Addison's Disease.

Thesis by A.J. Bilhamm

with notes on three cases under observation.
Addison's Disease - with notes on three cases under observation.

Definition. A morbid state dependent upon loss of function of the suprarenal glands due to various lesions, associated with increase of the normal pigmentation of the skin, connective tissues, membranes, with great Asthenia, tendency to syncope and often severe gastro-intestinal symptoms leading to death.

It was in 1849 that Addison discovered the connection between disease of the suprarenal capsules and the above train of symptoms whilst inquiring into the causes of furious ascasia.

He described 11 cases attributing the condition to lesion of the suprarenals.

Gummow & With held that the various symptoms known as Addison's Disease resulted from involvement of the suprarenal sympathethic nerves by disease affecting the neighboring suprarenal bodies.

This view has been abandoned.

The theory of internal glandular secretion established on an experimental basis by Ablow & Lange in France, Stüker & Oliva in England, led to a return to Addison's original view that the symptoms were due to interruption of suprarenal function.

Ablow & Lange found that after destruction of the
Substances in animals. Injections of suprarenal extract kept them in good health; otherwise they died in from 1 to 6 months from symptoms analogous to Addison's.

Schöyer obtained a substance from the suprarenal glands possessing very powerful physiological properties. The extract which they obtained from the cortex medulla of the adrenals was found to be a very active stimulant raising the blood pressure.

This extract is about in adrenal glands. (Alburt)

And described it as an alykoid.

Since muscular tone is kept in tone by this extract was stimulated by it. The contracture muscular and cardiac weakness not with in Addison's disease is probably due to its absence.

Etiology.

The disease is rare. More common in the male sex.

Average age is 31. Rare examples have been recorded in infants (e.g. Robidie d'Addison only one infant 14 mo. old. As to Paris 1885 in original).

A few cases have been recorded late in life. (Alburt)

A history of tuberculosis does not predispose to the disease nor is it hereditary.

It is of interest to note that the adrenal glands in the early years of life are remarkably insensitive to secondary infection of tuberculosis.
Inflammation of local injuries to the back have occurred to be the cause of the disease probably by rendering the organs vulnerable to the tubercle bacilli.

Or inflammation may have given rise to hemorrhage into the subarachnoid substance either at birth or later.

(St. Channer. Trans. of Articular Society of London 1892 p. 276)

Morbid Anatomy.

1. The commonest lesion is a fibrinous degeneration of the glands - tuberculous in character.

The tubercle forms in the medulla with caseation or softening. In the process a large formation of fibrous tissue occurs due to the irritation of the tubercle. This may contain nodular matter.

2. Simple Atrophy. The organs cannot be found after death.

3. Chronic interstitial inflammation leading to Atrophy.

4. Malignant disease invading the capsule.

5. Blood extravasate into the subjacentulars.

6. No lesion of the subjacentulars, but a lesion of the Semilunar Ganglia.

The lesion is usually present on both sides often in different stages.
The tuberculous change in the suprarenals may be
occur without any signs of Addison's Disease, or
cases may occur where the tuberculous deposit in
the suprarenals may be the only seat of tubercle
in the body.
Examples of simple Atrophy in association with
Addison's Disease strongly support the view that the
symptoms of the disease are due to loss of function of the

The absence of symptoms of Addison's Disease when
first noticed. The suprarenals are apparently destroyed
by Carcinoma is probably due to death occurring
before the symptoms had time to develop.

Lesions of the suprarenal glands are present in 88% of
cases of Addison's Disease.

In cases where there is no lesion of the suprarenals but
a lesion of the sympathetic ganglia,
The sympathetic ganglia & the sympathetic have been
attacked by the inflammatory process.
1. a stage of irritation is shown by redness & swelling.
2. a stage of atrophy & fatty degeneration.
But in many cases of Addison's Disease the sensory
structures have been healthy, thus the incidence of changes in the ganglia or sympathetic includes any causal factors in the production of the diverse other anatomical changes.

