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Notes on diseases of the alimentary,
respiratory and circulatory systems,
in the uirane
Notes on
Diseases of the Alimentary,
Respiratory and Circulatory systems
in the Insane.

Before entering into a more detailed
consideration of the diseases affecting
these systems, there are some general
points, which are worthy of consideration.
In many instances, the element which
produces deterioration of the brain
structures, simultaneously induces
pathological change elsewhere, while
in other cases cerebral degeneration is
secondary to disease in some other organ.
The low power of resistance to bacteria,
the special environment, in many
cases, the careless habits of the insane
produce certain peculiarities in the
origin, progress and termination of
disease.

In regard to subjective symptoms, the
mental condition must be carefully
borne in mind.
For instance, it is quite common for an insane patient to state that he regularly spits blood, whereas is not the case. The marked reduction in the sensation of pain in dementia, amnésias, and paralysies frequently leads to a wrong diagnosis.
I have seen several cases of peritonitis, which were only discovered at autopsy, because of the absence of pain and temperature.
The diminution of sensation in the air passages has an important bearing on lung diseases, and the matter is further discussed under that heading.
In the type of case presenting diminution of the sensation for pain, the temperature does not rise to the same degree as in the same.
Death may even occur from an acute supplicative process in which the temperature has remained normal during the entire course.
Diseases of the Alimentary System

Secondary Parotitis and the allied inflammatory condition of the sub-maxillary glands.

Inflammation, especially of a terminal variety, is very prone to arise in the parotid glands of the insane.

Browning states that he has met with it in various forms of mental disease, e.g. acute Mania, melancholia, puerperal insanity, and that, in two cases, it caused death from suppuration and septicemia. He considers that the cause varies in different cases, but believes that many cases are due to the toxæmia, which gives rise to the mental disease.

There seems to be no doubt that the chief causal factor, apart from the presence of bacteria, is the diminished resistance of the tissues to septic processes.

The condition is usually considered by
asylum medical officers to have a fatal termination, but of the six cases [see cases No. 1 to VI] observed in this institution [Monmouthshire Asylum], during the past three years, only one [Case II] proved fatal; death was due to lobar pneumonia.

Nevertheless, in 12 cases out of 2500, parotitis was given as the primary or secondary cause of death.

In seven of these cases, the sole lesion found at autopsy was double suppurative parotitis, except in one case where both submaxillary glands were also inflamed.

Before the development of the parotitis, they were all in a debilitated marasmatic state. Numerous cases of parotitis, secondary to some other disease, operative procedure, injury, or uterine derangement, have been described by Paget, Bucknall, Seibbs and others, but the cases are not at all similar to the above mentioned seven cases. Bucknall states that the condition may be met with in general paralysis,
dementia, old age, grave asthenia, following meningial inoculation and after the administration of iodide of potassium.

There are two rival theories as to the causation of inflammation of these glands. Namely: (1) Infection by way of the blood.

2) Infection by way of the duct.

Oglet, the author of the Theory of sympathetic parotitis, now admits that the theory is untenable.

The following reasons seem to indicate that infection takes place by way of the duct:

1. In 75% of the cases, the mouth is in a condition of extreme sepsis.

2. Bruce states that in all cases of insanity, the mouth is swarming with strepto-coeli, a greater virulence than those found in a healthy person.

3. In seven of the abovementioned cases, no other focus of suppuration was found.

4. In case No. 1, the mucous membrane round the opening of the salivary duct was red and inflamed.
In many cases of acute visceritis, the salivary secretion is diminished; the tongue being dry and parched.

In case No 1, the state of the salivary secretion could be accurately observed, as he was being tube fed. The diminished salivary secretion would seem to act, by allowing the bacteria to travel up the duct and by preventing the natural cleansing of the mouth.

Bucknall, who supports the duct infection theory, and Jebbs, who supports the pyaemic theory of the origin of parotitis, are agreed, that suppression of the salivary secretion is an important predisposing factor in the causation of parotid inflammations.

Bucknall states that in line embolic pyaemia, in which the parotid becomes the seat of an embolic process, many other organs being similarly affected, the parotid is one of the last to be attacked.
7th. It usually accompanies disease processes not usually associated with pyaemia.

8th. In six micro-photographs, published by Bucknall, the duct is undoubtedly the source of infection.

