Thesis for the degree
of Doctor of Medicine

Some Considerations on the
Etiology of Dementia Praecox
Some considerations on the etiology
of dementia precox.

From the very commencement of my work amongst the insane and the
general madness of these cases impressed me. I reflect on the failure of these lives,
which began with much promise of intellectual capacity and social happiness and then
were arrested. First, some failure of capacity - change of disposition became
apparent. This led in to mental disarrangement of greater or less severity and ended in
a diminution of intelligence and affectivity more or less complete. I feel distinctly
that some of the potentialities for work or happiness of which youth gives promise
should be fulfilled. This early aberration leading up to dementia
rested now sense of justice and all reponded if these were not suitable to arrest the
catastrophe at least to minimize the change in mind and despair.
But to cure we must find the cause. The etiology of dementia praecox was by no means certain.

Hunt-writers dwell on the hereditary nature of the disease. Some inherit weakness in the organism itself, whereby it cannot respond to the demands of even an ordinary existence—a brain born with a predisposition to degenerate.

Others regarded it as a peculiar sensitiveness of the brain tissue, a tendency to early atrophy which was brought on by some metabolic derangement—a condition which led to an auto-intoxication.

According to the school of thought the intoxication came from the intestinal tract, to another it arose through a deficiency of some internal secretion, viz. the parathyroidism—whichever was considered necessary for the health of the organism. Its absence disturbs nutrition, that is, metabolism. This, in turn, impairs the brain structure.
First must admitted both these factors - the inebriety occurs and is bound thus - granted a tendency to mental instability through heredity, the individual might go through life without becoming insane provided \( \frac{e}{2} \) a basic nature acts in the brain. But if it be exposed to any influence, whether through intestinal derangement or defective ovarian secretion, upset the mechanism of the body - the brain cannot understand it or deteriorates - till it gradually undergoes almost total destruction.

That it regresses the factor of heredity to come to this seems evident, for there are undoubted strains of auto-intoxication, either intestinal or ovarian, which in time not predisposed to degenerate do not lead to insanity.

So to put it in its simplest form, dementia praecox means a tendency to degenerate combined with an auto-intoxication.

My attention retered on the pelvic veins in dementia praecox.
were first shown by making a pelvic examination on a young girl at the request of relatives.

Although the menstrual period was quite regular - her mother wished this examination, saying she believed the period was to be the cause of insanity in her case. I found an infundibular uterine and case of ovarics.

Associating this fact with the toxic theory of insanity, I could not but draw the conclusion that the absence of ovarian secretion might be the starting point of an auto-intoxication and follow-up in this case. I undertake the examination of a series of cases classified as "remains female = 30 in all from the proof. - I think we would be justified in asserting that absence of ovarian secretion is the immediate cause.

These patients were examined under an anaesthetic & a most careful examination was made for vanadium & for rickets. The length of the fingers was measured with the found, so the possibility of error was reduced to a minimum.
Out of 30 cases, 21 were so far removed from the normal anatomical condition as to permit of their being classified as abnormal.

The rest of abnormalities, that existed, ranged from imperceptible uterine-tube, complete absence of ovaries, to rudimentary ovaries, acute anteflexion of uterus, & a condition where the length of the uterus was normal but it was narrow & tube-like & lie back in the pelvic girdle, adherent, supporting unimportant malformation.

In nine cases in which the anatomical structure seemed normal—nine in all—I had had one child each. The symptom had come a very soon after a condition that has been observed & described. In another case the ovaries were noticeably hard & dense as if corpora lutea & in another there was considerable enlargement. So that although the anatomical structure was present, the histological structure + functional activity may have been defective.

In the majority of the cases menstruation was normal or the irregularity was slight. In several cases there had been...
a history of pelvic discomport or pain, sufficient to make me suspect these organs as the possible seat of trouble. On examination these cases all proved to be either imperfect conditions or malformations.

