSIFICATION OF GYNECOLOGIC DISEASES
FOUND IN INSANE WOMEN; 319 PATHOLOGIC CONDI-
TIONS IN 252 PATIENTS SO DISEASED

Retroverted uterus	87	Polyp of urethra	4
Anteflexion - retroversion of		Urethritis	2
uterus	22	Vaginitis	4
Atrophy of uterus	8	Endocervicitis	19
Laceration of cervix	13	Endometritis	10
Relaxed pelvic floor	52	Salpingitis	20
Markedly relaxed abdomen ..	4	Tubo-ovarian mass	3
Prolapsed uterus	13	Parametritis	5
Prolapsed urethra	1	Condyloma acuminata	1
Prolapsed rectum	3	Bartholinian cyst	1
Fibroid uterus	20	Pruritus vulvæ	1
Ovarian cyst	3	Postoperative condition	13
Cystic ovary	2		
Polyp of cervix	8		319
Arrest of development, 30.			
Tears and relaxations, 86.			
Tumors, 23.			
Polyps, 12.			
Inflammations, 63.			

It is of particular interest to note the character of pelvic disorder prevalent among these insane women. Cervical lacerations were seen in only about 5 per cent. of the diseased women. Serious inflammatory trouble was only rarely found. Not a single case of malignant disease appeared in this number. Other tumors were of about average frequency. On the other hand, mild chronic inflammatory trouble was frequent; retroversions of the uterus were present in a large proportion, and, above all, relaxations of the pelvic floor and abdominal walls were very common. To what degree the prolonged institutional life of many of these patients, together with its attendant constipation, was responsible for this frequency of relaxation I could not say but the assumption that it was responsible seems justifiable. Polyps of the cervix or urethra were also frequent, out of all proportion to the average. Conditions indicative of an arrest of development of the genital tract were found in over 10 per cent. of the diseased women.

ANALYSIS

The percentage of women with gynecologic disorders, as shown in Table 2, is usually given as much higher than the 47 per cent. figured in the present report. It seems probable that gynecologic disease is only slightly more common in insane women than in the sane. The point of real interest is the distribution of these lesions among the different forms of insanity.

In three of the important groups — senile dementia, terminal dementia and paranoia — the percentage of women with pelvic trouble was only about one-third. In dementia præcox about one-half the women were diseased. About two-thirds of the imbeciles were to be so

* The work of the present report was done with the collaboration of Dr. J. P. Keim, Assistant Resident of the St. Louis City Sanitarium.

* Read in the Section on Obstetrics and Gynecology of the American Medical Association, at its Sixty-Third Annual Session, held at Atlantic City, June, 1912.

classed; and in the manic-depressive group the percentage of women with gynecologic lesions was as high as 74 per cent. The psychic diagnoses were carefully revised by the superintendent, Dr. Johns, to whom I wish here to express my thanks. Considering the large number of patients examined, it could hardly be mere chance that such a striking difference should appear between the women in the manic-depressive group and those in some of the other groups.

Analysis of these examinations according to the character of disease associated with the particular psychosis

TABLE 2.—PERCENTAGE OF PELVIC DISORDERS IN INSANE WOMEN

Physician Reporting	Number Examined	Diseased	Percentage Diseased
Manton	100	81	81
Lawrence	100	84	84
Hobbs	220	188	85
Claus	554	...	15
Danillo	200	138	69
Hall	154	...	38

TABLE 3.—REPORT OF 537 GYNECOLOGIC EXAMINATIONS OF INSANE WOMEN CLASSIFIED ACCORDING TO PSYCHOSIS

Psychosis	Total	Gynecologic Disease	Normal	Percentage Diseased
Terminal dementia	82	30	52*	36
Paresis	5	3	2	60
Senile dementia	106	30	76	28
Dementia præcox	92	47	45	51
Manic-depressive insanity ..	61	45	16	74
Imbecility	52	33	19	63
Paranoia	50	18	32	36
Melancholia	20	8	12	40
Toxic insanity	8	5	3	62
Hysterical insanity	4	3	1	75
Postapoplectic insanity ..	3	0	3	0
Epileptic insanity	18	0	12	0
Unclassified	36	24	12	67
Total	537	252	285	47