9th. The great suddenness of the swelling would seem to indicate duct infection.

10th. In Case No. II, accompanied by pneumonia, the pus was scattered in droplets throughout the gland. This condition is more likely to occur through duct infection than through infections by the blood stream.

11th. In 98% of Paget's cases, the parotitis was a solitary complication.

From the foregoing reason it is clear that we are not dealing with an ordinary pyaemic state.
12th. The fact that five out of the six cases, occurring in last 3½ yrs, recovered, is also in favour of the duct infection theory.

Therefore, it seems likely that most of the cases of parotitis occurring in the visera, are due to infection through the duct.

Cases XX are apparently of pyaemic origin.

Two of our cases [Nos 7 8] were associated with colitis.

Two occurred in general paralyses.
bases illustrating inflammatory conditions of the salivary glands.

Case I, male, aged 44, delusional melancholia. He was being fed by means of the oesophagus tube. Marked suppuration was present around decayed teeth, along with ulcerative stomatitis.

At this period, the introduction of the stomach tube caused no salivation. A right-sided parotitis suddenly developed, with slight febrile reaction, but without marked redness or fluctuation. The mucous membrane round the mouth of the corresponding duct, was red and inflamed. The submaxillary was not enlarged.

The condition, after lasting for ten days, resolved and recovery ensued. It was now observed that the salivary flow was increased to such an extent, that it ran out of the mouth during tube feeding.
Case No. 2. Male, aged 58, congenital imbecile. While he was being treated in bed for ill health and debility, he suddenly developed left parotitis, associated with much redness and swelling.

At the same period, signs, suggestive of commencing acute congestion of the upper part of the right lung, were found.

The mouth and teeth were in a markedly alcholic state, while the sputum contained pneumococci.

The temperature ranged round 99°.

He died two days after the commencement of the parotid swelling.

There was no redness of the mucous membrane round the opening of the duct, and the parotid was not enlarged.

At the autopsy, the gland was found to contain numerous small purulent foci, and from the pus, staphylococci were isolated.

The apex of the right lung shewed commencing pneumonia.
Case No. 3, male, aged 54, chronic maniac, developed a suppurative condition of the left submaxillary gland, while suffering from lobar pneumonia. The inflammation gave rise to cellulitis of the neck, and pyaemic swelling of the elbow-knee joints. The saliva was swarming with diplococci and the same organism was obtained from pus, procured by incising the submaxillary gland. He ultimately recovered.

Case No. 4, male, aged 37, General Paralytic with extreme oral sepsis, developed a right parotitis, which resolved. The entrance to the duct was not inflamed, but the sac was became enlarged and tender a few days after the parotid.

Case No. 5, female, aged 60, chronic maniac developed left parotitis while suffering from general debility, associated with cardiovascular sclerosis. There were no signs
of any uterine trouble.
The mouth was in a particularly septic state, but the entrance to the duct was not inflamed. The submaxillary was not enlarged.
Result: The parotid inflammation resolved and patient recovered.

Case No. 6, female, aged 53, chronic maniac, in a very debilitated condition, was similar to the preceding.

The following cases were extracted from the case books and post-mortem records.

Case No. 7, female, aged 46, demented, developed right sided parotitis, which proved fatal in seven days.
For fifteen days previously, she had suffered from obstinate diarrhoea.
At the autopsy, the gland was found to be filled with purulent foci, while the large intestine presented a few small ulcers.
No sign of abscesses in other regions was found.
Case No. VII, female, aged 55, epileptic, suffered from asylum dysentery. The left submaxillary gland became swollen and suppurred. The tongue was brown and furred, and the mouth and teeth were in a very septic state. Death took place two days after the development of parotitis.

At the autopsy, numerous ulcers were found in the large intestine.

Case IX, male, aged 41, alcoholic dementia, suffered from fatal double parotitis, associated with abscesses of both knees and elbows. This case was undoubtedly of a pyaemic nature.

Case X, male, aged 37, general paralysis, who developed extensive cellulitis of the right arm. Incisions were made which exuded pus. On the second day he suffered from diarrhoea, and during the night the right parotid became enlarged and tender; death took place next morning. No P.M.
This case also appeared to be of a pyaemic nature.