The thymus gland is sometimes persistent and enlarged. It is interesting to note that, as enlargement occurs in euthymic gastric sometimes in cirrhosis and accompanying disease of other digestive glands, pigmentation of the peritoneum has been met with in the small intestine. (Allchin "Pigment of small intestine." Tr. Path. Soc. Lond. 1890-91 26:1111. 302).

Pathology.

Some anaemia generally accompanies Addison's disease. In four cases (Schirchoff) the red cells before treatment numbered from 2,703,000 to 3,280,000. Neumann reported a still more severe case, 1,200,000. Morphological changes are not marked but microcytosis is abundant. Leucocytes are commonly diminished but sometimes increased or subject to secondary variation of anaemia. In some white cells are sometimes present.

Another class of case shows an excess of red cells, exceeding 5,000,000. In Addison's disease with great increase of red cells. Deutsche Med. Wochenschr. Zeit. 1894.
H. Neumann. This case ended in recovery.

Jeminesky found that the haemoglobin weight in the early stages exceeds the normal.

The pigmentary deposit has been thought to be due to minute thrombi, a haemorrhage in the superficial vessels. Rinkel & Lefkowith — the latter observed the chomatization of red cells in pigmentated areas.

(Clinical Pathology of the Blood, Swiny.)

Jeminesky thought that Addison's Disease was associated with a qualitative rather than a quantitative change in the haemoglobin of the blood, thereby resulting in an insufficient supply of oxygen to the tissues.

He examined two cases of Addison's Disease with special reference to the pigment by Graedel's Spectro

Photometric method, thereby estimating the relative amounts of oxyhaemoglobin and reduced haemoglobin.

He found in advanced cases a greater amount of reduced haemoglobin than is present in normal blood at times more reduced haemoglobin than oxy-

haemoglobin. When improvement occurred there was an increase in the proportion of the

Oxyhaemoglobin at the expense of the reduced haemoglobin. The total haemoglobin of the blood remained constant (Clinical Path. of the Blood by Swiny).
Here are three theories as to the method by which the symptoms of Addison's Disease are produced.

1. The Nervous Theory.

2. The Theory of Adrenal Inadequacy.

3. Dual Theory (Byron Bramwell).

In the Nervous Theory the important element is the lesion of the sympathetic. The changes are first, irritative giving rise to vomiting and fermentation, later degenerative changes occur associated with great debility and collapse.

2nd. The absence of the internal secretion.

In blood the Adrenals contain in their medulla an active principle which raises blood pressure.

This has been shown by Oliver Schäfer to be absent in the Adrenals from a case of Addison's Disease. The fact that in Addison we have low blood pressure & muscular weakness is that the degenerated extract when administered relieves these symptoms favours this theory.

3rd. The Dual theory is a compromise and it explains all cases as far as is known at present. Byron Bramwell holds that Addison's Disease is due to a combination of degeneratve inadequacy & direct irritation of the
Sympathetic mesenteric ganglia.

Physiology.

The suprarenal bodies are essential to life (Brown-Séquard) death followed removal of the adrenals, in animals, preceded by muscular contraction & other symptoms somewhat analogous to those seen in Addison's Disease.

Two views have been put forward as to the function of the adrenal glands.

1. That they are excretory
2. That they provide a secretion which is necessary to health.

It has not been proved that they are excretory.

Stöhr & Oliver have shown that the theory of providing an internal secretion is probably correct. They found that the medulla of the adrenal gland yielded an extract which caused a marked rise of blood pressure when injected into the circulation due to constriction of the arteries.

Signs

An insidious onset of varying duration without characteristic features.

Usually the patient has been losing strength for some time before seeking advice.

Gastric trouble is generally the first thing noticed.
By the patient. General dilution is gastro-intestinal dilution as a rule precede the pigmentation but not always. The subcutaneous fat is not lost.

