Anaemia in relation to insanity

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Thesis

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by

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Anaemia

in relation to Insanity.

"The efficient causes of numerous cases of insanity are actual loss of blood, or a deficiency in its nutritive power, occasioned by insufficiency of food, or by impediments in the conversion of food into healthy blood, or by the numerous anti-hygienic influences which limit the quantity or weaken the quality of the blood in the cerebral vessels." "In Anaemic Brain, from whatever cause, is always prone to disturbance of function. Lack of blood means imperfect nourishment. Here we have to vascular a tissue as the grey substance of the brain. Convolutions (almost half composed of Capillaries) Here the blood is needed in largest amount and richest quality, if we are to have healthy and vigorous Mentalisation. Here undoubtedly exists between Mental Disease and Anaemia a close and intimate relationship. Common as this disease is amongst those who
Are not insane, it is, perhaps, still more common amongst those suffering from mental derangement. In connection with this, it ought to be looked at from a two-fold aspect, viz. as a symptom or result of mental disease as well as a cause. What more frequent than to find it as a sequel or result or a symptom in Mania, Melancholia, Paraphrenia, General Paralysis, Syphilitic Insanity etc. Nor is its appearance in these diseases of small importance, for, in the last two Insanities named, its treatment may, in certain cases, produce distinct alleviation of the mental and physical symptoms; while in the first three, anaemia, if not recognized or neglected, will undoubtedly lead to organic disease of the brain, with loss of hope of the recovery of the powers of the mind.

The state of Anaemia "Ca. 15." Bucknill curried beyond a certain point, destroys the functional excitement and activity of an organ. Thus it happens that Anaemia of the brain, combined with atrophy of the brain, accompanied by a loss of functional activity and is a frequent
As a cause of Insanity it is, no doubt, rarer, but among what may be termed the purely physical factors in the production of mental disease, it may be placed in the first rank. In breezes, however, must be added to this, as a direct cause of Insanity, Anaemia is extremely rare, nor is it difficult to comprehend, for it is evident, that only under certain conditions would a purely functional disease be followed by organic change. As regards the Mental effects produced by central Anaemia, it may here be stated, that wherever the Anaemia acts as a direct cause, they are distinct and definite, and are, in most cases, readily amenable to treat ment.

As a Cause of Mental Disease.

Like many other causes of mental disease, Anaemia may act in two ways—
1. Directly or
2. Indirectly, or to use two words which in this case are synonymous as either an Exciting or Predisposing Cause.
1. As a Predisposing Cause.
   From 160 admissions, 100 female and 60 male, I have selected all the cases found Anaemic on admission. With respect to these, I put to the friends or relatives of the patient (in some cases, the patient, where I could obtain rational replies) questions on the following points: pallor of the countenance and lips, disorder and irregular menstruation, digestive and intestinal disorders, & palpitation, weakness of brain. From the answers received I have arranged my tables. From the cases of Anaemia, I have, however, excluded the following:—

1. Those suffering from Cholera, General Paralysis or Organic Disease of the Brain.
2. All cases of Puerperal Insanity.
3. Lactational Insanity, where the Insanity appeared less than 12 months after the birth of the child.
4. All females below 15 years of age and over 50.

The first two classes are left out, even where marked Anaemia existed, because the exciting
factor, whether Epilepsy, General Paresis, Organic disease of the Brain or the Peripherium, seemed sufficient to cause Mental Disease, without the presence of a predisposition such as anaemia.

Regarding the Mind class, Lactational cases, that more hesitation. Lactation, being a physiological function, complete in itself, exercising a marked neurotic influence on the mother, must therefore be held sufficient in itself to act as a predisposing cause of insanity. The point therefore is, how long after the birth of the child (providing it be nurses by the mother) can a case of insanity be considered lactational? Dr. Closterman, out of 52 cases taken from the years 1874-83, in Morningside Asylum, found that the great majority occurred before the sixth month of nursing.

Dr. Batty Lake, on the other hand, from statistics also drawn from Morningside previous to the year 1865, drew the conclusion that Lactational Insanity was most frequent after the ninth month of nursing. But, however, appeared subsequent to that date, and I have
Therefore fixed the somewhat arbitrary limit of a year after childbirth, when, if mental disease appears, it cannot be influenced by the nervous effects of the function of lactation. As regards the fourth class of admissions, I have left it out of consideration, not because Anaemia could not in it act as an efficient cause of insanity, but because disordered menstruation, a notable symptom in the anaemia of females, could not. If necessity, in the vast majority of cases, be found either below or above the limits of age mentioned.