*%.

brought out several additional points. The terminal demented showing only 36 per cent. abnormal had a proportionately large number of postoperative cases. Among the senile demented I found the increased number of relaxations that might be expected in old women. The dementia præcox patients showed an unusually large number with arrest of development. That there is some co-relationship between the gynecologic lesion and the form of the psychosis seems more than probable. In the group of imbeciles arrest of development was also more frequent than normal. Of special significance, however, was the frequency of inflammatory trouble and its associated misplacements of the uterus in the manic-depressive group. Since the psychic diagnosis made by the hospital authorities was only recorded after all the gynecologic findings had been tabulated it came as a complete surprise that there should be such a definite relationship between certain psychoses and certain gynecologic disorders.

TREATMENT

Although these examinations showed that almost one-half of the insane patients had some pathologic condition of the genital tract, it by no means follows that all of them required treatment. It was not always an easy matter to determine whether a given condition was giving rise to symptoms, but in all doubtful cases the

attendant was instructed to watch the patient closely for several weeks. As nearly as could be determined, 141 out of the 252 women required some form of gynecologic treatment. Forty-seven were put on conservative measures such as douches, tampons, pessaries, etc., and in the remainder the question of operative relief came up for decision. Before any patient was subjected to an operation, the following precautions were taken: (1) Consent was obtained from the relatives; (2) the patient was put in the best possible psychic condition; (3) the ailment must be clearly giving rise to symptoms of moderate severity or be in itself a danger to the individual.

Ninety-four patients in this series belonged to the possibly operative class, or 17 per cent. of the total number of patients examined. Probably not over two-thirds of this number will eventually require operation or submit to operative procedures. So far, only seventeen have been subjected to such treatment. One operation was an emergency one for double-sided suppurating ovarian cysts; the rest were undertaken only after the patient was in a favorable mental condition. Although the number of operations is as yet too small to justify any conclusions, it is interesting to see that all the patients showed physical improvement and some mental improvement as well, and that none showed any untoward effects either physically or mentally. Whenever possible, it was my aim, when doing a laparotomy, to keep a portion of the ovaries intact, and at the same time to resect a portion of the uterine end of the tubes. My opposition to double ovariectomy is based partly on the observations of such men as Manton, Raimann and Brown, partly on the history of the twenty-two postoperative psychoses in my own series. Over two-thirds of these women had had a double ovariectomy done on them; in some it had clearly been the exciting factor in the psychosis; in others it had made the condition worse; in none had it been beneficial.

My reason for resecting the tubes whenever the abdomen was opened for any other cause, provided always that the consent of the relatives was obtained, is based on several sad instances in which imbeciles and insane women became pregnant during lucid intervals while away from the institution and gave birth to imbecile or defective children.

In this connection, it is interesting that out of 313 women in this series of examinations 186 were married and 127 were single. In ninety married women tabulated for this purpose, there had been 216 children, an average of 2.4 child per mother. When we consider the domi-

TABLE 4.—TABULATION OF AGE OF 107 INSANE WOMEN AT ONSET OF PSYCHOSIS

No.	Age	Per Cent.	No.	Age	Per Cent.	No.	Age	Per Cent.
4	10-20	...	34	30-40	...	11	12-18†	10
14	20	...	11	40-50	...	11	42-52‡	10
33	20-30	...	9	50-60	...	...	20-40	60

* Congenital. † Puberty. ‡ Menopause.

nant part played by heredity in the causation of insanity, the question naturally arises whether the state should allow such propagation of the insane to continue indefinitely. With the growth of eugenics as a science, this matter is bound soon to receive proper attention. I believe the time will come very soon when the sterilization of the insane will be considered necessary for the progress of the human race.

A brief additional study was made of the relationship of the age of the patient to the onset of her psychosis.

Table 4 shows that out of 107 women, about 10 per cent. developed their psychosis at the time of puberty, 10 per cent. at the time of the menopause and over 60 per cent. between the ages of 20 and 40. Only here and there was the psychosis aggravated during menstruation or the direct result of a foregoing pregnancy.