Probably in all cases of apparent acute onset the sinister character of the disease has escaped notice.

Pigmentation is the most prominent symptoms; it is very variable both in degree and in time of appearance. It may appear early or late in the course of the disease.

It may be absent (case of Addison's disease without pigmentation. Connell. Lancet Lond. 1897. 1. 260) or it may be slight, or of considerable intensity.

Occasionally it has preceded all other symptoms by years (Bronzing of the skin for 8 years. To. Path. See Lond. 1879. XXX. 346 Goodhart).

Also a Mizner's case quoted by Greenhow, pigmented lasting seven years before symptoms appeared.

The bronzing is an exaggeration of the normal deposit of pigment.

Large areas are usually discoloured, then being a gradual shading off of tint into the natural colour of the skin.

The exposed parts are first attacked, such as the face, neck & backs of hands. Then the parts naturally pigmented such as the amilla...
A second, dorsal surface of the forearm, genitale, and glans. Thirdly, due to pressure or slight injury, e.g. Justin Brasses. Less it shall be noted hereon in which the whole thickness of the skin has been destroyed remain white.

In the patches of pigmented area small darker spots may be seen like small moths. Greenhow consider these important in diagnosis. The Zona Alba is sometimes pigmented.

Dermosporosomes may occasionally show pigmentation, e.g. the lips where they come in contact, also the tongue (Case of marked pigmentation of Tongue in Addison’s Disease. Lancet 1883 Whitten).

Pigmentation in these sites is usually due to irritation, e.g. from carious teeth.

Pigmentation of the Zona Alba has been recorded (Dr. Path. To. Lancet 1886-5 xxxvi 449 Taylor).

Pellagra is ushered in by a feeling of tiredness becoming more and more marked until the slightest motion is impossible. Gastrication does not as a rule accompany the muscular weakness. There is no peripheral neuritis. For Pellagra is often caused
of great debility there is not the striking loss of muscular power.

Circulatory System. The heart's action is feeble. This is shown by the small, soft, and sensibility to be felt at the wrist or also in the fatal syncope-like attacks.

The extremities are cold. Palpitation or shortness of breath are frequent on movement.

The temperature is usually normal, but can be high shortly before death have been recorded (Maclean Brit. Med. Jour 1886).

Gastro Intestinal Symptoms.

The tongue is usually clean. Appetite variable often capricious. An early symptom is loss of desire for food which later passes into anorexia.

Nausea & Vomiting are generally met with being always present in the later stages & often being so continuous as to cause death from exhaustion.

Confliction the result of loss of muscular tone is common, but severe attacks of diarrhoea may occur at intervals sometimes uncontrollable leading to death.
Nervous System.

There is general depression with loss of tone, impairment of special senses, sight, hearing.

Mental processes generally remain clear till final coma or delirium.

During the unconscious stage muscular twitchings or rigidity, or even general convulsions point to the irritation of the nervous system.

Headache, stiffness often associated with fainting are frequent.

Pain in the limbs, back, abdomen are sometimes complained of. The lumbar pain is probably due to an extension of inflammation from the adrenals.

The urinary system presents no abnormal feature.

Progress of the Disease — is marked by exacerbations during which all the symptoms are intensified. The patient makes an incomplete rally, the exacerbation proceeds pari passu with these attacks, though diminished in the remissive periods, remains more marked than in the last attack.

Very acute cases may be fatal without remission, but one of the constitutional symptoms is constant — vomiting. Muzzle in one case, fainting
a breast tumor in the Cardiac type.
Throughout you have extreme Asthenia.
Duration of the disease is very variable, from a few weeks to two years.
(Rapid onset of Addison Disease. London 1895 p. 283)

Dorwin & other cases by EWALD "Miththeilungen fallen von seit tödlich verlautenden Insuffizienz der Nebenniere" Berlin, Klein. Wissenschaft 1893.