Now place in a statistical form the results of observations made in these cases. In Table I. are to be noted the following points:

a. Number in whom Anaemia acted as a predisposing cause.
b. Their Age
c. Period during which Anaemia existed, before insanity appeared.
d. Number in whom another predisposing cause existed.
### Table I

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admissions</td>
<td>60</td>
<td>100</td>
<td>160</td>
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<tr>
<td>with Anaemic Predisp.</td>
<td>7</td>
<td>27</td>
<td>34</td>
</tr>
<tr>
<td>Average duration Anaemia, prior to Insanity</td>
<td>9.7 months</td>
<td>8 months</td>
<td>9.3</td>
</tr>
<tr>
<td>Average Ages</td>
<td>36.96</td>
<td>34.57</td>
<td>36.14</td>
</tr>
<tr>
<td>Number with another predisp. cause</td>
<td>2</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Number of Recoveries</td>
<td>5</td>
<td>21</td>
<td>26</td>
</tr>
</tbody>
</table>

### Table II

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of maxim. anaemic</td>
<td>11.66</td>
<td>27</td>
<td>31.25</td>
</tr>
<tr>
<td>Percentage of Adm. with a second predisp. existed</td>
<td>0.03</td>
<td>0.08</td>
<td>0.06</td>
</tr>
<tr>
<td>Percentage of Male anaemic who recovered</td>
<td>71.1</td>
<td>77.7</td>
<td>76.4</td>
</tr>
</tbody>
</table>
I. Number of anaemic cases who recovered.
In Table II will be found percentages corresponding to the figures in Table I. It will be noted from these tables that out of 160 male and female admissions 34, or 21.25%, had anaemia, predisposing them, under any exciting cause, to Mental Disease. This total is a large one, nor does it seem less significant when examined under the divisions of sex. Out of 100 female cases, 27.70 were markedly anaemic for a period averaging over 8 months before the appearance of mental symptoms. How little it is to be wondered at? Mal-lying in such a physical condition, and sudden mental strain, and severe domestic trouble or trial of the affections should move their mental powers off the balance. The percentage of males influenced by anaemia will be observed to be much smaller. This is a result to be expected, for in man, anaemia is most complicated with more phenomena which in woman are indicated by insuper-
once with the menstrual function and which exercise so powerful an influence over her mental & physical well-being. Moreover, it is a mere truism to add, that the female mind is more unstable than man's, so that mental and physical shocks which hardly affect the latter, will frequently in the former produce mental aberration.

The next point to be noted is the respective ages of the cases examined. The average age in the males was 36.96 or nearly 37; in the females 34.57. This is not what I expected to find. Before I commenced this "Mesis", I believed that the great majority of the cases (especially the female) would be between 18 and 25 years of age. It is not easy to explain why this should not be so, for unquestionably in general practice, the majority of cases of Insanity do occur between the limits of age referred to. However, I offer the following observations, - 1. That over half of the cases who were over 30, were married or widowed and had families. II. That these individuals were, at such an age, in a relatively
much worse position to stand a mental or physical strain than a man at 20. That is to say, more than half the cases who suffered from anaemia, were in a feeble physical condition between the ages of 30 and 50. They were in as girls of 18 to 25. In the first instance they were the wives or widows of agricultural labourers, earning 12/- to 14/- a week, exhausted by repeated childbirths, successive feverishness and in many cases protracted lactations, and on whom the "ves angusta domi" must necessarily press heavily. On the other hand, as girls they were unmarried, strong and robust, probably in domestic service, well fed and well looked after, and few things beyond their chores and love affairs to perplex them. The mind set of figures in Table I indicate the average duration of anaemia in both sexes previous to the appearance of mental symptoms. It is considerable and, as might be expected, longer in men than in women.

The last point to be noticed in the tables
to the occurrence, in certain cases, of a second predisposing cause. In every instance it was "Heredity." Out of the 27 females, 8 or nearly 30%, had a hereditary predisposition as well as anaemia to mental disease: in the males 2 out of 7, 28.5% or a little less. Relations are always, however, reluctant to admit insanity exists in their families and therefore believe these figures ought to be higher.

Before concluding the subject of anaemia as an indirect cause of mental disease I should like to mention some of the causes of anaemia in these cases. None of them are unusual.

\[\begin{align*}
\text{Mental} & \Rightarrow \text{Domestic trouble and anxiety}.
\text{Physical} & \Rightarrow \text{Insufficient food, unhealthy surroundings,}
& \text{Withdrawal, depression, habitual constipation,}
& \text{Heart disease, exhaustion after lactation etc.}
\end{align*}\]
Domestic trouble & pecuniary anxiety with insufficient food and unhealthy surroundings were in most cases the causes of anaemia in men. In females below 25, men affairs with disordered digestion and habitual constipation were generally the factors. The remaining cases accounted for the rest. In a recent case at Mornin-
side Hospital anaemic insanity was referable to cancer of the stomach as was ascertained by the post mortem examination.

II As an Exciting Cause.

As a direct cause of insanity anaemia is exceedingly rare. Dr. Clowson points out, that from the years 1874 to 1880, there were admitted into the Royal Edinburgh Asylum 3145 cases of mental disease, and that out of this large total only 15 or .47% were ascribable to chlorosis. In our cases, taken, of course, from far fewer members, amounted to .47%. That is to say, out of 1000 cases, of whom over 300 were first admissions or U admissions, only 4 had anaemia as the exciting cause of their mental disorder.
Regarding the causation of the Anemia.
Dr. Clouston mentions two causes viz. starvation and prolonged indigestion. With these Dr. Wilson mentions four more —
"Excessive menstruation."
"Prolonged & excessive sexual intercourse."
"Simple loss of blood."
"Morbus Addisonii."