OPERATION IN MANIC-DEPRESSIVE INSANITY

Let us return for a minute to the question of operative treatment for these insane women. In Table 5 is a

TABLE 5.—OPERATIONS AND RESULTS ON MENTAL CONDITIONS

Operator	Number	Mortality Per Cent.	Recover- ed Per Cent.	Improved Per Cent.	Un- changed Per Cent.	Worse Per Cent.
Hobbs...	173	2	42	24	32	0
Mayo...	60	0	..	16	..	0
Angelucci	109	..	..	..	..	21
Henry...	28	3	..	57	40	0
Rohe...	34	0	41	15	44	0
Brown...	242	2	18	..	..	0
Taussig..	17	0	17	17	66	0

summary of some of the operative work done so far. While the percentage of mental recoveries is not very great in the more careful statistics of such men as Brown, there can be no doubt that the operative measures are absolutely justified merely by the bodily welfare of the patients. The most important fact brought out by Leroy Brown's last report is the fact that a large percentage of the women who recovered their normal mental condition were of the manic-depressive group. The exact numbers as stated by Brown are fifty-one out of seventy-two, or about 70 per cent.

We have therefore three facts pointing to some sort of relationship between gynecologic disease and manic-depressive insanity. They are:

1. The decidedly greater frequency of gynecologic disease in this form of insanity—74 per cent. as compared with average of 47 per cent.

2. The large proportion of chronic inflammatory conditions of the genital tract in this form of insanity.

3. The proportionately large percentage of mental recoveries after gynecologic operations done on women having this form of insanity.

I conclude, therefore, that in manic-depressive insanity every patient should be subjected to a gynecologic examination and that when a definite lesion is found this should be corrected either by local or operative measures.

ABSTRACT OF DISCUSSION

DR. T. M. T. McKENNA, Pittsburgh: In the psychopathic department of the hospital we have about 100 women all the time, and it would seem desirable—in fact, a duty—in the entrance of a woman patient to have every form of examination gone through with. The plan of procedure that we adopt is about as follows: The history is taken in the receiving-ward and then all the physical examinations are gone into by competent men—the internist and the psychiatrist—and then the various laboratory tests are made. In a very small percentage of cases it is possible to have a gynecologic examination made. In the neuter cases it is rare to have such examination unless the patient is subjected to anesthesia, and as Dr. Taussig has said, it is advisable to do this but rarely. We have really formed no definite conclusions, although this matter has been going on for several years. The dementia præcox patients do not show a large number of disturbances except in the matter of undeveloped uteri. This is in harmony with the other anatomic stigmata in these cases. The general hospitals for the insane in many of the states have gynecologists associated with them. In Pennsylvania all of the state hospitals have a

woman resident physician who is supposed to do this work. Unfortunately, I believe that in most institutions this work is rather neglected, and it comes down to the question of these chronic cases, many of them cases of dementia præcox, and the senile type in which it is thought hardly worth while to examine unless actual attention is called to the case.

Our gynecologist, Dr. Huggins, has operated in quite a number of chronic cases. I am not competent to speak on the matter except from the psychic standpoint. So far as our observation goes, operation is borne badly and the postoperative care is very difficult, especially if they show maniacal tendencies. The subject is one to be approached from the scientific standpoint. Institutions should have a competent gynecologist associated with the work. It is difficult to avoid wrong conclusions. Recovery in an individual, especially in this class of cases, does not indicate that the means used have been actually productive of recovery. This is especially true of the manic depressives, among whom the ordinary recovery rate is from 60 to 85 per cent.

DR. C. O. KEPLER, Boston: About a year ago I had a paper published in the *American Journal of Obstetrics and Gynecology* on the subject of complete procidentia in the nulliparous woman, with special reference to physical degeneration. I was surprised to find how many cases there were of congenital stigmata associated with mental perversions. I found that the physical stigmata that were not gynecologic included hare-lip, cleft palate, spina bifida and various stigmata of that sort; also umbilical hernia and obstetric stigmata. I also found cases of congenital absence of perineum, atresia and absence of the vagina and the uterus and its appendages; also in quite a large number of cases complete absence of the pelvic floor and many cases of relaxation. In another case that was not congenital there was femoral hernia, associated with procidentia. This is a true hernia in Douglas' pouch. Of the complete procidentia in the nulliparous woman I was able to collect in the literature reports of seventy cases. Through the kindness of gynecologists and alienists in this country and Europe, I was able to collect about eighty more cases of complete procidentia associated with all forms of mental perversion from a low-grade mentality to complete imbecility, even cretinism and idiocy and from hysteria to all forms of mania.