The average duration is 18 months.
Termination may be gradual from Asthenia or typhoid semiconvulsive state, or sudden by syncope often before the patient is bedridden. (Case of Addison sudden death. Stone, London 1895 p. 284).

Rupture or evisceration may be the immediate cause of death.

Progress:
The disease when diagnosed is evident is fatal, but it is possible that arrest of wasting may occur after symptoms of slight intensity.
Cases of recovery have been recorded (Brit. Med. Jour. 1895 II, 463 Jones). (Also by Neumann in the Deutsche Arch. Wissenschaft. Leipzig).
Diagnosis

In well marked examples this is easy but as a rule it can only be arrived at by a process of exclusion from:

1. Prolonged Pregnancy,
   Maligant disease of the Peritoneum accompanied by facial pigmentation.
2. Abdominal diseases by compression of the lymphatics of the suprarenals cause the condition in one of Addison's Disease e.g. Lymphosarcoma.
3. Fever diseases especially in Hepatic Cirrhosis (Hunt)
   marked pigmentation of skin may occur.
4. Melanoderm has been confounded with pigmentation
5. Granuloc disease. Pregnancy and uterine irritation
   all giving rise to pigmentation.
6. Granuloc kidney, Chronic Plasmon, Malarial Palla
   anaemia, Melanosis. Consanguinity genetic - here
   the pigmentation may be great.
7. Rheumatic arthritis, Osteopyria also produce a
discoloration of the skin. Arsenic given over long
   periods. Diabetes sometimes called brown diabetes
   because of this condition. Specific diseases.
   Exposure to Sun - coal etc. Also occupation
   must be borne in mind.
Addison's Disease without pigmentation is mainly diagnosed by exclusion from Pernicious Anemia, Polyic Anemia & Bright's Disease.

Treatment.
This falls into two classes.
First the replacement of the natural internal secretion by preparations of the gland.
Second the symptomatic treatment in general principle.

The suprarenal extract was first given by subcutaneous injection but since Whitebread & Schaffer have shown that the principal hydrocortisone acid do not impair its action it is simply given by the mouth in the extract in the form of a pill.
The thymus gland is usually employed.
One pill equal to 0.5 g of gland substance is given twice daily. Probably this dose can be greatly increased.
The active principle is present in the medulla & not in the cortex of the gland but since the suprarenal extract is prepared from the whole gland the amount of active principle is uncertain.

In one case where simple atrophy of the glands was probably the condition great abatement of symptoms & slowing of pigmentation followed.
Treatment by raw meal capsules of bees. The patient
relapsed when this treatment was discontinued and
improved when resumed. (Stockman)

These cases in which Hyper-Aconitism progression in
present seem to derive no benefit from this extract-
treatment.

No cases have been reported in which best results
followed treatment.

The results vary. Temporary improvement in
strength a some diminution of pigmentation is
almost invariably followed by relapse.

Treatment still be continued when improvement
has taken place.

Byron Bramwell (I). regards Hyper-Aconitism
as Glandular Inadaptainty or an irritation of the
sympathetic. He believes that in cases of failure these
are adhesions to irritations of the sympathetic.
In cases where the adrenal extract does not give satisfactory
results, there is probably only glandular insufficiency.

General Treatment.

First in bed is important. During any exacerbation
of symptoms especially when there is any tendency
to apoplexy.

Avoidance of all strain mental or physical
Singly digestible not irritating food should be given.
Any constipation must be treated by the mildest
measures. Restrains diarrhoea by Opium & Bismuth.
Vomiting should be treated in the ordinary way.
Tonics such as Strophanthus, Arsenic & Iron
may be given but with doubtful benefit.
The active principle of the Suprarenal may be
given:
1st., as fresh usual capsules - now.
2nd., as an extract either dry or liquid.
It exercises a general tonic effect on all involuntary
muscles, strengthens the heart's action, slows &
regulates the pulse.
Intravenous injection produces the maximum effect.
The suprarenal extract is of such strength that
90 is equal to 8 in of fresh suprarenal sheep
substance.
Other mention that out of 97 cases of Addison's
Disease treated by suprarenal extract:
9, grew worse
43, no effect
31, temporary improvement
16, permanently relieved.
(Maria Varanini, Klein had) gave 165 tablets, 0005
gram of not in a case of Addison's Disease with no
result. Med. Annual 1905.) But a case
treated by Doeks with supernumeral extract of Wall thirse daily improved greatly - Med. Annual 1905
Case 1.