Case XI, male, aged 37, chronic maniac. While in a debilitated excited condition, both parotids became acutely inflamed. Death took place in three days. Autopsy showed no further sign of suppuration.

Case XII, male, aged 62, senile dement, was similar to case No. XI.

Case XIII, female, aged 70, secondary dement, suffered from inflammation of both parotids; the inflammatory condition of the right preceded that of the left.

She died in about a week, at the autopsy, puré of suppuration were only found in the parotids.
Case 14, female, aged 57, manic-depressive insanity. Both parotids and submaxillarys became suddenly swollen and inflamed. Marked swelling was noticed in the afternoon, although, in the morning no swelling had been evident. Suppuration followed, and death occurred in eight days. No other suppurative focus was found at autopsy.

Case 15, male 30, primary dementia. Death was due to double parotiditis, no further focus of suppuration was found.

Case 16, male 48, chronic melancholia. Death took place two days after the development of double parotiditis. This was the only suppurative condition found at the post-mortem examination.

Case 17, female, 51, chronic mania, died in two days after developing double parotiditis. No other inflammatory condition was found.
Intestinal Affections in The Insane

It is astonishing, with what ease, foreign bodies are passed by the intestine. I have known a lady’s watch pass through the gut in thirteen days. The patient was confined during the period in which the foreign body was in the intestine.

The only symptom manifested was the vomiting of a considerable quantity of digested blood, on the day after the watch was swallowed.

Foreign bodies may perforate the intestine. I have seen a case, where the ileum was perforated by a twig, which the patient had swallowed in the circus recti.

In another case again, covered by a calcareous incrustation about the size of a date stone, was found in the appendix. There were no symptoms of appendicitis, but on autopsy, some adhesions were found in that area.
Tuberculous ulcration of the rectum is not so common as in the same.
This is further considered under tuberculosis of the lungs.

Asylum dysentery appears to vary in infectivity in different asylums.
During the past nine years in this institution, there have been about
a dozen cases, which were diagnosed or proved at the post-mortem, to be
asylum dysentery.
The cases were sporadic, and in only one
instance, associated with diarrhoea in
the same ward.
The bacillus of asylum dysentery probably
does not become highly virulent, until
it has passed through two or three
individuals.
The following case of colitis is interesting.
He was treated in the infirmary ward
and used the ordinary closets.
For nineteen months he suffered from
diarrhoea, with slimy stools sometimes
tinged with blood, and associated with a certain amount of tenesmus.

At the autopsy, lesions indistinguishable from ordinary asylum colitis, were found. During the whole of that period, there were no signs of any extension of the disease to other cases.

In the records of this institution, two cases of intestinal ulceration [colitis] were found to be associated with parotitis.

Minor intestinal lesions

Most states that evidence of inflammatory changes of the mucous and submucous tissues of the stomach and small intestine are frequently met with at autopsy in all forms of insanity that this may be due to some extent, to the ill-effects produced by the ingestion of foul saliva, a marked condition of oral sepsis being frequently found.

For Robertson quoted by Bruce states that atrophic changes in the mucous submucous coats of the large intestine
are common in all forms of acute insanity, which present symptoms of toxæmia, and also in cases of general paralysis.

Two cases have recently been admitted to this asylum, in which a virulent intestinal infection may have been a causal factor in the production of the insanity. Both suffered from acute mania and diarrhoea on admission. They quickly passed into a low lymphoid delirium and died. Portal and Déjago reactions were absent. At the post-mortem numerous small petechial haemorrhages were found in the walls of the cæcum.

Appendicular and other adhesions in the region of the cæcum are very frequently met with in an asylum post-mortem room. They are probably caused by slight peritonitis, resulting from virulent organisms swallowed from a septic nasal cavity.
Diseases of the Liver:

Advanced cirrhosis or typical hot-nail liver is rarely met with.

In 1200 post-mortem records belonging to this institution, only five cases of hot-nail liver are recorded. Two of these suffered from ascites. Slight fibrous change was met with in 3% of the cases.

In 9506 persons, dying in English asylums in 1910, only 23 cases of cirrhosis of the liver are recorded. Considering the important factor of alcohol in the causation of insanity, one would expect a much greater number of cases of cirrhosis.