1. The first two of these four cases, were present a strong predisposing cause to insanity viz. a highly neurotic temperament combined with a well marked family of insanity in the family history. The influence of these neurones could be traced in their character when well, and in their symptoms and mental result of treatment when unsound.

2. The third case, where the insanity was due to simple loss of blood, it was produced by abundant and frequent emesis, which was with difficulty checked. The mental symptoms appeared almost immediately after the profuse haemorrhage had ceased.

3. In the last instance the mental disease was of gradual onset, and seemed to advance "pari passu" with the progress
Of the disease, ending only with its terminations - death.

Mental symptoms in connection with anaemia.

Four types of mental disease are to be recognised in relation to anaemia, that is, where it acts as the direct or exciting cause. Where anaemia is the predisposing cause, there are no special points to be noted as regards the symptoms, though there are certainly some as regards the prognosis and treatment. The four classes of mental symptoms referable to anaemia may be divided as follows:

1. Symptoms of Melancholia.
2. Symptoms of Melancholia with Delusions of Suspicion.
3. Symptoms of Mania.
4. Symptoms resembling Hyper-sial Insanity.

1. In certain cases anaemia appears to be the direct cause of mental depression. Why? In some instances it should be the result, and in others
Mania, I cannot explain. As much, however, can be said, that when the case showed a well marked hereditary history of Insanity or Epilepsy and possessed a neurotic diathesis, there were symptoms observed were those of the fourth class and not those of simple depression or Excitation. In the two cases, I am now going to describe, the causes of Anaemia were entirely dissimilar. Their temperament were antagonistic and yet the result was the same—simple uncomplicated Melancholia.

Case 1. C. B. age 54, was admitted into the Norfolk County Asylum April 26th 1874. She was then suffering from Mania. On two previous occasions she had been a patient here, on both occasions she suffered from the same disease. From this fact and the history in the case books what I have seen of her during the last two years I concluded she suffers from Recurrent Mania. Her late attacks have been very slight
And only indicated by a marked exag-
eration of a naturally cheerful and
sanguine temperament. She would become
very talkative and jovial, very familiar
to Magistrato and Medical Officers,
and would make herself a general nuisance
by talking of and meddling in everybody's
affairs. She was a most agreeable
woman, obliging, civil and very considerate.
It is not said that Mat. Mio was not a case of
"Folie Circulaire", and Mat. Mio was
not a trace of Melancholia in her case.
About the end of last year she suf-
f ered from debility and was placed on
extra diet and a stimulant. On the
7th January she was seized with most
severe Epistaxis. The usual remedies, cold
to the head, Linch. Her. pellises. internally,
injection of Ergot & plugging the anterior
nares, were employed and all without
success. Late that night, the posterior
nares were plugged which checked the
bleeding for ten. On the 9th the plug
was removed and the haemorrhage
recommenced. As a last resource.
Minims of pure tincture were injected into the nasal mucous membrane. This seemed to have the effect of permanently arresting the epistaxis. She was, on the day following, transferred from the Anesine, where she resided, to the Infirmary at the Main Building. There found her in a state of extreme exhaustion, with pallor marked Anaemia. Her face was perfectly pallid, her lips and gums almost white, her pulse hardly perceptible & heart sounds very feeble. Under treatment her condition rapidly improved. She is now (March) in fair health. But her mental state was even more noticeable. Until the day of her illness she had been remarkably cheerful & bright; on recovery from apoplectic she was in profound Melancholy. Simple morbid depression, unaccompanied by delusions or motor disturbances. She would lie in bed without saying a word or taking the slightest interest in her surroundings, with an appearance of extreme melancholy. A letter from her son, a
soldier in the army, from whom she had not heard for years, did not seem to love her in any way. In this state she remained for some weeks, the intensity of the mental disease passing off as the haemorrhage improved.

After a few days, placed her on a mild chalybeate, and now, about two months since the haemorrhage occurred, she is convalescent, her spirits returning, and as far as her bodily health permits, she employs herself actively and industriously. Then then was a case of simple morbid depression occasioned by loss of blood.

Case II. The next case is one in which the mental symptoms were the same as in the preceding, because being drawn very dissimilar.

M. P., age 57, was admitted into this asylum, August 30th, 1884. The was then suffering from acute melancholia, was believed to be suicidal and had religious delusions of the usual type viz.- that she had com-
mitted the unpardonable sin, and her soul was lost to. Her mental state gradually improved, and, on October 30th 1885, she was transferred to the Asylum. In June 1886, she was comparatively cheerful, attended the amusements in the recreation hall, could enjoy a joke and employed herself usefully and regularly in ward and needle work. Her physical condition was, however, very unsatisfactory. The symptoms she suffered from were typical of her constitution. Her temperament was an exact antithesis to that of the preceding case. C. B. was of the languid temperament, her figure large and well developed, her features well marked, her complexion fair and muddy, eyes blue, heart sounds [in health] distinct and vigorous. M. B., on the other hand, showed markedly the bilious constitution. Irregular as regards her features, she had dark eyes and dark hair. Her alimentary system was sluggish, she suffered from constipation, dyspepsia.
Pemorrhoids and jaundice.