J. S. aged 40, was first seen August 7, 1883. At that date he had been acting for two years, was thought to be anemic. He had lost 30 lb. in weight & complained that his mental & bodily powers were failing, he being thereby confined for his business of grocer's traveller. His memory was faulty & he suffered from extreme depression. He was easily fatigued by the slightest exertion. Shortness of breath, giddiness & faintness were also troublesome. He had been losing weight in spite of a good appetite. There were occasional attacks of weakness. The bowels tended to constipation. Although it was very warm weather he always felt chilly. A specialist whom he had recently seen thought the condition Senesderma + Anaemia. He had never had jaundice.

Physical Examination. Temperature subnormal. The patient was found to be fairly well nourished. There was some wasting of muscles but not of fat. No edema. The face was extremely pallid. Hair dark. Conjunctiva was melanotic. Hands were glossy. Fingertips blue & cold.
Skin & Musca Membranes

The skin was smooth & delicate. The colour of the skin generally was markedly white in contrast with well-defined patches of pigmentation which did not fade into the surrounding whiteness.

There was no pigmentation on the face but some patches of leucoderma near the lips.

The backs of the fingers were discoloured - the rest of the hand was free.

Scattered patches were found on the extremum surface of the limbs.

The back & other places where pigmentation is normally found were all deeply pigmented.

On the inner aspect of the thighs the pigmentation was strikingly symmetrical.

The lower part of the abdomen exhibited most discolouration. The penis was almost black having a pencil-like appearance, & the scrotum was much discoloured.

There was no discoloration on the front of the chest.

Most patches were present on the shoulders & the spinous of the vertebrae in the dorsal region were discoloured. One area of discoloration corresponded to the lirae. The tips at the junction of skin & Musca Membrane showed pigmentation, & also the genae.
Circulatory System:
Signs of cyanosis of the finger ends.
False regular, small, extremely soft and compressible. Barely perceptible at the wrist.
Heart's impulses felt with difficulty but found in position.
No increase of distress.
Heart sounds were faint - the first approximating in duration to the second.
A diastolic systolic murmur could be heard at the base of the chest in the neck.

Abdomen Abdominal:
Tongue was dry. No apparent dyspepsia. The appetite good. Occasional vomiting. Bowel
inclined to constipation. No free HCl.
There was a great tenderness over the epigastrium.
Weight hypochondriac region, but nothing
abnormal could be felt.
There was no similar pain.
Liver & spleen did not be felt.

Nervous System:
An incapacity for mental exertion was a prominent
feature. Headache & giddiness were frequent.
Anemia was a trying symptom.
Under treatment temporary improvement lasting for four weeks occurred. The occasional vomiting ceased. The patient gained 13 lb. in weight. There was a decided increase of strength - the patient after the first fortnight being able to move about. The memory improved & sleep returned.

In September the weather broke up, confining the patient to the house.

There was a sudden return of the vomiting & in spite of all treatment persisted in slight remissions. The patient was entirely confined to bed. Death ensued on Aug 19th from syncope, precipitated by severe vomiting &continued diarrhoea.

There was no apparent increase of pigmentation in the last six weeks & no wasting.

Treatment by complete rest & open air was instituted. Drug treatment consisted in gr. V 5
Infusional Infant Three daily. Arsenic was also given in increasing doses on account of the anaemia.

The resulting improvement was marked, but did not last. The syncope was relieved by the
recumbent posture. Vomiting was the most troublesome symptom and drugs afforded relief.