At first sight, this would lead me to suppose that alcohol is not a potent factor in the causation of insanity. It is generally conceded that it requires a large quantity of alcohol to cause the disease.

At all probability, the alcohol damages.
the brain, in predisposed or unstable subjects, long before it has time to produce fibrotic change in the liver. Consequently, we see very few cases of liver cirrhosis amongst lunatics. The rarity of this disease amongst the insane population would seem to disprove the assertion of French physicians, that liver cirrhosis is mainly due to the absorption of toxins from the alimentary canal, because of late Jean it has been proved that anti-oxidation is an important factor in the production of insanity.
Malignant disease:-

Malignant disease is so commonly met with in connection with the alimentary tract and associated organs in the insane, that the matter is worthy of discussion.

The opinion generally held, is that malignant disease is relatively uncommon amongst the insane.

This idea has been falsified by statements supplied by the English Lunacy Commission.

In their 65th report the following statement is found:

"There remains one morbid condition which is responsible for an increasing number of deaths in the general community, from which it would almost appear as if the insane enjoyed some immunity.

According to these figures, the proportion of deaths from "Cancer", i.e., from all forms of malignant disease, was in asylums 36.4 per 1000, which may be compared with the ratio of 99.4 per 1000 in the rest of the community, this disparity being more marked in the female than in the male sex."
"Although the mortality rates per 1000 living show a rate of 2.98 amongst the insane and one of 1.39 in others, yet having regard to the great divergence between the general death rates in the two series, the general cancer mortality in relation to that of the insane is not 1.39 but 3.11. Upon what then this difference depend? Is it because as suggested in the analogous case of bronchitis, the asylum patient is protected from some yet unknown factor in the development of this disease; or has it to do with the mode of living as well as of environment; or can it be that there is any antagonism between the conditions favourable to the development of cancer and those which conduce to insanity. At any rate, in view of these statistics, which seem valid and are confirmatory of those we published two years ago, although investigation of the subject might not be without profit."
From the above extract it will be observed that the Commissioners consider that the cancer mortality of 2.98 per 1000 amongst the insane, should compare with the adjusted figures of 8.11 per 1000 in others.

The latter figure is arrived at by multiplying 1.89 by 5.8 = 8.11, because the death rate in asylums is 5.8 times greater than the death rate of the general population.

This procedure cannot be defended. The great divergence in the general death rates, which is simply due to the fact that the insane are extremely liable to die from cardio-vascular degeneration inclusive of Bright's Disease, epilepsy, exhaustion and bacterial diseases, should not be taken into account in estimating the relative incidence of cancer.

In fact one might state with equal truth that, because the insane are ten times more liable to suffer from boils, carbuncles, abscesses and gangrene, they
should be ten times more liable to
waste.
The true method is simply to compare
the number of cases per thousand,
I.e. 2.98 in the insane against
1.39 in the sane.
The higher figure amongst the insane,
is accounted for by the fact, that 68.3%
of the inmates of our asylums are over
55 years of age hence within the
period of cancerous incidence.
It will therefore be seen that cancer
is more common amongst the insane
because of the higher age period.
The death rate from malignant disease
in the Monmouthshire Asylum, based
on the last 1200 autopsies is 4.3%.
The cases to the number of 51, were
analysed with a view to ascertaining
if cancer could be a possible cause
of the mental trouble.
Bases that had been insane for over
two years were eliminated and in
only six cased the cancer have been
a causal factor in the production of the insanity.
In only two of the six cases was the cancer connected with the alimentary system, although thirty-six of the fifty-one cancer cases were associated with the alimentary tract or its associated organs.
In these two cases the insanity appeared to be caused by the cachectic state produced by the cancer.
Pulmonary Diseases

The insane are specially liable to pleurisy, tuberculosis of the lungs, lobar broncho pneumonia, gangrene of the lung and passive congestion.

Lungs absolutely free from pleuritic adhesion are seldom met with; the process in many cases seems to be of a tuberculous nature.

Tuberculosis of the lungs.

For nearly a century it has been recognised, that the insane are specially liable to pulmonary tuberculosis. There is nothing special to note about the course of the disease, except that cough, pain and expectoration are not usually prominent features.

The diminution of sensation in the air passages, interferes with the normal cough reflex.