DR. M. A. COHN, Brooklyn: Only last week I saw a case of nymphomania in my office. The woman was bordering on insanity, and I am almost sure that sooner or later she will land in an insane hospital.

DR. WALTER P. MANTON, Detroit: From my experience I doubt whether pelvic disorders ever cause insanity. There is no doubt whatever, however, that pelvic conditions—foci acting as points of irritation—do keep up the insane condition and add more or less to its severity. I can also say that I have never yet seen an insane patient cured by surgery *per se*. We have had many cases of so-called cures, and there is no doubt that surgical procedures in their proper place do act as factors in helping to restore the disordered mind, but I doubt very much whether surgical operations alone on the insane have a curative effect. The statistics of Dr. Taussig as to the frequency of pelvic disorders among the insane correspond very closely with mine, about 50 per cent. in unselected cases. Some years ago in a series of unselected cases at the Pontiac State Hospital I found the frequency to be about as stated.

An anesthetic is absolutely necessary in the successful examination of certain patients. I have not yet seen any evil effects from the anesthetic used either for examination or operation. Some years ago I looked into the question of the legality of operations on the insane and found that such operations were not permissible unless the consent of the friends of the patient was obtained, or in the absence of friends, in the instance of state charges, of the superintendent. Relative to the large number of cases of manic depressive insanity and dementia præcox in which pelvic disorders were found, I think that dementia præcox occurs, roughly speaking, in something like 10 per cent. and manic-depressive insanity in perhaps the largest proportion of all cases of insanity in institutions. This being so, naturally we should expect to find the largest number of pelvic and abdominal conditions in the insane associated with these two mental disorders.

DR. GUY L. HUNTER, Baltimore: I have a patient in the hospital who brings out very strongly the importance of knowing about what we ought to expect from operating on patients of this class. A very prominent woman of Washington consulted me about two months ago, saying that her family physician, whom I know to be a very good man, had told her that she must be operated on for her relaxed outlet and partial descensus of the uterus. She is 36 years of age, has three children, and has had increasing trouble after her menstrual epoch in reference to mental disturbances, almost suicidal. Were it not for her children she feels that she would take her life. The family history is very bad, which seems to me to have more to do with her condition than the relaxed outlet and partial descensus which would be seen in almost any woman who had had three children. To test the question of whether a supportive operation would help her, I had her wear a pessary for six weeks or two months, but it seemed to do absolutely no good. I operated on her the day I came down here, because she had the idea firmly fixed in her mind that she was not going to get well until operation was done, and because she had some little trouble in the pelvis. I had urged that she wear the pessary for the summer, but she did not agree to this. It is only by having many statistics, such as Dr. Taussig has, that we shall be able to draw very definite conclusions concerning the value of operating on patients suffering from this sort of trouble. The cases that perplex me most are those of so-called epilepsy—menstrual epilepsy. In almost every case the family and family physician are convinced that the attacks occur at or near the menstrual period. Practically, they occur at almost any time. I have operated on four or five patients, explaining thoroughly beforehand that I had no faith in the results, and have had but one good result in removing the ovaries. That case was the only one in which the epilepsy did occur at the time of the menstrual period. The patient is well and is most grateful for the outcome. I should think that twelve cases of polypi, eight of the cervix and four of the urethra, in 500 cases, not a very high percentage. It seems to me that about 1 per cent. of all office patients have urethral polypi and eight out of 500 have cervical polypi. The urethral caruncle is almost one of the most painful conditions a woman can have. In regard to the inflammatory conditions in these maniacal depressive cases, I wonder if it is not just the class of patients who have had abortions performed and have done such things during pregnancy that would bring on inflammatory disease, and whether the gynecologic condition was not subsequent to the mental rather than the other way about.

