

A contribution to the etiology of Idiocy

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Medical Diet of Medicine

A Contribution to the
Etiology of Idiocy.

by

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Lancaster.



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1
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Seguin M.D.), the earliest type-
writer on the Occurrence
of Imbeciles, refers to the following
"Institutions" as some of the causes of Idiocy:
des Idiotes I. Craniotomy II. Symplication of
p. 173. ^{the} ^{bones} III. Degeneration of Essential
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Amongst Circumstances under which a child may be born, or may become, idiotic, he mentions:-

1. Profound & sudden maternal Emotions, (& these he thinks are more frequent in cities, than in the country)
2. Abuse of alcoholic liquors by the mother during pregnancy: gestation, the liquors being usually taken to satisfy craving, & frequently not producing the ordinary signs of intoxication
3. Drunkenness of the father at the time of Conception
4. "La circonstance monstrueuse" at the time of Conception, producing hydrocephalus -
5. Old age of parents, father especially

- 6. Syphilis, & certain skin affections
- 7. Excessive contrast of temperaments of father & mother.
- 8. Impaired procreative power exemplified in illness of last born of family, other children being healthy.

Finally he refers to neglect of parents, in domestic conditions as "aggravating circumstance". Considering that Leguin published his book "Mentement Moral, Hygiene et Education des Enfants" as long ago as 1846, when very little was known of the subject, I think his views on Etiology, if not strictly scientific, show characteristic sagacity.

Griesinger, writing in 1861, refers to his connection with the

Idiot Asylum at Marienberg,
 & in the second German edⁿ
 of his classic work on Mental
 Diseases Pathology, devoted several
 Mental pages to a consideration of the
 Disease Causes of Idiocy. Amongst
 (Exp. 303) these, he lays stress on hereditary
 p. 349 to 351. Causes, especially hereditary
 Neuroses; & states that Idiocy
 frequently occurs "as an individual
 manifestation of a general
 deterioration of a race". Intem-
 perance, excessive age or youth
 of parents, parental drunkenness,
 are referred to as causes of racial
 degeneration in families. Another
 series of causes acts during the
 foetal period, such as Maternal
 Anaemia, anxiety & shock,
 alcoholism, & sometimes ^{accidental} injury.

Other causes do not produce their effect till the third or fourth, or even the fifth or seventh, year of the child's life; & these, often hereditary, produce congenital, supplementary or other derangements of the nutritive process, occasionally sanguineous retentions in the brain & its membranes, & very frequently affections of the cranial bones. Bad care & ill-adapted nourishment in early infancy; undue heat or compressive coverings to the head; the use of opiates; ^{chemical} injuries & shocks; the exanthemata & Syphilis; early epilepsy ^{& precocious} ^{local} ^{partial} ^{irritation}, together with total mental neglect, are cited as instances of these causes - Local causes of a spasmodic

6

Character, & especially in towns
"house & chamber miasms," act
partly upon the fetus, partly
upon the child after birth, thus
accounting for the various forms
of cretinism.

Turning from this medical
authority to a recent German
writer, Pastor Senghmann,
Director of the Alsterdorf Idiot
Institution, we find 5 pages of

"Idiotophilus"
p. 54-57 *Idiotophilus* devoted to
Etiology. Arranged as causes

- are (1) Large families
- (2) Consanguinity of parents
- (3) Drunkenness of parents
- (4) The male sex.
- (5) Injuries to head & spinal cord
- (6) Onanism
- (7) Accidents & illnesses in infancy

Debel is quoted as stating that 50 p.c.
 of Idiots have insane relatives: May
 be instancing against consanguineous
 marriages the preponderance of idiots
 in the Jewish communities of Germany
 as compared with the ordinary population;
 & Klud as observing that in Hanover
 9.5 p.c. of idiots are illegitimate,
 the general proportion of illegitimate
 births being only 6 per cent; also
 that 29.07 percent of idiots are
 first born children -
 In ^{the counties} ~~the~~ Ireland & Longdon Down
 have, in ~~the~~ country, at various
 times, placed on record their
 experience & opinions as to the
 causation of Idiocy. As however
 I shall refer to their figures by
 way of comparison with my own,
 I will now pass to a brief

8.

Consideration of Some Transatlantic
Statements on the subject.

In 1880 Dr. Isaac Kerlin of the
Pennsylvania Institution for the
Feeble minded, presented to the
Association of Officers of American
Idiot Institutions an elaborate
Table setting forth abnormal
conditions in the family history
of 100 of his patients for the two
antecedent generations. Taking
parents & grandparents into the
account, he shows that in 56
per cent there was a history of phthisis,
in 35 per cent of neurotic disorder,
in 30 per cent of intemperance, in 18
per cent there were weak-minded
in 10 per cent in some relatives, whilst
in 7 per cent there had been consanguineous
marriages - Syphilis is only noted only

in 2 cases. The plan of pushing the inquiry for causes to the grandparent generation seems to me a very excellent one, whenever it is practicable.