Sputum is usually swallowed, but tuberculous ulceration of the intestine
is not more common than in others. In 448 autopsies in this institution [Monmouthshire Asylum], in which active pulmonary tuberculosis was found, only 12 presented intestinal ulceration. An analysis of the Blaybury statistics in the London County Asylum Reports Nos. 17, 18, 19, 20, shews, that one-third of the cases of active pulmonary tuberculosis suffer from tuberculous ulceration of the intestine.

Galen stated, in his first book of medicine, that in 1000 autopsies, performed at the Munich Pathological Institute, on cases of pulmonary tuberculosis, 56% had secondary tuberculous ulceration of the intestine.

The Brompton Hospital Report for 1903 gives a percentage of 61.3 in 263 cases. It would therefore appear, that lunatics do not present secondary tuberculous ulceration of the intestine as often as others.

This is in all probability due to the fact
that they do not last long enough to
develop the complication to anything like
the same extent.
Laryngeal tuberculosis is uncommon for
the same reason.
In the above mentioned 48 autopsies,
only two cases of laryngeal tuberculosis
were found.
In 163 cases of active pulmonary
tuberculosis mentioned in the previous
Blayburg reports, only two instances of
laryngeal tuberculosis were recorded,
while in the aforementioned Brompton
Hospital report, 52.6% suffered from
the laryngeal complication.
Vomicae in the insane tend to become
markedly gangrenous and necrotic,
consequently in the terminal stages
the breath is exceedingly foul.

Broncho Pneumonia
Terminal broncho-pneumonia is the
commonest cause of death amongst the
insane.
Janzo states, that the commonest cause of death in senile dementia, is a diffuse broncho-pneumonia.

According to the statistics of the English Lunacy Commission, the lobar variety is twice as common a cause of death as the lobular variety.

The lobular form is undoubtedly more common than these statistics indicate, as the confluent variety is apt to be confounded with the lobar form.

In at least one-fourth of the deaths occurring in this institution [Mon Asylum] during the last 3½ years, Broncho-Pneumonia of a terminal variety was present.

It is sometimes caused by the inhalation of food or septic saliva, during its passage over an imperfectly sensitive glottis.

When these septic matters enter the air passages, the normal cough reflex does not arise, owing to the lack of sensation in the larynx bronchi, consequently they are not expelled and give rise
to broncho-pneumonia.
The purulent secretions of bronchitis are also
tamned in the bronchi and give rise
to a low form of broncho-pneumonia.
Many broncho-pneumonic cases give rise
to gangrene of the lung.
In 50 cases of broncho-pneumonia
occurring in this institution, this
complication was met with in six cases.
In terminal broncho-pneumonia the
respirations are not much increased;
cough is not a prominent symptom;
pain is not often complained of;
the temperature ranges from 99° to
101.5°, but in some cases it remains
normal or even subnormal.

Lobar Pneumonia.
My own experience is that lobar
Pneumonia is more common amongst
lunatics than amongst the sane.
Statistics collected upon the subject in—
in this asylum are worthless, owing to the fact that there was an extensive epidemic of an infective variety on the female side. Blaybury statistics for the abovementioned four years, give a death rate of 4.7 per 1000 living, whilst among the general population for 1910 [England], the death rate from lobar pneumonia was only .98 per 1000 living.

Lobar pneumonia in the sane is fatal in about 20% of the cases, consequently the incidence of this disease = .98 x 5 = 4.9, but lobar pneumonia is practically always fatal in lunatics so it would appear that the case incidence in the two classes is about equal.

Bianchi states that pneumonia following primary degeneration of the vagus is sometimes the cause of death in General Paralysis of the Insane.

General Paralyses however do not seem to be specially liable to this form of pneumonia as only 6 cases of lobar pneumonia were found in 145 autopsies on general
paralytics dying in this asylum.
Cases of lobari-pneumonia met with in
asylums are often atypical.
The temperature is erratic & the respirations
are not increased to the same extent as
in others.

Gangrene of the lungs
Gangrene and abscess of the lungs are
common, as foreign material is liable
to enter the bronchi.
All pulmonary infections are liable to
grow to gangrene, on account of the
non-resistance of the tissues, possibly
through degeneration of the trophic neurones
and the inactive state of the phagocytes.