In the series of cases I have followed up the hereditary, viz. the patient who had insane relatives or those in whom symptoms of hypertension existed. These cases in which a shock or previous illness were given as the determining cause were few - in two cases the shock said to be the cause was so slight that it might be excluded.

Lastly I have observed the state of nutrition and the presence of insulin in the urine, so as to follow up the incidence of intestinal auto-induction in this series - which appears to be comparatively slight.

Therefore the hereditary factor was considerable - about half of the cases showed this. Symptoms were slight, if we exclude the deformed palate which was present in all but one case.
From these cases I have concluded that menstruation can occur when the ovaries are rudimentary or absent, which condition assisted in the first case of Dementia Praecox that I examined and included in this series.

I have accepted as certain the absence of ovaries when, with careful examination made chloroform both rectally and vaginally, I have not been able to palpate them. In one or two cases when adipose tissue made a thorough exploration of both fornices difficult, I have regarded their absence as doubtful and noted the fact in each case.

Another fact I noted is the abnormal position of the uterus in several cases without any subjective symptoms arising - in several instances I felt sure this retroplacement was a congenital abnormality.

In three of the cases, where the condition came in later in life, the pelvic examination revealed a condition which suggested the malnutrition, or an early menopause - that is at about 34 to 36 years, associated with dementia, might be the explanation of delayed Dementia Praecox.
INDIVIDUAL CASES EXAMINED

M.C. Act. 20
P.R. Examination: Small abdomen, uterus, sound passed 2 in. no trace of appendix, no liver palpable. P.R. Small uterus lying in hollow of sacrum, tender to pressure, felt. Menstruation had been irregular for some time before admission. No clots or bulky mass found. Cervix smooth, no discharge. Menstruation has occurred since admission. Normal. Liver, spleen, and kidneys normal. Abdomen and rectum normal. Indurated 2

M.C. Act. 28: Triple
Individual Case Records

Mr. H. Dec. 22. Cold. (Second attack)
Pt. examined 11 days in front of. The body was movable in all parts, as if
there were an underdeveloped part between.
Both ears palpable. Unusually small.
Head passed 2 in. in P.R. Pupil close.
Menstruation in advance. Regular
normal before + since.

Palate. Very highly arched palate.
Head small. measured 5.24 cm.

Face irregular. Left side smaller.

Oesophagus depressed into the phr.

External gentle small. All found

Digestive System Normal. Indian 1

Y. T. Dec. 22. Cold. (2nd attack)
Pt. examined. Throat small +

jerked. fixed by something soft.

Like a bone from the厂商 attaching
it down. Overin un-palpable.

Head passed under 2 in.

P.R. Right very red, stomach + left abnormal.

Menstruation regular + normal.

Palate high. Arched shape palate.

Two small + protruding.

Head small. measured 5.3 cm.

Digestive System normal. Indian 0.
Individual Cases Examined


Pt. Examination. Lungs normal to percussion. Small - Sound percussed 2 in.

Breath very labored - very small.

Respiration at an al. 14 1/2 yrs. regular but

muffled voice. He asked to take his 5 - 10 deep. He

always coughed with his head down. Thin

administration. He has a moistened note.

Ulnar Palate. High with a flat-tip

head small measured 5.3 cm.

Romani very small - nipples indrawn

Epidermal Bruits present - in 3° interscalene

space. 2% from the lateral sternal edge.

No thrill - No epiphysis palpable and

Examination suggestive of patent Ductus Arteriosus

Suprarenal system normal. Indica 2.

A.R. 4th. Simple

Pt. Examination. Pecul similar small

seemed asthenic. Breath very faint

Sound percussed 2 1/4 in. voice not felt.

R.R. Right - very felt. Left - not felt.