Seeking for other recent statistics from American sources I find that Dr. Rogers of the Iowa Institution & Dr. Carson of the New York State Asylum for Idiots have each published papers relating to Idiocy, but as these appear to be based upon the statements of relatives only, I do not further refer to them. I must however briefly allude to certain American statements as to the causes of Idiocy which are of interest rather because they have been frequently quoted - & sometimes misquoted - rather than for

devoid of professional knowledge or
 training, it is not to be expected
 that scientific accuracy could
 be attained, though Dr. S. G. Howe
 has been credited to ~~the~~
 their scientific value. In 1846
 & 47 Dr. S. G. Howe of Boston &
 2 colleagues were appointed a
 League into the condition of
 the idiots of Massachusetts, &
 their Report based upon statistics
 collected perhaps with more
 zeal than knowledge, ^{by the latter group} has been
 largely drawn upon by temperance
 & other social reformers. Amongst
 causes of delinquency given by Dr. Howe
 we find (1) The low condition of
 the physical organization of one
 or both parents (2) Intemperance
 of parents (3) Self Abuse (parental)!

(4) Intermarriage of Relatives (5) Attempts to procure Abortion. Dr Wood has been credited with the statement that "out of 300 inmates of an idiot asylum 147 had drunken parents" but I do not find anything to justify this in the Report which says that out of 359 idiots 99 were the children of drunkards; & it further states that out of a total of 574 idiotic persons ^(including the above) 419 are described as "known to be of decidedly scrupulous families" & 211 had near relatives insane or idiotic. The Report of the Connecticut Commission (drawn up in 1856) sets forth that out of 310 cases in which an adequate cause was reported consanguinity of parents was noted in 20: Epilepsy in 76: Self abuse in 19: Vicious habits of parents in 98

out of 235 cases reported, & of these
 intemperance was specified in 76.
 Feeble condition of parents was reported
 in 33 cases out of 163; Scrupulous
 tendencies in 41 cases out of 145; &
 neuroses in 70 out of 164. Maternal
 emotion or anxiety was ascertained
 in 53 cases out of 108.

I will only remark with regard
 to the figures just quoted that
 whilst there was no doubt an
 honest attempt on the part of the
 Massachusetts & Connecticut
 Commissioners to ascertain the
 cause of Idioty their methods
 & questions ^{do not seem to have been} ~~were~~ of such a
 character as to secure scientific
 accuracy - To a great extent the
 Statistics seem to have been based
 upon schedules filled up by non-
 -Medical Reporters -

Passing word to the results of my own
~~personal~~ experience, I may premise
 that although more than 2000 idiots
 & imbeciles have passed under my
 personal observation at the Esherwood
 & the Royal Albert Asylums, I do
 not propose to use for the purposes
 of this paper more than about
 1200 cases, that being the number
 of patients of whom I have pretty
 complete histories. The cases
 are not in any way selected,
 & belong to all social classes,
 the majority however being the
 children of working people, a
 few being of wealthy parents,
 & pauper cases being for the most
 part excluded in consequence of
 the imperfect character of the
 information respecting them.

Not more than 10 percent of my patients are epileptic, owing to the exclusion from the election lists of just candidates known to be epileptic. These circumstances are mentioned as they will account in some measure for certain divergences from statistics given by ~~other~~ authorities whose experience has been derived chiefly from patients of a higher, or of a lower, social grade.

It seems to me to be a convenient plan to range the various causes of Idiocy & Imbecility into 3 groups: viz.

1. Causes acting before Birth
2. Causes acting at Birth
3. Causes acting subsequently to Birth.

Under the first head fall the causes which depend upon parentage, & consequently include morbid hereditaries

as evidenced by family history of
 phthisis, insanity, imbecility, intem-
 perance, syphilitic taint or conser-
 vation of parents. They also include
 uterine conditions of the mother
 during ~~pregnancy~~ gestation, exhaustion of
 procreative power from old age or
 repeated pregnancies; & in the same
 connection may be considered the
 influence of illegitimacy. Under
 the second head come Premature
 birth (1) Difficult Labour (2) Reten-
 tional Delivery (3) Accidents at
 Birth; & in connection, the relation
 to imbecility of primogeniture & op-
 tion birth will be discussed.
 Under the head of "Causes acting
 after birth" we include (1) Symp-
 tomatic Convulsions (Eclampsia) (2) Epilepsy &
 other brain disease, (3) Febrile illnesses

in childhood (4) Puerile affections
 (5) Lame stroke (6) Mucous shock,
 & (7) Physical injury. It is to be
 remarked that in this ~~last~~ ^{third} class
 especially, the causes may not
 infrequently prove to be merely the
 excitants, & not the "fons et origo,"
 of the mental defect, the inherent
 instability of the nervous system
 yielding to the stress of attacks which
 would not leave their mark in the
 case of original soundness of mental
 constitution. Dr Langdon Down
 calls such cases "Developmental";
 others are clearly accidental, these
 being included both in groups 2 & 3;
 whilst Group 1 - in my opinion
 by far the largest - comprises
 the Congenital cases, not always
 however, recognized as such by the parents.