Asthma does not appear to be common
amongst the insane.
Cardio-vascular Disease

It is surprising, when one considers the number of degenerate hearts found post mortem in lunacy practice, and Beadles puts the percentage at over 90, that marked cardiac symptoms are not more common.

This is due to the fact, that the rest, and easy existence, enjoyed by the great majority of lunatics, prevents exhaustion of the function of contractility of the heart muscle.

This however does not apply to the epileptic with numerous seizures, or to the acutely agitated and excited patients, who, in this asylum at least, only account for about 15% of the population.

Cases presenting symptoms of advanced mitral and aortic disease, associated with marked dropsy, cyanosis, orthopnoea, dyspnoea, water hammer pulse are not specially common.
The symptoms and signs mainly seen in the great majority of asylum patients are simply, feeble heart action, syncopeal attacks, dilatation of heart, slight hypertrophy, sudden cardiac failure, extra systole, reduplication of sounds, impurities of sounds, bruits and mild heart block.

It is somewhat astonishing, when one considers the number of cases with extreme calcareous degeneration of the coronary arteries, met with in asylum practice, that angina pectoris is not more common.

During the last 3½ years I have not met with a single case. The easy existence enjoyed, prevents failure of contractility, which is considered by Mackenzie, to be the cause of angina.

On the other hand, the demented condition would prevent the development of an irritable centre in the spinal cord considered by Mackenzie to be necessary.
for the development of anginal symptoms. Tanzi states that a precordial pain is common in melancholia.

I have questioned Twenty melancholics in regard to this sensation, and a few admitted that they had had some uneasiness about the heart region, but nothing approaching angina was found. Asympathetic attack in a young lunatic with hypochondriacal delusions, should always make one think of General Paralysis of the Insane.

Instated of excitement the heart is usually a little dilated and the pulse is weak, rapid.

According to Mackenzie indulgence in alcohol may cause a continuous increase in the rate.

Pulse tension may be extremely high after epileptic seizures. In insanity the heart is usually very small.

When one considers the facts that arterial degeneration that syphilis are so
common amongst the insane, it is surprising that aneurisms are not more common.

There were only sixteen deaths from aneurism in 98,066 deaths, in English asylums, in the year 1910.

Atherosclerosis, or rather its causal factor, is without doubt, one of the chief causes of insanity in middle and later life. In some instances this degeneration is confined to the cerebral vessels, the remainder of the arterial system being comparatively healthy.

These cases of atherosclerosis are practically always associated with contracting kidney.

According to Japanese cerebral arteriosclerosis is always accompanied even in its incipient stages by various subjective phenomena, such as headache, often slight but constant, a feeling of faintness, giddiness, a ringing in the ears, the inutility of weakness and insomnia.
These, according to the same authority, are in many cases the prodromal symptoms of senile dementia. In several instances, I have found the aorta comparatively free from atheroma, while the coronaries were very degenerate, in fact in one case they could be broken like a pipe stem.

Large subcutaneous capillary haemorrhages are common in senile insanity.

In some cases they are due to slight injuries, and are similar to the subcutaneous haemorrhages seen in senility in many lunatics, but especially in idiocy. Dementia praecox, the extremities get blue and cold owing to the feeble action of the heart and want of vascular tone.

Slight cardiac hypertrophy is common in most forms of insanity, except in young dementes and imbeciles.

Rheumatic heart conditions and acute rheumatism are extremely uncommon.
Abdominal atherosclerosis and its effects

Atheroma is a common cause of abdominal lesion amongst the insane. Haemorrhage into the brain is a common result of vascular degeneration but haemorrhage, due to the same cause, can occur in other organs, such as the kidney, adrenal body, pancreas, the wall of the stomach, retro-peritoneal tissues, or into the peritoneal cavity itself.

The following cases are interesting in this respect.

Case I, male, aged 70, with history of syphilis, and old tuberculous disease of the right hip joint.

On August 24th 1911, he suddenly developed retention of urine. He was put to bed, and the catheter was passed twice a day, until death on the 4th Sept. 1911.