In June 1886, she had a severe attack of Cataract jaundice which yielded, steadily enough, to treatment. Between this date and July 1887, she had two more attacks of jaundice, which, combined with an intense and increasing pallor almost resembling malignant cachexia, gave rise to the suspicion that she was suffering from Cancer. Against this was the fact that no examination and many were made, could detect any blemishes on the pyramids or any hepatic enlargement. The true nature of the disease was soon after discovered. A discolouration or bronzing of the skin was noticed on the face, neck and hands, then on the abdomen especially round the umbilicus. This bronzing was inconsiderable and never increased to any appreciable extent, though the patient lived for some months after this. It was, however, united with other symptoms, profound anaemia, constant headache, and lowered temperature, with steadily increasing debility.
ity without any definite cause. Considered sufficient to make the diagnosis of "Addison's disease" a tolerably certain one, and this view was confirmed by the post mortem examination. As regards the mental symptoms, it may be said, that the lassitude of body was more than equaled by the lassitude of mind, and that with it, there was, as in the case of C.B., Marked Melancholia. Morbid depression advanced with the advance of Anaemia, was unattended by delusions or motor disturbance and lasted till death. It must also be remembered that like C.B., M.P. had been previously to her illness in a tolerably satisfactory mental condition. After her last attack of jaundice, she was worn, cheerfully contented, and quite sanguine about her recovery of body and mind. The mental lassitude referred to was very noticeable, no one could arouse her, no one could interest her, the visits of friends or relatives produced no alteration, and as with the Asthenia of body, so with the
Amenia of mind, medical and dis-
cert treatment had not the slightest
beneficial effect. She died October
30th, 1887. At the Post mortem" made
40 hours after death, "The supra renal
capacities were found to be enlarged.
while the substance of the organs was
a broken down, putty-like mass, putty to
The fist, granular in appearance." The brain
was markedly anaemic, the organ present-
ing the appearance of being totally devoid
of blood. Nae was present a slight amount
of general atrophy.

Having described these two cases of Ana-
eaemic Depression, I turn now to cases
of the next class of symptoms attendant
on Anaemia of the brain.

II. Melancholia with Delusions of
Suspicion.

These mental symptoms are seen in
two qual and typical mental diseases viz.
Phthisical and Syphilitic Insanities. These
two diseases, by interfering with the funct-
ions of the blood in relation to nutrition,
and by diminishing its actual quantity,
lead to anaemia. In some cases the anaemia is very marked, and in these is most typically seen - depression ac-
panied by delusions of acute dis-
ficience. "The Cachexia, the blood prou-
ing and the diseases of nutrition in
which blood is not made in sufficient
quantity may all be attended with destroying}
qons brain functions, though certain
brain seem to have the innate organic energy
to nourish their tissues and perform their
functions on less blood than others.
Holding Physical Insanity to be a distinct
clinical disease, it is still not in consist-
tent with that view to believe that some-
what similar mental symptoms
will appear in other mental diseases
where the cause - practically Anaemia - is
the same. That this is correct will I
think be shown by the Syphilitic Case
here described. I shall however first
mention a case of Physical insanity
which shows the following points.
1. The well marked mental symptoms
of this disease.
2. The presence of extreme anaemia.
3. An improvement in the mental symp- 
froms succeeding the improvement 
in the above condition.

A. Y., age 20, a labourer's daughter. 
Single, was admitted into the Norfolk 
County Asylum June 21st. 1884. 

Her case on admission was one 
of melancholia. Previous to admission 
she had exhibited acute motor symptoms, 
Y. dazing her hair, continual restlessness 
and violence to men around her. Her 
physical condition on admission is 
described as "illnourished and anaemic. 
After admission the anaemia seems to 
have persisted and she suffered much 
from menstrual irregularity. Her 
mental state was one of pronounced 
melancholia with delusions of suspicion 
in addition. She believed that those ar- 
round her were encompassing her death, 
that the nurses wished to strangle her 
and the doctors poison her. This con- 
dition was varied with attacks of ex- 
teiment, during which she would
Refuse food and show violence to those around her. About sixteen
months after admission expirations were detected at the apices of both lungs.
It was evident she was suffering from Pulmonary Phthisis. She was
then placed on medical, hygienic and
dietetic treatment. Iron was freely
provided with Codliver oil. She was
encouraged to take abundant exercise
in the open air when the weather was fine.
And milk, eggs, port-wine to, was included.
Under this treatment her physical con-
dition greatly improved. Anaemia
diminished, her menstruation became
regular and for a few months the Phthisis also
seemed to be in abeyance. Synchronous with
the bodily improvement, the mental symp-
ptoms became much less marked. She
lost her morose delusions, could enjoy
a picnic or a dance on the green, and
seemed altogether a different girl. This
favorable condition lasted about nine
months when she caught a venereal
infections rapidly formed in the apices and
She was soon unable to leave her bed. Her mental state, along with her bodily, declined. Her stomach could not tolerate any preparation of iron or colloid oil or even the liquors of diets. Her malnutrition & anaemia returned and with them the depression and delusions, even more marked than before. Before the close of life she refused food in toto, declaring by her colleague myself wished to end her existence with poison. She died August 3rd 1886. The Post mortem showed —

1. Well marked Perihepatic & Periornal.
2. Extreme cerebral anaemia.
3. General atrophy of the brain with local atrophy of the anterior convolutions.