Upon these principles we may tabulate the Causes of Idiocy & Imbecility as follows:

I. Causes acting before Birth

- Family history of (a) Phthisis
- (b) Insanity, & (c) Imbecility
- (d) Epilepsy
- (e) [Other neuroses]
- (f) (g) Intemperance (Parents)
- (h) (i) Syphilis (Parents)

Contiguity of Parents.

- Abnormal Cond. of Mother during Gestation
 - a. Physical (Illness or injury)
 - b. Mental (Fright or distress)
- Old age of Parents

Illegitimacy.

II Causes acting at Birth

- Premoxenesis
- Premature birth
- Prolonged parturition
 - a. Protracted pressure
 - b. Forceps delivery
- Orta occurrence of asphyxia Neonatorum
- Accident at Birth
- Twin-birth.

III. Causes acting after birth.

- Infantile Convulsions (Eclampsia)
- Brain Disease (hydroceph? Meningitis)
- Epilepsy.
- Paralysis
- Injury to head from fall, blow &c
- Fright
- Stroke
- Febile illnesses - measles

- Scarlatina
- Whooping cough
- Small-pox
- Diphtheria

Drugging a baby, especially
 will prepare me at school
 In dealing with my cases I do not
 attempt to fix a ^{single} specific cause for each,
 as I believe in most if not in all, there
 is a combination of causes; and it
 seems to me a wiser plan to seek out
 & tabulate the various factors which
 co-operate in the production of illness,
 & to show their comparative preponderance.
 Consequently the number of causes set

forth will in the aggregate exceed
the number of cases.

Amongst causes acting before Birth
my experience leads me to give the first
place to a phthisical family history.

In no less than 24.25 per cent of my
Cases such a history exists. Dr. Down^r
states that he found a marked history
of this disease in 25 per cent of the fathers,
+ 20 per cent of the mothers: I have not
discriminated above between the parents.
Nor have I reckoned the factor twice,
when the taint exists in both. Dr. Graham
gives 22 as the percentage of phthisical
history in his Earlswood cases.

Next in order comes a history or
indication of hereditary lacerated disease
Now frequent give a percentage of 15.17
with family history of insanity, 1/2

4.2 per cent ^{with} of family history of
idiotcy, equivalent together
to 20 per cent of inherited mental
weakness. Dr. Down speaks of
16 per cent on father's side, & 15 per cent
on mother's side; & Dr. Grubbans
refers to 19 per cent of his cases in
which hereditary taint is admitted.

Parental alcoholism is,
according to my experience, the
factor next in order, ^{connected with family} ~~parental~~ ^{history,}
occurring in a percentage of
13.25 of my cases, according
to the best information I have been
able to obtain, not only from the
parents themselves, but in many
instances from less partial testimony.
This corresponds closely with the
statement of Dr. Down that in 12
per cent of the fathers, & in 2 per cent

Op. Cit
p 61

of the mothers. There was "wound
& notorious intemperance". No doubt
if we were to push back our enquiries
through the grandparental generation,
& scrutinise the habits of 6 husband
progenitors (as Dr. Kerlin has done)
our percentages would ~~not~~ perhaps
not be very different from the 38
per cent which he gives in his
"Etiological Table published in the
"Proceedings of the Assocⁿ of officers
p. 150. of American Institutions for Deaf^{ness}".

I have already discussed the
influence of a ^{in the causation of} syphilitic taint, in
a paper communicated to the
International Medical Congress
at Washington in 1887. I stated
therein that in my experience both
at Epsomwood & the Royal Albert
Asylum the characteristic signs

of inherited syphilis were rarely met with amongst idiots, though one could not help thinking that with a more complete knowledge of parental histories it might prove to be a more common factor in the arrest of cerebral development than at present appears. With special attention directed to this point I have however so far not been able to ascertain the existence of syphilitic taint in more than 16 out of my 1200 cases, a proportion equivalent only to 1.33 per cent. In the majority of these cases the mental deficiency has not been noticed until the age of the second dentition, from which time gradual degeneration has ensued, probably from atrophic changes due to the blood

diminished calibre of cerebral arteries
& thickening of membranes.

"The relation of Marriages of Consanguinity to Mental Imbecility formed the subject of a paper read by me at the Brighton meeting of the British Medical Association in 1886. My conclusions then were that our Case-Books furnished, in the parental history of ¹⁰⁷⁶ 1000 imbeciles, 5.1 per cent of Consanguineous Marriages & included in these 1 2.9 per cent of first-Cousin marriages

Op. cit. 6.74

I see that Dr. Down states that whilst in 1866 an examination of 952 cases gave a percentage of 7 per cent who were children of consanguineous marriages & 5.1 per cent children of first cousins. Notes of 400 recent cases give