Sedation with codeine was given during a period of two weeks. A stimulant, administered whenever required.

Post Mortem.
Body fairly well preserved. The amount of subcutaneous fat being rather striking.
The pigmentation was well marked as above described & had not altered.

Beyond the absence of the suprarenals, nothing abnormal was found in the abdomen.

Heart was pale & flabby & smaller than normal
No evidence of tubercle in the body.
Case 2.

J. W., aged 36. Gardner. Was first seen July 6, 1905
Complained of great prostration & weakness, feeling
faint on exertion. He had had fainting attacks
& thought he had "a touch of the seen" two weeks
before. He was quite unable to attend to his
duties & had been getting rapidly weaker.
There had been three attacks of severe vomiting &
diarrhoea the 3 weeks prior to seeking advice.
He suffered from pain in the back & headache.
He had always been thin & tanned readily
with the sun, & though it was summer time he
always felt cold.

On exam examination he stated that he had not
felt well for over a year, but only in the past
fortnight did he think it necessary to seek advice.

Physical Examination.
No oedema. There was marked anaemia - no
subcutaneous fat, the muscles were small & thin.

The face was deeply & evenly bronzed. The
colour being so marked as to suggest Indian ex-
trusion. HisCHEST showed freely white
against the surrounding dark colour.
Hair was dark - expression of face gloomy in the extreme
Hands were thin, cold - external surface almost brown - the palms almost white.

Temperature subnormal.

Skin, mucous membrane
There was uniform discolouration slightly more marked in the exposed parts and the normal places where pigment is found.
The skin felt soft but dry.
There was a line of pigmentation at the junction of the skin & mucous membrane of the lower lip.

Circulatory system.
Shortness of breath & faintness were prominent symptom. Pulse regular 120, small, soft, compressible.

Heart: superficially hardly perceptible.
No increase of dulness. Heart sound, feels no murmurs.

Abdominal
Tongue very clear. There was nausea vomiting great inability to take food. Tendency to diarrhoea pain in back. Nothing abnormal else felt in abdomen.
Urinary system: normal.

Nervous system:

Extreme depression, intense irritability, diminution of speech. Sense of hearing impaired. Mentally clear.

Diagnosis:

The pigmentation combined with gastric atonic symptomatology produced a typical picture of Addison's disease.

Treatment:

Rest in bed with the greatest amount of fresh air obtainable. Careful feeding with milk and albumen water combined with administration of hypophyseal extract.

In the course of ten days - diarrhea ceased and vomiting diminished but a tendency to nausea was marked even in the recumbent position.

The slight improvement quickly gave place to a relapse - the distresses returning and vomiting being almost continuous.

Restful feeding was impossible owing to diarrhoea. The effect on the hypophyseal gland was now given hypodermically in 100 in doses of 5 c.c. per day.
The patient rapidly became moribund and died Aug. 10. 05.
This was probably an instance of an insidious onset with an acute termination.
The general segmentation pointed to the condition having existed for some considerable time.
No post-mortem was performed.

Case 3.
L. D. age 19. Housemaid. First seen Dec. 1904 when the following history was obtained.
She had enjoyed good health till November 1903 when she had a severe chill which she did not throw off. In April 1904 a troublesome cough set in and she noticed the extreme loss of weight and therefore consulted a doctor.
She understood she was suffering from anaemia of that one of her lungs was affected.
From then till December she remained in a fitful state of health, subject to fainting attacks.
Her friends noticed how thin she had become. She slept badly and often walked in her sleep. She said her mind "felt weak".
At this time complained of pain in the left hip which rest did not relieve.

Family History:
History of Tuberculin in Father side.

The history of 'Tuberculin Sensitivity'.

Physical Examination:
Considerable ascension was a prominent feature. There were old scars on the neck of tuberculin glands - on both sides but no infiltration. The muscles as well as the fat were greatly wasted.

No oedema. Face pale with anemic looking, thin, dark. Presence glossy conjunctiva.