Pacinian Bruits at 14 yrs. regular -

continuous excepting a slight pause. 1

second every tenth or every 5th. Adminis-

tration 50% saline solution. Palate

Suprarenal system. Tongue curved.

mouth always open. Indica 0
Individual Case

M. D. Oct. 27. Example.
Primary examination uterine position located and easily palpated, normal in size. Both ovaries felt posterior.
Menstruation regular and natural till the 8th month. Child is 10 months old and breast-fed. Pains sub-spiculated and uterus palpable.
Palate has high V in front it is unusually flat behind. Head is small measure 8.25 cm. Flat-in-top has broad shape - spine small Digestive System. Appetite poor. Healt much decreased. Enteralism.
Indican = 2.

II. Oct. 18. Simple
Primary examination. Large room pelvic uterine is posterior - small.
Head formed 2 in. Both ovaries palpated - about normal in size F R confirmed the above.
Menstruation regular since established till 9 months breast administered. Then commenced for milk-period. Regular & natural since administration.
Individual Cases Examined

I. H. Del. 15. Female.
Pt. examined. Utters small and normal pitch. Sound passed 24 in ovaries not palpated.
P.R. Unformed. The above
Menstruation occurred with help administration of
which suppressed totally with head symptoms did not occur during acute period. Men became regular in natural.

Dyspepsia. Pulse was very high with nausea.
Digestive System: Tongue coated, mouth dry and dryish. An appetite increased.
Indications: Administer 1 McCall acute stage. Indurcan = 24.

II. P. C. Del. 24. Female.
Pt. examined. Perine normal uterus in position. Sound passed 24 in ovaries were not palpated.
Menstruation occurs every 3 weeks regular and always heavy.

Dyspepsia. Pulse was slightly elevated with nausea. Carminatives taken.
Indications: Digestive System normal.
Indurcan = 0.
Individual cases examined


On examination, uterus normal in size, both ovaries felt normal in size.

Menstruation began at 12 yrs. was always regular, but in intervals (6 to 8 weeks) between 9 to 14 days. Patient had a full term child some 2 or 3 years ago.

Uterus very large, arches palate very small, rounded.

Extraneous System: mouth full of teeth, all appearing just above gum, no symptoms of incompetence. Index: 5.
Individual Cases Recorded

1. P. aged 18 single 2nd attack.
   Right eye - reduced visual acuity.
   Left eye - normal.
   Both fields of vision were reduced.
   Right field of vision was reduced.
   Vignette:
   Head small - 3 3/4 cm.
   Digestive system normal. Indeces = 7.

2. P. aged 35 single 2nd attack.
   Vignette:
   Vagina stretched. Cervix hard, lateral shift (parabola operation) tolerance in position. Thickened and firm chronic mater. Sound passed 2 1/2 in.
   Both sides felt. Slightly tender.
   Right - poor condition, left - well tolerated.
   Termination in adrenalin 10 c.c.
   Vignette:
   Palate - quite flat, upwardly retracted behind.
   Digestive system - Tumour eroded teeth, eroded on decays of septic part in which she was a plaque.
   No symptoms of visceral pain.
   Indeces = 5.
PV examination. Liver, spleen etc. in pelvis + about normal size & shape.

PR. Both ovaries felt. Hard & lumpy. about normal size.
Menstruation, regular till recently when a slightly irregular interval noted.
Discharge. None. I topped.

Cats. act. 22. Simple.

PR. Reexamined uteras seemed adhesive. No blood from uterus. No ovary felt.
Menstruation irregular. Uterus adenomatosous.

Discharge highly chronified. Pelvic Organs normal. Tumor 0.
Individual Cases Examined.

M.C. Age 26. Single.

Post-examination uterus in Fundus normal in size. Both ovaries palpated normal in size.

Micturition: regular, normal length of urine and sound in colour.

Expenses: palpate slightly arched.

Head: normal. measurements 5 3/4 cm.

Superior Sphincter normal. Indices: 0.

L.W. 34. Single.

Post-examination: uterus, reduced and sound adherent without inflammatory symptoms. Small fundus 2½ in.

Small right ovary felt. -

Posture: lying in bed. 5.0 cm.

Small left ovary felt. -

Menstruation: regular. normal uterine changes. but little abdomen. tend to be moderately acide.