$6\frac{1}{2}$ per cent. of the former, & 4.75. of
 the latter class. Taking now
 1200 cases into consideration
 instead of 900, I find recorded
 70 who are the offspring of
 consanguineous marriages against
 52 previously, i.e. 18 in the additional
 300 cases. Were we to consider the
children alone, my percentage
 would be exactly 6 per cent, not
 very different from Dr. Dow's most
 recent statistics. This however does
 not seem to be a fair way of dealing
 with the question of consanguineous
marriages, inasmuch as 4 of my
 18 cases are children of the same
 parents, & consequently 15 only
 of the family histories have to
 be compared with the 300 in
 estimating the frequency of consin

marriages amongst the parents of
 idiots. This would give 5 per
 cent of consanguineous marriages
 in my new series of cases, against
 5.1 in my previous series, a remarkably
 close correspondence. If however
 we simply consider the percentage
 of idiot children under care who
 are the offspring of consanguineous
 marriages it will be higher, viz.
 5.83 per cent, ⁴² 70 out of 1200 cases.
 I have no doubt that were I to
 include also imbecile brothers &
 sisters of my patients who have not
 been under my care, my percentages
 would be quite as high as Dr. Down's.

Passing now from causes
 connected with family history to
 those more personal to the parents,
 we have first to consider utero

Conditions of the Mother during gestation. Of course we must accept "Evidences" much that mothers tell us on this subject, & not neglect, in consequence of presumed information, to carry our inquiries farther back; yet I think in a certain number of cases we shall find good ground to believe that maternal debilities, either physical or mental, are truly responsible for the imperfections of the offspring. My statistics give 21.4% as the percentage of such cases, mental abnormal^{states}~~cases~~, including worry, fright &c, being about 3 times as numerous as depressing causes of a physical nature.

No doubt the influence of the father's state both mental & physical at the time of the procreative act

Lettsonian Lectures p. 83.

"I have now read altogether 12. 8 sporadic
cretins under my care, & in the majority
there was reason to believe, that they were
presented during the intemperance of the
father, some of the later ones could well
have been presented under some other
condition."

Resulting in conception is an important
factor in the production of idiocy.
Though it is not easy to estimate.
I must content myself by stating that
I have known instances in which the
temporary mental condⁿ of the father, arising
from business anxiety & worry, seem
to have been responsible for begetting
an idiot child; & Dr. Down, as is
well known, has adduced evidence
in favour of one particular type of
idiocy - the sporadic cretin - being
often associated with drunkenness
in procreation - The old age of the
father has seemed to me in some few
cases a cause of idiotic offspring;
& the Mongol type of idiocy is in
my experience frequently connected
with the advanced ^{& unpaired functions} age of the mother,
more than half of such cases, being the
last children of a long family.

Lettsonian Lectures p. 83.

Sir Arthur Mitchell has laid some stress upon illegitimacy as a cause of idioty. Statistics upon this point will necessarily differ considerably with the country & class from which the figures are drawn; & my own ~~own~~ notes give barely 2 per cent of illegitimate children amongst our patients at the Royal Albert Asylum. In one case it is alleged that tight-lacing resorted to for the purpose of making appearances was the cause of the child's imbecility! Of course one would expect Emotional causes specially to come into play in illegitimate cases. Klud says that in Hanover the percentage of illegitimate idiots is 4.5; whereas the general proportion of illegitimate to legitimate births is 6 p.c.

Let the
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I have included amongst "Causes Acting at Birth" - Premature Birth. Of course this may be due to some of the causes already considered, such as Maternal Debility, or the presence of a syphilitic taint; but in some instances probably the bad start in life, consequent upon premature entry into the troubles of the noisy world, may account for a backward condition of the intellectual powers, amounting to imbecility. Such cases have an aspect resembling that of idiots of the Mongol type, & are often feeble physically as well as mentally. 3.0 per cent of my cases were prematurely born. I notice that attempts to procure abortion are debited in certain American statistics with the production of Idioty.

Importance has been attached by
Dr. Down & other authorities to the ^{relative}
preponderance of first-born children

My list amongst idiots; 24 per cent of
No. 56. Dr. Down's cases being "primigenious" -

Remarks No. 57. Dr. Gathman states that of 1100
cases at Eastwood 23 per cent of
The males were first-born, & ^{near} 25 p.c.
of the females, a result contrary
to what one wd expect were the cause
simply due to primum parturition.

For my own part I am not clear
that primogeniture is so perilous
quā the production of mental defect
as has been suggested. My own cases
furnish less than 20 per cent of
first-born children, which wd be
about the ^{percentage} ~~amount~~ to be expected
taking an average family of
numbering from 5 to 6 children - &
large percentage are undoubtedly last-born children
of a last born.

Prolonged parturition is doubtless a considerable factor in the production of idiocy, though I cannot from my own statistics give a larger proportion of cases than 8 per cent. Of these, the large half (4.75) are attributed to protracted pressure without instrumental aid interference: 3.25 per cent were attributed to Forceps delivery. In very few of the latter however were injuries noted due to the use of the forceps; & I think we may fairly conclude that the prolonged parturition was more detrimental than the delivery by forceps. I have found it difficult to ascertain from mothers the frequency of the occurrence of Asphyxia neonatorum, which Dr. Down states at 20 per cent among idiots

generally, & amongst those who are first born children, 40 per cent. This corresponds very closely with Dr. Lewis' statement that of 26 cases of cerebral birth palsy 16 were first-born children. The injuries found are due not merely to direct compression but to mechanical & asphyxial congestion; & while death occurs early, meningial haemorrhage is found on the convexity of the brain, thickest over the central gyrus, & in some cases with actual cortical laceration. Cases that survive often suffer from convulsions during the first few days of life, & at a later period of spastic contraction of the limbs, with incoordination & athetoid movements, are observed. Some atrophy of convolutions in the central region is found in these cases.