He suffered from hyper trophy of the heart, associated with marked vascular thickening.
The urine contained a large quantity of pus, and was extremely foul.
Up to the 1st of September, the temperature was slight but variable.
This was thought to be due to catheterisation.
The pulse was normal in rate, but high in tension.
On September 1st, he complained of severe pain in the lumbar region, radiating into the legs.
The pulse and heart sounds were weakened, and the temperature was raised to 102°.
There was no diarrhoea, vomiting, or dulness in the flanks.
Towards evening he had a syncopal attack, but rallied, complaining that the pain in the back was very severe.
On palpating the abdomen, there was some general resistance and pain, with dulness in the flanks.
On the 4th of Sept., he had three fainting attacks during the day, and expired in the last one.
Post Mortem Examination.

Brain: Vessels highly atheromatous.

Thorax: Extending up behind the right pleura, as high as the fourth rib, is an extensive haemorrhage.

Heart is large, weighs 15½ oz.; the left ventricle is much hypertrophied, its muscle is firm and evidently of good quality. The mitral and aortic valves and aorta itself were atheromatous.

Abdomen: The true pelvis is filled with blood. There is also blood clot on the under surface of the liver, around the head of the pancreas, around the region of the right kidney; blood clot also extends upwards from the adrenal body, behind the peritoneum, along the right crus of the diaphragm and aorta up into the posterior mediastinum.

Kidneys: Both contained numerous foci of suppuration. The tissue showed fibrotic change and thickened arteries.

Suprarenal bodies: The medullary portion of the right suprarenal gland is replaced
by blood clot, and, on careful examination, this was found to be quite distinct from the external haemorrhage.

Spleen was large and diffusent, weighing 6½ oz.

Stomach:—The vessels of the stomach wall were injected.

Intestine showed some old appendicular adhesions. The large gut was bound down to the bladder, the wall of which was thickened and corrugated.

There were no haemorrhages in the pancreas.

The abdominal aorta and its branches contained numerous calcareous patches.

There was no sign of phlebitis of the capsular or renal veins.

Case II:—Female; aged 62; she had a stroke and consequent hemiplegia, six months before admission.

The radial arteries were much sclerosed, and the heart was much hypertrophied.

Asystolic murmur was present at the apex and a diastolic in the aortic area.
She died suddenly three months after admission.

Post mortem examination: - Heart weighs 28 oz., all the chambers being much thickened. The mitral valves were very atheromatous, as well as the aorta and its valves. Lungs: - An old infarct was found in the right.

Kidneys: - There was a large effusion of blood clot externally to the capsule, which was deeply stained with blood. This clot extended right down into the retroperitoneal tissues.

The kidney was sclerosed, and some pus was present in the calyces - pelvis. The abdominal aorta and its branches, were highly atheromatous.

Case III Female: 65; The outer parts of the pyramids of the right kidney presented small haemorrhages. She suffered from mitral disease & slight hypertrophy of heart, which weighed 14 oz.
The abdominal vessels were highly atheromatous.

These three cases occurred amongst 400 autopsies held at this asylum. In each case, there was marked degeneration of the abdominal blood vessels. It would appear that these haemorrhages are of the same nature as haemorrhage into the brain substance.

Extreme atheroma of the abdominal aorta, may lead to calcareous embolism of the superior mesenteric artery. I have only met with one case in an insane patient.

The gut was rapidly becoming gangrenous. The abdominal aorta was found to contain numerous loosely adherent spicules of lime, especially round the mouths of its branches.

The following case presented a peculiar calcareous formation inside a small artery in the gastro-hepatic omentum.
Female, aged 61, epilepsy mania:-

In one of the smaller arteries of the gastro-
hepatic omentum there was a calcareous deposit
resembling a fish bone.

There were no signs of peritoneal adhesions in
this area.

The structure was not firmly adherent to the
arterial wall - was slightly over an inch
in length.

In microscopic examination it had a definite
crystalline structure without any central
canalisation.
References

1. Mental Diseases - Clouston - 3rd Edition
2. Secondary Parotitis - Paget - Lancet Vol I 1886
3. Dr. Dr. Bucknall - Transactions of Medico-Chirurgical Society Vol 80
5. Discussion on Secondary Parotitis, Trans Med Chir Society Vol 80
6. Studies in Psychiatry Bruce
7. Archives of Neurology, Mott, Vol III
8. Text book of mental diseases, Tengi
10. Mental Science Journal, Vol 41
11. Diseases of the Heart - Mackenzie