Expenses: remarkably high and normal palpate.

Individual Cases Examined

W. B. 26. Simple

Right lower field grade judiciously reft. Not protruded.
PR. Improved slowly.
Medicated 11/10. Much better. No return of corneal ulcer occurred since.

S. G. 40. Unilateral juvenile simple.

Face square. Not returned from ninth to chin. Patient had pains in lips and chin.
Sensation system normal. Indications 0

A. F. Age 24. Simple

P.V. Examination: Ulcer retracted replaced by scar. Sound period 24 hours not protruded.
PR. Right upper field as a small round body. Left not present.
\nMedicated formerly regular monthly for some time before admission. Every other
three weeks. Pains - regular, opal. No
Photophobia - mild.
Sensation system: occasional stitches.
Deja vu present. Not in admission.
Indications 0.
Individual Case Examined

J. J. Ad. 26 little

P. R. Examined 1/4 inch posteriorly.

Bowd passed backward 2 1/2 in.

Jaw - normal & without form. It slipped back at will when replaced. The lateral could be palpated - in the subjacent area in the left jaw.

P. R. Imp normal.

Mesenchymal regular in normal position & same admission. Moved 2 points early in the year.

Jaw passed rather high.

P. R. All shears - obliquely self.

Dental - lower child & lower upper.

Gastrointestinal system - Supra fine firm soft - Laparoscopy - Indecisive 3.

<table>
<thead>
<tr>
<th>Date</th>
<th>Mayo 30th 19</th>
<th>Details</th>
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</thead>
</table>
| P. R. | Examined; inter - perforated into fund of stomach. Sound passed 2 1/2 in. into it when replaced with - the subjacent area - normal - no palpation but palpation was momentarily present.

P. R. Fears the same.

Mesenchymal - regular. Supra fine - same admission.

Dental - normal. Findings: 2.
Individual Cases Examined

A. C. Rel. 21. Married
P. V. Examination: Cervix shrunk - uterus seemed very small. In normal position Sound passed 1 1/2 in. Small right-ward feel. - left-ward not.
F. R. Enlarged but a. normal.
Menstruation: irregular before admission, her menses had last appeared since.
Uterus: healthy and in position
Can successfully small - Head small, measured 5 3/4 cm.
Digestive System normal. Induration 1

J. H. Rel. 23. Single
P. V. Examination: Cervix open - body in long axis of vagina - body of uterus, anteverted 12 acute anteflexion. Uterus large - stern normal. Right-ward was large & globular - left-normal
P. R. Enlarged at above.
Menstruation: began at 12 yrs. - has always followed at Nat. time. During the last 12 months periods very heavy - abnormal.
Flatus: was reduced 2 months ago. Now occurs twice a week - normal
Urination: High arch - Scalpel
Digestive System normal. Induration 1
Individual Cases Examined

A G. Age 32 Married
P.V. Examined: uterus protruded
vagina replaced - normal in size
Breasts normal felt normal in size but
hard.
Menstruation: began at 13 yrs regular
normal. Birth of 1st child in child 1st
mental symptom came to an end.
Signs marked. High mental \[\text{pace}\]
development system normal. Indian = 1

N. B. Age 19 Single
P.V. Examined: uterus small normal
+ cervix. Uterus back in pelvis - uterine
vagina replaced. Cervix found
irregular in size not palpable.
P.R. small regular blood normal.
normal not palpable. Hard palpable very dense.
Menstruation: came in at 19 yrs regular
slowly. Normal amount. during acute stage - regular for 4 months. normal
signs marked. High mental \[\text{pace}\]
small head. measured 5.34 cm.
External genitalia normal.
Defective development normal. Indian = 2
Individual Cases Examined

P. V. Examination - Dyne under +
Vagina Multiparous. Sorely small
flattened uterine fundus. Rectal wave fell like a wave. Slight slit running
up into the left fornix. A little
small + tender, ampulla dist. - Opened
over to the left side. Sound passed 2½ in.
Ovaries not palpable.
P. R. Smaller, acutely flexed uterus. No
trace of ovary felt. Single butt formed
under the nuchal interp - palpable.
Menstruation irregular x normal.
Examination - Small broad, measured 3.25 cm
Separation between normal. Indrace = 27.