Lancet
July 14/21.
80

Dr. Frank
Mott
American
J. of Obstetrics

Occasionally idiocy is attributed to some accident happening at birth, such as injury to the head from the precipitate birth of the child into a chamber pot in a sudden labour, or to haemorrhage from the umbilical cord. Such accidents are alleged in 2.25 of my cases.

Twin birth is sometimes stated to be the cause of a child's idiocy, the mother proudly pointing to the perfect twin as a proof that imbecility was not inherent to the Conception. 1.44 of my cases are twins, & in about one-fourth of these the other twin is also imbecile.

Causes acting after birth are more willingly alleged by the friends than Congenital Causes owing to the stigma they consider

attaches to congenital defect; &
 in consequence caution is needed
 in accepting their statements. After
 sifting the information at my command
 I have come to the conclusion that
 about 65 per cent of my cases are of
 congenital origin, & not more than
 35 per cent accidental or acquired,
 though information tendered by
 parents will give the preponderance
 to the latter class. As Dr. Dowse
 has pointed out ^{the} some innate tendency
 to brain defect may remain latent
 until some crisis of development,
 as the period of second dentition or
 of puberty, & such cases be classed
 as developmental.

The most frequently alleged
 cause of Idiocy & Imbecility is
 undoubtedly Scrophulous Infantile

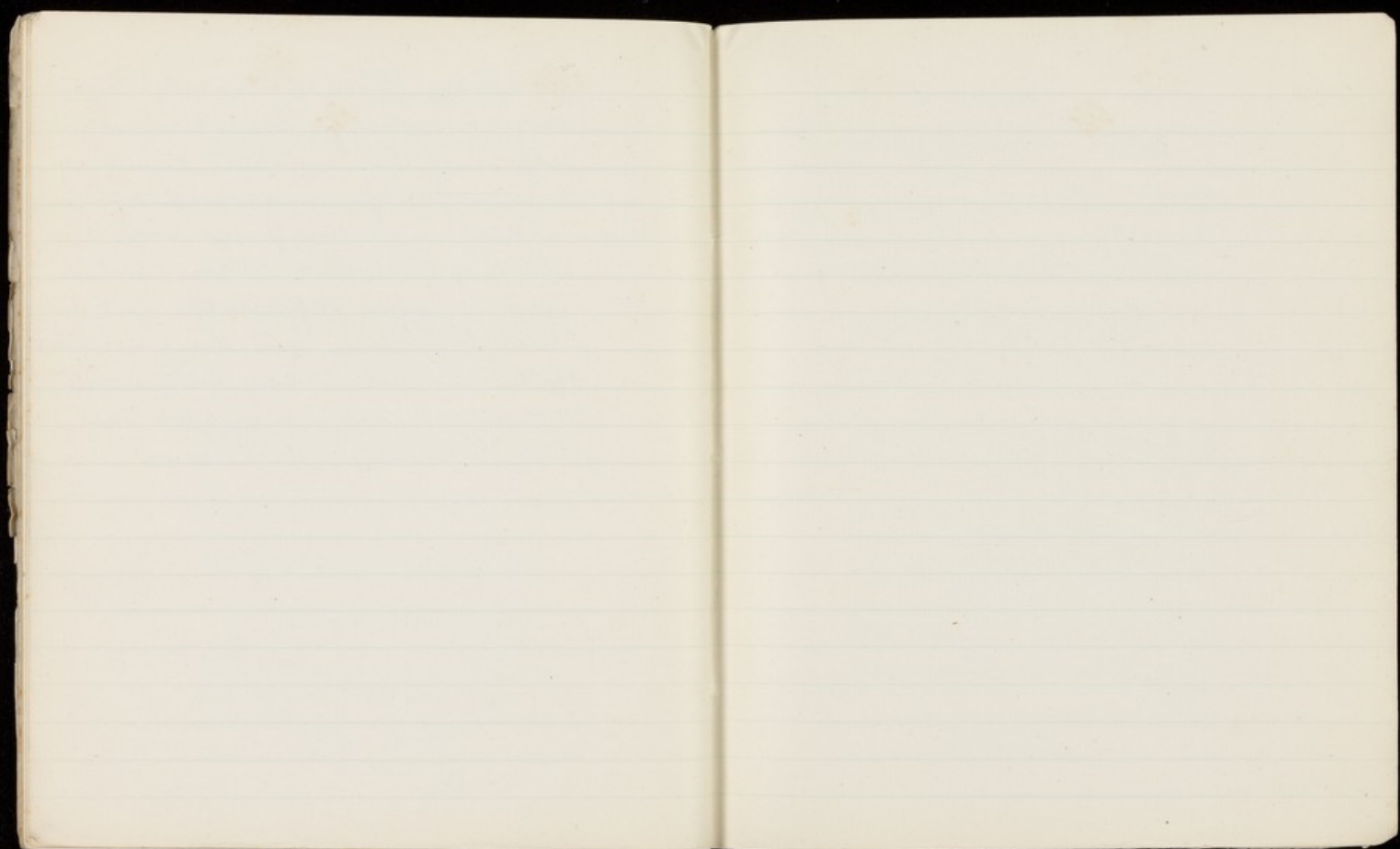
Convulsions. To this cause nearly one-third (32.6) of my cases are attributed. In many, however, there are other contributory causes; & the consideration always suggests itself. How many children suffer from severe convulsions during teething & yet escape being idiots! Brain disease of an active kind such as acute hydrocephalus, & other forms of inflammation of the brain or its membranes, are recorded in 57 cases (4.75) per cent, whilst what the parents call "a stroke" occurred suddenly in 15 (1.25 p.c.). In 99 cases (8.25 per cent) there was history of severe injury to the head from falls, blows or, falls being often from the arms of a careless nurse or down a flight of stairs.