The next case I wish to record is one of Syphilitic Insanity. This case exemplifies what Dr. Clouston calls "Cerebral Syphilitic Insanity"; when the mental symptoms follow endarteritic changes in the arteries of the brain, and are the result of a long continued and practically incurable anaemia.
E. J., age 35, a lawyer, was admitted into the Norfolk County Asylum April 14th, 1884. From his previous history the following facts are gathered.

At the age of 17 he had been under treatment for Secondary Syphilis. No further symptoms appeared. A few years after he married, had several children and to his wife and children he was apparently much attached. As regards his business habits he was reputed to be an able solicitor and had an extensive practice. Eighteen months before admission, a complete alteration was noticed in his manner and habits. He neglected his business, formed the habits of drunkenness and profligacy and almost entirely deserted his home, living in town with a prostitute. When he did visit his home he exhibited an extreme irritability of temper and a profound suspicion of his wife. He declared she was unfaithful to him and poisoned the minds of his children against him. The brutalities to her were great, the
frequently struck her, and threatened before witnesses that he would have her tied down and violated some woman, and so obtain technical grounds for a divorce. This state of things lasted a few months when he came under medical treatment. He improved considerably, threw up his disgraceful connections, lived at home and attended to his business. His delusions regarding his wife diminished in intensity, although his irritability to her and his children persisted. This improvement was very temporary, he left home, found a mistress and came down with her to Norfolk. He lived in great style in Stonich and Beamin, and finally, for assault, was tried at the Guildhall. He was found to be insane and was sent to the Bedlam, from which he was removed as a private patient to the County Asylum. On admission he is described as follows: As regards his physical state, he is in fair health, is anaemic, feet and
"Lungs healing". As regards his mental state, he was voluble, very familiar and friendly to the attendants and fellow patients, but grossly indecent in conversation. An old attendant told me shortly before E. J.'s death, that he was the most level-minded man he had ever known. He still cherished his envious hatred for his wife and this he retained till a month or so before he left the asylum. From the extracts in the case books it is easy to see, that though he showed at times a sort of Boistrous good humour, he was in reality a gloomy, melancholic, jealous and suspicious, thinking evil of all men, and erotic to a very marked degree. About six months before discharge, he suffered a great deal from palpitation, dyspepsia and frontal headache. He was treated with Iodide of potassium, iron and arsenic. The last two dropped him most good and the were pushed. Under their use his mental as well as physical symptoms
Seemed to improve. He became cheerful, rational and decent in conversation, and his affection for his wife returned. She, being very anxious to have him out, pressed the matter strenuously, and he was, in consequence, discharged "Relieved" August 26th 1885. Up to this point, I should think his case was one of arterial endarteritis as yet unaccompanied by atrophic and degenerative changes in the nervose cells and neuropia. Under my assumption, alleviation of the haemic condition being followed by a remission of the mental symptoms can be understood and the subsequent failure of this line of treatment, once organic changes had taken place, can be explained. After his discharge, he kept tolerably well for two months. Then his morbid irritability returned, and though living with his wife, he again indulged in the wildest excesses. On October 25th he was re-certified and returned to the Asylum. After two or three months of excitement he sank into his former condition.
of most suspicious ness. He believed his food to be poisoned, his medicine to be drugged with narcotics, noxious vapours to be let into his room at night. With this delusional Melancholia there was now a certain degree of dementia. In October 1886, he had a right sided hemiplegia, he was apparently recovering from this, and regaining use of arm and leg, when, early in November, another occurred, from whose effects he never rallied. He died on November 24th.

At the post mortem made the next day, the skullcap in the parietal and frontal region was found to be thickened. The meninges were hyperaemic almost amounting to nodos. The membranes were hyperaemic. The pia mater being, however, non-adherent except at one small pleat on each side of the corpus. The vessels at the base of the brain were markedly atheromatous & cystous. The amount of atrophy present was inconsiderable. The brain was hyper." anemic in the region of the left corpus striatum, where a haemorrhage was
III Symptoms of Mania.

Out of the 15 cases of Anaemic Insanity mentioned by Dr. Clocersor, on Mind
shows symptoms of Mania. Than
not for me such a case, so can=
not unfortunately turn on misportion
of my subject. I will therefore pass
the fourth class of mental phenom-
ena in connection with anaemia.

IV Symptoms resembling Hyster-
crical Insanity.

There occurred two such cases, one
in a female the other in a male.

The first was that of a young lady
whom I treated as a private case. Her
case showed the following points —
1. The causation — loss of blood.