Hands were cold and blue with finger tips blunted. Temperature normal.

Skin x Membrane

The skin was very harsh and dry. There was no discoloration anywhere.
The mucous membrane was pale and anaemic.

Circulatory System:
The pulse was regular, small and rapid - 116.
Breath compressible. Bruit heard in the neck.

Slight increase of the extremities.

Skin not normal in position but feels dry.

No diminution of respiration.

Heart sounds feeble, no murmurs.

Tendency to syncopeal attacks.

Shortness of breath on exertion.

Lungs.

Impaired movement of right area - weak breath sounds, no rales - otherwise normal.

Alimentary System

Appetite ravenous. Attacks of vomiting at infrequent intervals.

Tongue red - raw - almost looks diabetic.

Constipated.

Nothing abnormal was felt in the abdomen.

泌尿 System

No sugar or albumen.

No albumin on Occasional inspection.

Renal function normal for 6 months.

Nervous System

Motority, mentality, & sensory were marked
Stephanus & often headache.

Pain in the left knee was a prominent symptom.

Menderes Born & Spina.

Evidence of Rheumatic arthritis especially marked in left knee. Pain & fixation of limb almost resembling early lupus disease.

There was grating in the shoulder & knee, less marked after movement.

There was considerable muscular wasting especially marked in the left thigh & about the shoulders.

Progress of the case.

The patient was put on Arsenic & Iron with great benefit to the Rheumatic condition & improved greatly - gaining flesh & strength & being able to get about.

This lasted till Aug 1805 - a period of 8 months - then a sudden collapse occurred & the rapid wasting associated with vomiting & syncope attacks.

Notwithstanding the vomiting the appetite was excessive & the thirst great.

His urine was again tested for sugar & albumen.
but with new result.
The patient was kept in bed & carefully watched.
The motions were examined & much undigested food found, especially milk.
In all manner of food the patient improved, the vomiting ceased. Raw meat juice was added in miniscule amounts & milk cut off.
At this date mid Aug 1805 slight discoloration was noticed around the mouth for the first time, but none elsewhere.
Improvement was maintained & the gained weight. At the end of September she was able to be up.
Her mother then called attention to the staining of her combinations, especially marked where her stays pressed, there was a slight discoloration of the corresponding areas of the skin namely the waist & the front of the chest (not Twain Verricos)
This train of symptoms prompted to administer Oinone & treatment by subcutaneous extract was commenced & Tymia daily.
There was again a relapse with frequent vomiting & the patient went down to 40 at 10/30.
The bed were dyspeptic attacks with shortness of breath.

During October and November she was kept in bed and then there was a diminution of the fainting attacks in vomiting.

In December a sudden and rapidly progressive rapid improvement set in. The patient sat on weight and was steadily gaining over a stone. The vomiting had entirely ceased and the patient was able to be dressed.

The chief complaint was her constipation to cold.

From this date improvement was maintained. There were no gastro-intestinal symptoms except very slight vomiting.

Constipation has been absent since the beginning of the illness.

During the last four months the treatment with the enemata inexact has been continued. The patient taking from five to a day.

The pigmentation is now only just visible. She has gained weight and her digestive disturbances and vomiting has ceased.
No pain in extremities. No symptoms of joint disease have been observed. There has been no return of the joint condition. The patient is able to take short walks without discomfort.

Throughout the disease there has been no diarrhea. No other peculiarities have been noticed as in Rheumatoid Arthritis.

The continued improvement has rendered a continued course of digital and extract unnecessary. The improvement continues to the present date.

Considering the rarity of the disease the presence of these cases, within the last three years, grown in a small rural district, is of some interest.

Comparing the above cases pigmentations was present in all three and especially marked in the two fatal cases. J. S. (case 1) showed very marked pigmentations. The pigmented areas being sharply defined owing to the presence of patches of leucoderma.
In G.W. (Case 3) Pigmentation was just the opposite being almost uniform resembling the dark races.