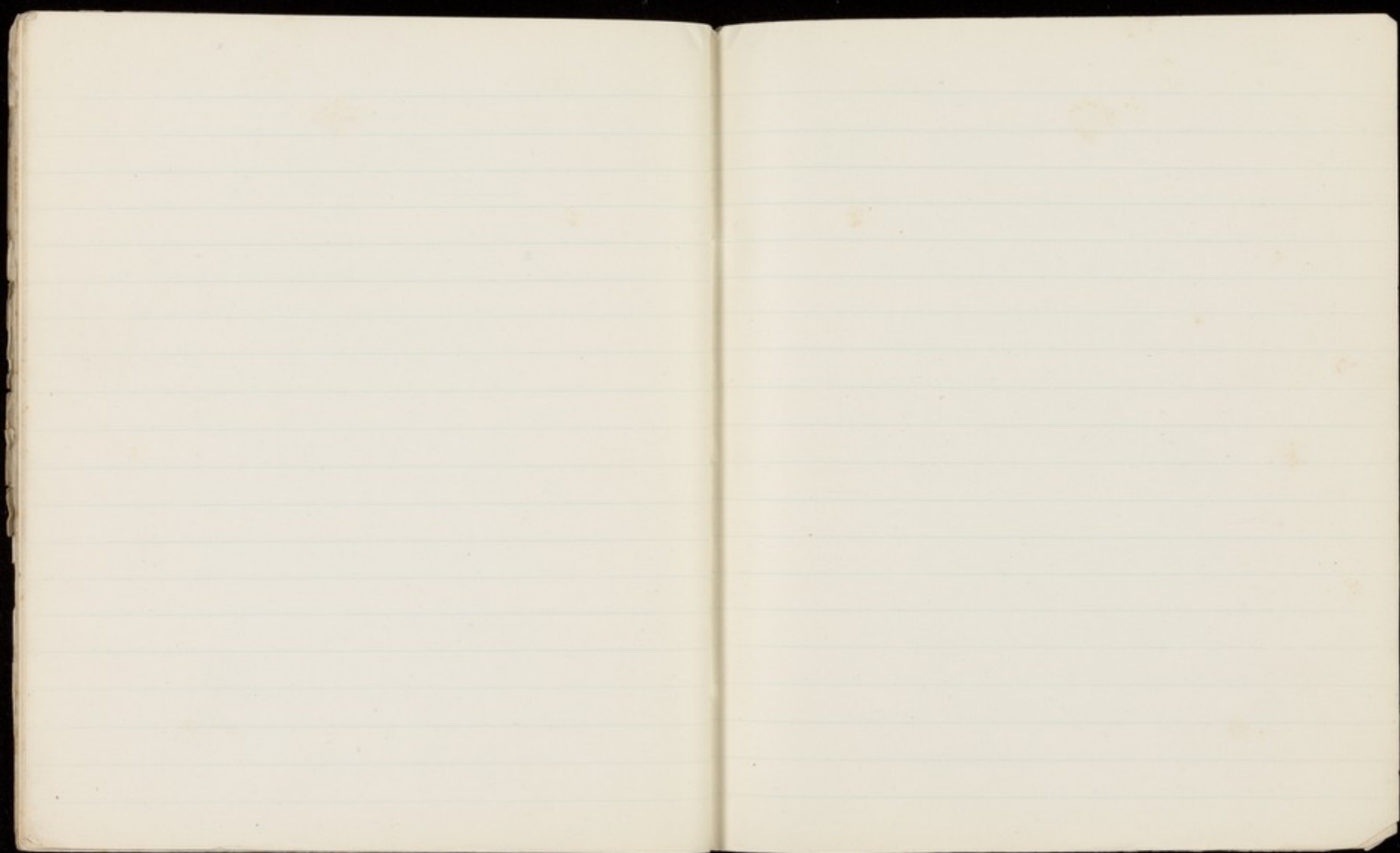
Fright is alleged as a cause in
 27 cases (2.25), & in about half
 has been immediately followed
 by fit. Stomach has been given
 as a cause in 8 cases (0.66 per cent),
 the majority of these being children
 from India. Febriile illnesses
 such as scarlatina, smallpox,
 whooping cough & measles, are
 said to account for as many
 as 119 cases (9.9 per cent), ^{these}
 brain symptoms being associated
 with the majority, & in the rest
 general defect of nutrition appearing
 causing cerebral atrophy - It is
 a little remarkable that in these
 days of forced education I have
 only met with 3 cases in which
over-pressure at school has been
 alleged as the cause of the imbecility