2. That the case was believed to be one
   of ordinary hysterical insanity.

3. That it was treated as such with anti-
hysterical remedies, that this treatment
   failed.

4. That the treatment on the line of
   pure anaemia was entirely successful.
M. A., age 19, came under my notice in the autumn of 1886. She had been under treatment for hypochondria of a marked type for several months. Her history was as follows - she had been for the past year at a "finishing" boarding school in London. She had good abilities and had worked very hard especially for the Trinity College examinations in Music, which she passed with honours. Her family history was a bad one, an uncle died of Phthisis, an aunt suffered from Epilepsy, a brother was next door to an imbecile. She was herself markedly neurotic, slight figure, dark hair and complexion, bright eyes, rapidly changing facial expression and though active bodily and mentally, suffered markedly from tension after mental or physical fatigue. In the last six months at school she had suffered from profuse menstruation. Her menses being excessive and frequently only a fortnight between the periods. After she left school, she was observed to harden
peculiarities. She exhibited an extreme emotionalism, she would laugh uproarious-
yly and cry bitterly on the slightest pretext. She took up dietic visiting for a few days
and then lived it up in favour of a mad=
dalene home, in which she assumed
a keen interest. She was shy in general
society, but her conversation in private
was, according to information supplied
her mother by another daughter, indicative
of a marked degree. She would obtain by
stealth most realistic literature - Zola
for example, I believe it in her bedroom.
She was strongly suspected of menstru-
ation and she was certainly guilty of
unpleasant familiarities with her cousin,
a boy of 15, who was also of a well
marked neurotic diathesis. Her medical
attendant treated the case with an
aphrodisiac mixture, valerianate of ammoia,
assafreida and pushed the doses of
Bromide of potassium. He also placed
flashes on the ovaries. Under this her sex-
ual appetite somewhat diminished,
but her mental state generally was
in no wise improved. She used at this period to go about with an air of Pharisaical hypocrisy, looked so Rancid as simple pleasures and made herself almost intolerable to her family and friends. Knowing the family, I was asked, with the medical advice to be me girl. She was very anaemic, her complexion waxed and tinged a yellow-green. She had a haemic tract at the mitral and pulmonary areas, her heart appeared to be dilated, the percussion note striking as high as the second rib. She suffered from dysphagia, palpitation, and shortness of breath. Her menses at her last time were scarce, previously were excessive. Her manner wasullen and defiant, most questions she refused to answer, at one point in the examination she declared "God's spirit was upon her and made her as the Lord." She let one phase of her mental disorder be seen clearly; she requested her mother to leave the room "as she could not tell us all that was necessary before"
her," I thought this a curious example of purely Hahnemannian treatment. It was at first directed towards the digestive disturbances, and she was placed on a light but nutritious diet, principally milk, eggs, fish, and fruit, with a bitter tonic and small doses of Belladonna. Sago at night. The medical and dietetic treatment suited her for 10 days, she was able to tolerate iron. She was placed on Blaas pills, one three times a day, to commence with, and a pox of iron, aloes and new comica three times a week to rush her bowels regular. A month after, there was visible improvement, in three, the mental and physical function was established and the morbid mental symptoms appeared to have vanished. Six months afterwards, I met her, she seemed to be a modest, unaffected and cheerful girl, fond of healthy recreation and a favorite with all who knew her.

The next case I would mention is one of a young man who suffered
from extreme anaemia, the result of excessive sexual intercourse, and with it exhibited symptoms of mental disease resembling, as in the case preceding Hysteria.

W.L., age 26, carpenter, unmarried, was admitted into the Norfolk County Asylum February 22nd, 1884. His family history was a bad one; his father and mother being first cousins. Two uncles died from Phthisis. His personal history was a strange one. He lived in a large university town, to which town is attached a college for lady students. W.L. became enamoured of the housemaid of the head of this institution, and she, believing him to be a most respectable young man, permitted an engagement to exist between them. Abusing the confidence of her mistress, the girl allowed her lover to seduce her, and as they had abundant opportunities of meeting, both under the lady superior's roof and elsewhere, he indulged in unlimited sexual intercourse.
The girl did not suffer, she was strong and healthy, not at all neurotic, but on H. L. The results was very different. He was the very type of a neurotic temperament, small (only 5½ ft. 2 in.) figure, slight, hair dark, eyes keen and bright, lines of expression sharply delineated, small hands and feet, both well chapped. His mental state (in health) corresponded to his physical appearance. He was a good workman, especially at the finer parts of his trade, but was not capable of sustaining a prolonged, steady and monotonous routine. He could work by fits and starts, work with great energy at a job for a few days, then tire of it. During his mental arrangement, this characteristic was much exaggerated. On a constitution such as his, the pernicious effects of prolonged and excessive sexual intercourse can easily be imagined. His appetite fell off, he was sleepless at night, his capacity for work diminished. Mentally, he became irritable and bad tempered, occasionally depressed and moody, at
other times in the highest of spirits. Gradually he became worse, he suffered from indigestion, palpitation and that sense of breath, and he told me himself, that his pallor was the subject of remark by his girl and his friends. Succeeding this, he fell into a state of unsettled and fitful melancholia and made an attempt at suicide. This he afterwards acknowledged to be a very half-hearted business. He was brought before a Magistrate, certified, and as he was chargeable to a Norfolk's Union, was transferred to this Asylum.