DR. F. J. TAUSSIG, St. Louis: In nymphomania and epilepsy it seems to me we may have gynecologic symptoms, but not gynecologic disease, as a rule. Six out of eighteen epileptic insanities in my series showed only slight gynecologic abnormality, and while I have not tabulated the nymphomania cases I recall three or four cases in which there was absolutely nothing wrong with the genital organs. Particularly in nymphomania we must consider the eroticism as a part of the mental condition and not ascribe these symptoms to gynecologic lesions. Dr. Manton stated that gynecologic disease does not directly cause insanity. I am quite in accord with that view, but it seems to me that we must consider the fact that in women gynecologic disease is the most frequent form of irritant, acting as a factor in the production of insanity. If we can correct that irritant, we may perhaps prevent a recurrence of the insanity. The patient may not be assisted in getting over her manic-depressive condition by the gynecologic treatment or operation, but at any rate she is not so liable to recurrence after the removal of the gynecologic irritant. When a laparotomy is indicated for other reasons, I think we are justified in doing a simple sterilizing operation on the tubes in a woman who is insane. Knowing the tremendous factor of heredity in the causation of insanity, we are merely doing our duty if we prevent more insane being born into the world. Several instances in which imbeciles were allowed to leave institutions and had children, who in turn were imbeciles, have particularly led me to this conclusion. The operation of sterilization of the tubes is such a simple one that I believe it has practically no mortality when done in conjunction with other operative work.

THE EPIDEMIC OF SORE THROAT IN CHICAGO

A PRELIMINARY REPORT

P. G. HEINEMANN

CHICAGO

During the past winter there was an extensive epidemic of sore throat in Chicago, the main features of which have been fully described by Capps and Miller.¹ It is, therefore, needless to repeat in detail the data published by these authors.

Capps and Miller investigated conditions in eight hospitals, two of which were using milk from a certain dairy, designated Dairy X. In two of these hospitals the morbidity among the nurses was respectively 48 per cent. (H) and 53 per cent. (M. R.). The other six hospitals were not using milk from Dairy X and had a morbidity of less than 10 per cent. A canvass of 584 households was made by Capps and Miller with assistance from the Department of Health of the City of Chicago. Of this number 153 were attacked; 51 per cent. of households using milk from Dairy X were affected, while 7.2 per cent. of households using other milk-supplies were affected. Employees of the health department investigated conditions in B, where one of the pasteurizing plants of Dairy X is located. They also visited a large number of farms contributing milk to Dairy X, with the object of finding whether or not cases of sore throat existed among the milkers and their families or cases of mastitis among the cattle.

I have made no attempt to duplicate the data reported by Capps and Miller, but have made some inquiries in other directions, covering the following points:

1. The sources of supplies of Dairy X, the distribution of their milk in Chicago and the efficiency of the pasteurizing machines.
2. The conditions in all hospitals and public institutions using milk from Dairy X.
3. The conditions in certain households using milk from Dairy X.

1. THE SOURCES OF SUPPLIES OF DAIRY X, THE DISTRIBUTION OF THEIR MILK IN CHICAGO AND THE EFFICIENCY OF THE PASTEURIZING MACHINES

Dairy X obtains supplies from two localities, which may be designated as G and B. At G the milk is obtained from 122 farmers. The milk is pasteurized by the continuous process at a temperature of 162 F. The time of exposure of the milk to this temperature is less than one minute. No milk is bottled at this plant. One hundred to 200 cans are shipped to Chicago daily, according to the demand. The balance of the milk is made into butter and cottage cheese. There are six employees at this plant, all of whom were in good health and had not suffered from sore throat during the winter. Physicians controlling the bulk of the practice among the farmers contributing to this dairy stated that they had not seen a single case of sore throat among the farmers.

At B the milk is obtained from eighty-eight farmers and from a dairy located a few miles from B. All bottled milk and cream sold in Chicago by Dairy X is obtained from the pasteurizing plant located at B. The milk is pasteurized by the continuous process at 160 F. The temperature of the milk in the pasteurizer is recorded automatically in red ink on a chart. On exam-

1. THE JOURNAL A. M. A., June 15, 1912, p. 1848.