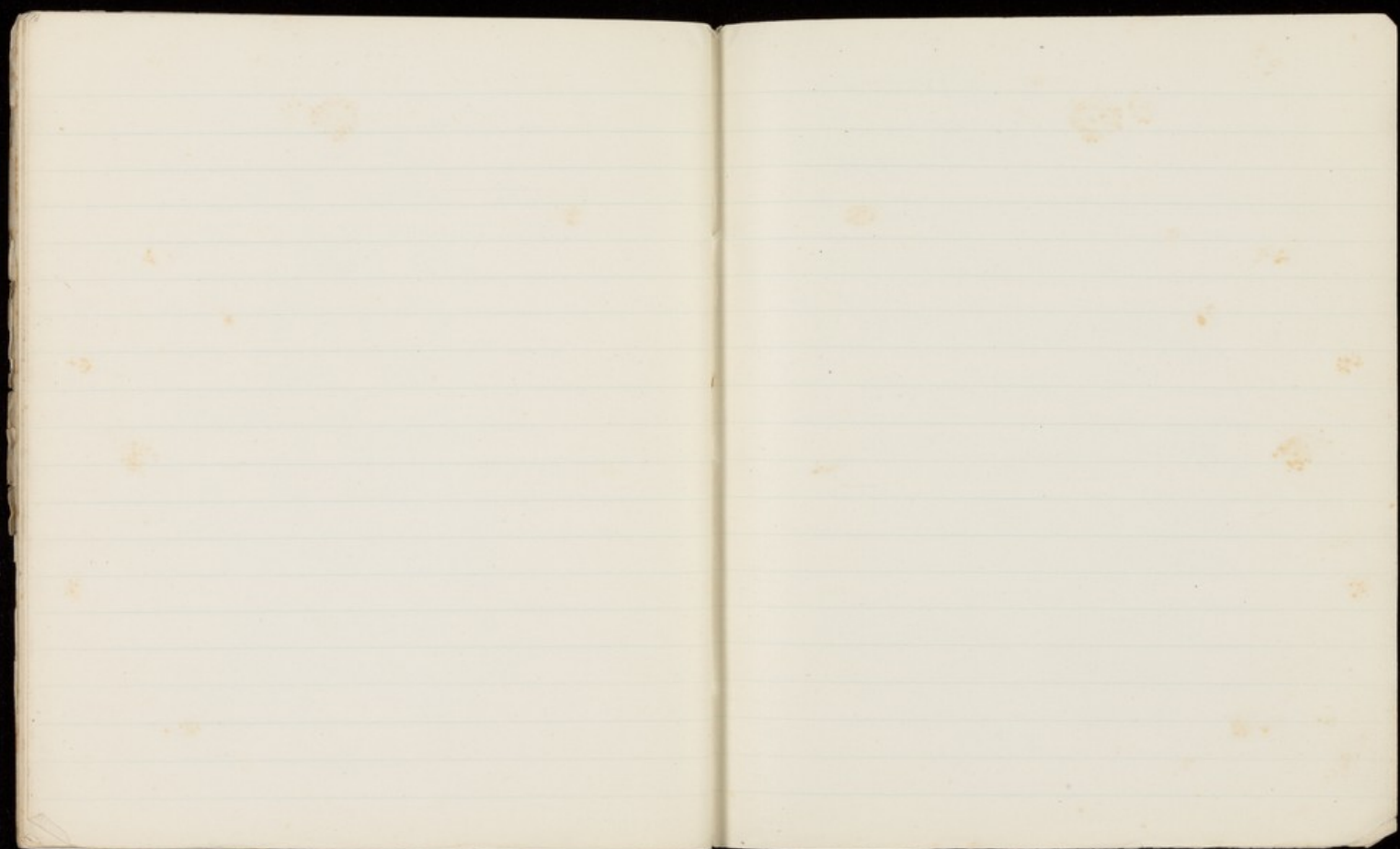
I have now concluded my necessarily somewhat cursory review of the factors which our Case Books show are contributory to the causation of Idiocy. I think it more philosophical to state merely the comparative prevalence of these factors than to attempt as a rule to assign an individual cause to an individual case. There are indeed but few cases in which one cause only could with any degree of probability be assigned. In the great majority we find not only the "damnosa hereditas" of morbid tendencies, but a combination of circumstances, in many cases avoidable by the parents, which seems to determine the actual occurrence of mental degeneracy in the offspring. If ~~any~~ these