His physical condition on admission was the subject of the following extract: "He suffers from dyspepsia with irregularity of the heart's action." His mental state appeared at this time to be one of melancholia. The whole account of his case, from the day admitted for two years, is one constant mood of temper, any improvement followed by relapse. He was melancholic and erotic, was at one time suspected of masturbation,
and for some months was treated with strychnine. It was also given an arsenic for a considerable period, but as the Case book states "without any apparent benefit." My attention was first drawn to his mental state in June 1886, by the head carter. This man described him as flighty and fanciful, that he could never get him to complete a job, and that he was troublesome from constantly shamming illness. Had him sent into the wards and examined him, the following is a extract from the Case book.

"June 4th. A physical examination of his patient was made today. There is present well marked Anæmia. His lips and gums are pale, conjunctivae pearly. A distinct Epithelial murmur can be heard in the Mitral area, it is not propagated towards the Arilla. The 2nd sound is accentuated in the Antic and Pulmonary areas."

In consequence of this, the was placed on Blaudo's pills, one three times a day to commence with, also a pill
of aloes and iron three times a week
To keep his bowels in order. He was also ordered a cold bath in the
morning, abundant exercise and
a liberal diet. His mental state at
this period was very noticeable.
He was very hypochondriacal and had
delusions regarding his sexual impot-
ence. His hypochondriasis was well shown
by one trait, he seemed positively pleas-
ed if anyone told him he was look-
ing ill, and would be quite annoyed
if he was supposed to be in good
health. He was morbidly religious
and spoke in the tone of the Salvation
army on most religious topics. One day
he would be cheerful and anxious to
work, another, he would be very depres-
sed, sit motionless for hours, and could
express peculiar delusions. One day he
expressed a disinclination to go outside,
declaring that the other patients and
attendants were putting their tongues
out at him, and wagging their heads
in derision. Another characteristic of his,
was his unsettled restlessness. He would begin a job and never finish it, make violent and sudden friendships and dissolve them abruptly; one week would write cheerful letters to his brother painting a not far and happy union. The next week, he would, perhaps, write a letter of quite another moral tone & even indecent in expression. Such was his mental state previous to being placed on the regime described. Under it he rapidly improved. On the 12th of August it is noted in the case book that he has gained a stone in weight since June. His mental state is also described as "markedly improved." In another month he had gained 8 lbs more. As his anaemia had by this time disappeared, and the iron was beginning to make him Good, I stopped it on that date, Sept 28th. Sometimes for it a bitter tonic with Theom salts every morning. His mental state appeared now to be satisfactory. He worked steadily in
The carpenter's shop and the building, enjoyed. The amusements, dances, concerts, etc., and was cheerful, rational and decent in conversation and behaviour. He was discharged "Recovered" on October 26th.

Anaemia as a result of Insanity.

In all forms of mental disease, anaemia is seen to occur as a symptom or result. It almost invariably follows the acuter forms of Insanity, Puerperal and Lactational Insanities, Acute Mania and Melancholia, especially.

More varieties of Melancholia, where there is much disturbance of the motor centres. No is it a symptom to be overlooked, I have already quoted the words of Dr. Bucknill (Page 2) in which he points out that Anaemia when carried beyond a certain point leads to loss of functional activity and is followed by dementia. Examples of anaemia following the ordinary acute mental disorders are so common that it is unnecessary for me to quote any cases,
I shall therefore only mention two instances of Insania in connection with General Paralysia of the Insane, in which the treatment was followed by distinct remissions of the disease.

J. R., a farmer, aged 30, was admitted into the Norfolk County Asylum, April 17th, 1886. His illness was the usual one, the mental symptoms being however more pronounced & altogether out of proportion to the physical signs of the disease. Several months before admission he had ceased to attend to his ordinary avocations, told all his friends he was the owner of fabulous sums of money, and was going to buy up half Norfolk. As a matter of fact, he wasted all his little funds, the result of the savings of years, on the purchase of a piece of worthless marsh land adjoining his farm. The remonstrances of his wife he met with jars, though at times, the opposition on his part to his new habits, for he entirely neglected his farm, and indulged freely in diss
soration, roused in him exhibitions of angry passions which were foreign to his nature. On his admission here he expressed most grandiose delusions, mostly running on the possession of landed property. His physical condition was not at first very typical of his disease, but this developed come-what-may rapidly. In two months his face was ataxic, his pupils unequal, and his speech "staccato" in character. In June I noticed he was very an-
æmic and placed him on a chlor-
hydrate (Citrate of Iron and quinine). Under this the anaemia rapidly disappeared and, strange to say, with that his mental symptom improved. He lost his del-
usions entirely, engaged in active work on our farm, and so much im-
proved, that he was discharged at the end of the year, as "Relieved." The curious thing I observed about his pupils, on admission they were equal, in June they were very unequal in size, in August they were again symmetrical in size and
shape.