M.E.D. Case 21. Simple
P. V. Examination - Large slack-walled
vagina. Uterus palpable. Normal
size. Sound passed 2½ in. Uterine
placeable. Right ovary palpable
normal. Left - m. palpable.
P. R. Improved since.
Menstruation irregular + normal. Sealed
Examination. Pelvic high + normal
Esparal aspiration + normal. Chief.
Examination system normal. Indrace = 1.
Individual cases examined

A.P. Oct. 22. Simple
PR. Examination. Small mammary where lying back in sacrum. Fundus recti
Sounded passed without difficulty, so if there was some, it the cervix passed 2 in.
Ovary not palpable. All that could be felt was bladder.
PR. Confirmed above.
Menstruation. Normal, regular, no scanty.
Respiration. Palate not high arching
Small nose. Mamm as 3 1/2 cm.
Digestive system normal. Indications:

M.D. Oct. 22. Simple
PR. Examination. An acutely ante
duedand retroflexed uterus.
Sounded passed 3 1/2 in. nearly
On left side a fundamentary mass,
Wet - in the right side none.
PR. Confirmed above. Curved 3 months ago.
Menstruation escape between 13-14 yrs.
Quite regular but always painful & scanty.
Digestion. High menstrual pale.
Digestive system. Bowels active.
Indications = 2.
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<tr>
<th>Name</th>
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<th>Family History</th>
<th>Signs &amp; Symptoms</th>
<th>Cause Alleged</th>
<th>Digestive System</th>
<th>Alienism</th>
<th>Spinal Organ</th>
<th>Mental Condition</th>
<th>Biological Factors</th>
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Note: The table above includes a summary of various conditions and biological factors related to each individual. The conditions include mental and digestive systems, as well as Alienism, Spinal Organ, and Mental Condition. The biological factors listed include Headache + General defect.
The foregoing series of cases seems to indicate that there is a strong hereditary taint or a marked tendency to degeneration in almost all the cases; that is to say, there is probably the defective paternal power to intercession which is a feature of degeneration or else these variations from the normal anatomical formation which mark the dignity of the race.

Superimposed on this, there is an intercession - here possibly an auto-intercession starting in defective secretion of the genitalic organs, or occasionally an extraneous or physical intercession is added. Since this intercession is uncoordinated, wrong or arisen from some anatomical defect in the organs of generation - a condition exists which indicates the impotence or inactivity of the organism to reproduce its like - which is the final phase of degeneration.

This makes the individual progenitors very frail and offers little hope from treatment, or appearing a complete or permanent cure.
that cases are arrested is certain - as a few cases seem to pass off apparently the incident - but the mental state is never quite the same - the disability to relapse is imminent.

It seems to me that the most favourable cases will scarcely reach middle life with mind unimpaired - an early mannerism followed by dementia is the best to be looked for.

The incidence of child-bearing is grave, for it seemed to have precipitated the attack in the three cases in my series.

Operative interference in the pelvic organs also seems to determine the onset of the disease if we would judge from the three cases in this series where it previously occurred.

I think the condition might be regarded as an atrophy to ovaries (or hypooestrogen) with the uterine or the defective glands. Sometimes atrophy has taken place - sometimes a general degeneration of the glands - possibly all these on the part of the hypophysis (hypophysemata)
with subsequent loss of function
and an associated lack of
state of hyper-trophied, with
a state of excitement, hyper-
atrophy, chronic mental
exhaustion supervene.

The condition occurs a period
late in the life history, as
the brain's ability to function
lates, so it is at the adolescent
period that the condition
first declares itself.
Standard of colours used in the estimation of indigo in the drink.