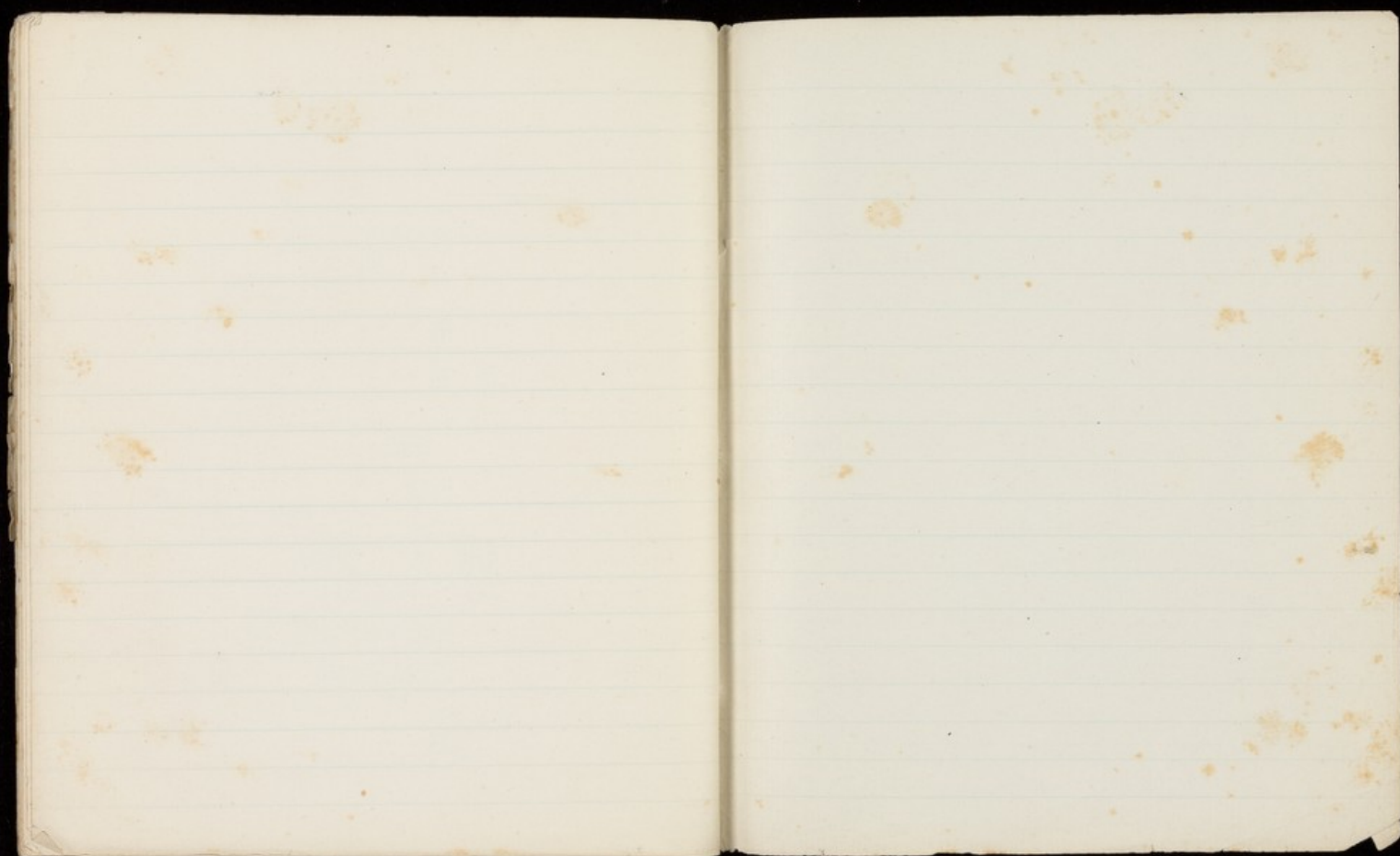
circumstances can be defined with any degree of certainty, & pointed out for public information, I think one raison d'être of such ~~and~~ Institutions as that ~~which~~ with which I am connected will have been established; & it is only by patient enquiry extending over a long series of years that any trustworthy results can be arrived at. For myself I feel that the publication in Annual Reports of the Causes of Idiotcy & Imbecility in the cases received during the previous 12 months is of comparatively little value, as it is only by making the personal acquaintance of the relatives & forming ^{a mature} ~~an~~ opinion of their condition, rather than by merely

accepting their statements that
one can arrive at sound conclusions
respecting the Etiology. I am very
conscious of numerous defects
in dealing in this paper with a
mass of statistics accumulated
after 26 years experience, but I
trust that any rate, the introduction
of this subject in conjunction with
Dr. Fletcher Beach - may give rise
to an interesting discussion.









Mem for article
Beuch's Tables to be inserted in
compressed form

Phthisis (p. 9 Beach) 383 cases out of 1100

$$1100 \overline{) 3540} \quad (32.5 \quad = 32.5 \text{ p.c.}$$

3540

2900

2360

5400

(24.23 p.c. GES)

$$12 \overline{) 2913} \\ 24 \cdot 25$$