In both pigmentation of lips was present.

In the female patient The pigmentation was comparatively slight - I only noticed on rect of gums.

None of his mucous membranes were discoloured. Vomiting & fainting attacks preceded the pigmentation by some months.

Vomiting & diarrhea were the more severe features of J.S. & G.W.'s cases eventually leading to death.

In the female case the vomiting was severe but there was no diarrhea.

In all three cases dyspeptic attacks of varying intensity occurred, being the immediate cause of death in case 2.

J.S. was fairly well nourished with plenty of subcutaneous fat - smooth & supple skin differing with the association of hard dry skin of cases 2 & 3.

Anemia was very marked in the first two cases less marked in the third.

All three patients suffered from irritability depression & dyspnoea.

J.S. had epigastric tenderness & also in right
Hydrochloruric.

It is interesting to note that post mortem. The disappearance of the depressors was the only change noticed. There was no melting together of surrounding nervous structures.

This case could have benefited from the administration of Suprarenal extract of Dr. Macmillan's conjoint theory is true. One would have expected a fibrinous change in the depressors.

In G.W. we had severe pain in the back. No post mortem was permitted.

In the female case the presence of Rheumatism Articular probably accounted for her emaciation. This case had all the appearance of a Diabetic.

The pigmentation which appeared months after the Rheumatistic condition was not due to this.

Treatment

Considering that the disease is due to loss of function of the Suprarenal, the administration of the Suprarenal extract is the only rational procedure.

Suprarenal extract was given in all cases.
with temporary improvement in case 1.

1. Improvement in case 2.

2. In case 3 no improvement resulted in the

two months of administration, whereas a sudden
improvement set in which has since been
maintained.

It is difficult to say whether this
improvement is due to the extract or to
natural arrest or remission of the disease.

In cases where symptoms of disease are
severe it is doubtful whether the improvement
extinct given by the month is absorbed.
Hence in case 3 digital preparation was
administered hypodermically.

Although the open air treatment wasted
in all 3 cases, special interest attached
to their method of treatment after
reading Byron Bramwell's article in
The Post Med. Jour Oct 1905 in which

got improvement took place in a case of

Addison's Disease under open air treatment-
The administration of Suprarenal extract.
Discussion.

A series of pulse tracings taken before and during the administration of supramaximal extract might be of value in prognosis.

A careful note should be made of the character and regularity of the pulse.

It is still open to question whether the action principle is exercised by the kidneys.

In cases of Addison's disease there have beenart. velocis.

It might be interesting to know whether an increase of supramaximal secretion can occur similarly in its effect to the condition seen in supplicative gout - a high arterial tension and slow pulse.

The action principle has been given in detail but there was no increase of blood pressure (given been in every case).

In Addison's disease there is no tendency to Purpura or haemorrhage, which considering the destruction of skin and muscle tissue is worthy of note. Is the fact of haemorrhage not taking place due to feeble circulation?
No case of Addison's disease in connection with
Intestinal Ulceration has ever been reported - it will
be interesting to note whether this high arterial
tension of renal disease will be lowered - provided
the renal disease did not prove fatal first.

Large doses of suspensal extract killed animals
I made from the healthy gland. But the active
principle in that where Addison's disease exists.
The first case mentioned above bears out
Addison's theory.

Could you have Addison's Disease in Addison?

Much attention has been directed lately to the
treatment of Addison's Disease by the administration
of suspensal extract.

In some cases it appears to have done good
reports of cure are to hand.

In the majority of cases no benefit has resulted,
but it is early days to give a positive opinion.
The inconsistent results of treatment by adrenal
extract support T. Bramwell's view that though
some cases may be due to inadequacy. This remember
are due to an additional lesion of the sympathetic.
References were made to the following:
Robboston. Stockman (Griston). Allbut.
Encyclopaedia Medicina.
The book of Treatment. Medical Annals.
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