The next case is very similar to the preceding, except that the anaemia was far more marked, the physical symp- toms far more pronounced and the results of treatment therefore more distinct and clear.

F. K. age 41, a plumber, married, was admitted May 20th 1887 into St. David's Asylum. For 6 or 7 months previously he had given up his business; hav- ing some private means, he lived on them, spending his money right and left in pursuing most insane projects for increasing his private property and absurd philanthropic schemes. Latterly he became noisy and sleepless, would wander about at all hours of the night in the fields, surveying his supposed property. He was passed out of the control of his wife, who had him therefore certified and sent to St. David's Asylum as a private patient. On admission he talked very ex-

-antly, expressed delusions of gran-
Dear, and was full of plans for the benefit of the Hospital and its inmates and officials. His speech was hesitating, there were present marked fibrilar twitchings of the facial muscles of expression and his gait was very feeble and typically G. P. Indeed, he could hardly walk without assistance. He was very anaemic and had a neo-

vision of Phthisis. He was placed by my colleague on iron and cod-liver oil. Under this treatment, he is far im-

proved bodily and mentally, that he was able to be discharged as ‘rel-

ired’ in October of the same year. He had gained over a stone in weight, his gait had greatly improved and his actual delusions had disappeared, though certainly he had still a high opinion of his abilities and personal impor-

tance. He is still (March 1888) at his home, and is able to attend to his business.

I think that the conclusion from the results of treatment in these two
Cases is, that, even in incurable diseases such as General Paralysis of the Insane, treatment of Anæmia when present may be followed in certain cases by a favourable termination.

I have now to refer to the Prof = noci in Cases of Insanity Caused by Anæmia.

As a rule the Prognosis is eminently favourable. It of course depends on the cause of the Anæmia whether a hopeful opinion can be given.

I have mentioned four cases where Anæmia was the direct cause of Insanity. Of these 3 or 75% recovered. One who died, suffered from an incurable malady - Addison's disease. Of W. Clonstoe's cases 80% recovered. Where Anæmia acted as an indirect or predisposing cause, the results of treatment were rather encouraging. Of the 7 male cases 5 or 71.7% recovered, out of 27 females 21 or 77.7% were cured. It follows therefore that of the whole number 34 in all,
26 or 76.4% were successfully treated.

In contrast, the recovery rate for the year 1887, at the total admissions of 32.89% were discharged "recovered." The male admissions of 59.76% were discharged. The female - 46.83%. Certainly not. If the list of manic cases are omitted, insanity, where the prognosis is very bad, e.g., General Paralysis, Phthisis, and Syphilis central disease; on the other hand from this list are also omitted highly curable insanities like Puerperal and Lactation. Think of the following figures: That whereas insanity is the cause of mental disease whether direct or indirect, the prognosis is eminently favourable.

Treatment of Manic Insanity.

The treatment of manic insanity is so simple and so clearly a defined basis, that there is really very little to say about it. How, in the vast majority of cases, combined with mild laxatives, is all that is necessary, preserving, of course that there be combined with abundant fresh air and
A nutritious diet. In cases where there was emaciation, I found Arsenic a useful addition. Where emaciation acted as a predisposing cause and maniacal symptoms were present, I found the following a good mixture:

Dr. Ptn. Brom. Zii
Syrup. Fri. Phtha. C. Zii
Aq. ad Ziii m.

If Zii to be in the pint citron.

In the female cases Dr. bean’s pills, so strongly recommended by Prof. Dr. Haring Stewart, most serviceable. In a case I had since commenced this paper, I tried a mixture recommended by Sir Andrew Clarke in a recent number of the Lancet. More mis, and although rather unpleasant

Take, acted well—

Dr. Fer. Sulph. qn X iii
Maj. Sulph. Zii
Acid. Sulph. long. Zii
Frit. Zircon. Zii
Aq. ad Ziii m.

First mix.

Li. a pack twice a day.

The treatment may be summed up
as follows:

1. Fresh air, regular and active exercise.
2. Invigorative and easily digested food.
3. Invigorative tonics up to the point of mixture.

I may now conclude, merely adding, that from what I have seen in my own short experience and from the observations of others, I believe that Anaemia plays no inconsiderable part in the production of mental disease; that its occurrence as a symptom in enervatio =_ = clearly fatal maladie is not to be neglected; and that its treatment is attended in most cases by most satisfactory results.

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Manwells Little
Senior Assistant Medical Officer
Norfolk County Asylum

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Appendix of References
A "Pathology of Insanity" (Bucknill) 
B "Mental diseases" (Clouston) Page 457.
C "Pathology of Insanity" (Bucknill), 
D "Mental diseases" (Clouston) 513.
E "Psychological Medicine" (Bucknill and 
  Hake Sutton) 
F "Mental Diseases" (Clouston) Page 591.
H "Mental Diseases" (Clouston) Page 458.
I " "  " "  "  "  426.
J " "  " "  "  "  591.
K " "  " "  "  "  591.