The Wightman Prize, of about £15, is awarded annually to the Student of the Class of Clinical Medicine who shall write the best Report and Commentary on cases treated in the University Clinical Wards during the Academic year. Candidates are reminded that the permission of the Physician of the Ward must be obtained before any case under his charge is made use of, and that this permission does not authorise the publication of the case. The Essays to be lodged with the Dean of the Faculty of Medicine on or before 1st July.

Set of 5 cases taken by permission of Professor Wyllie in the University Clinical Wards, during the current session, & submitted for competition for The Wightman Prize

by William D. D. Small,
10 Glenorchy Terrace, Edinburgh.

1. Richard Cairns – Right Homonymous Hemianopia
2. Annie Birrell – Hypertension Gravis
3. John Lindsay – Aortic Incompetence, &c.
4. Annie Ballingall – Neuromastia: Movable Kidney
5. William Scott – Progressive Muscular Atrophy
The case of

Richard Cairns.

(Right Homonymous Hemianopsia.)

Taken by permission of Prof. Weirich
by W. D. D. Small.
Richard Carrus  Aged 56. Married.  
6 children - 3 of which are alive.  
Occupation: - labourer - works in the 
    Edinburgh mills.  
Native Place - Edinburgh.  
Present Residence - 12 St. Ruth Place, Leith. 
Recommended by Dr. Millard.  
Admitted on February 8th 1910 to 
Ward 344. R.I.E.

Complaint: -
Patient sought admission because of a severe headache which he 
has had constantly for the last 
fortnight & which is still present. 
He also complains of loss of sight 
in the right eye & incontinence 
of urine.

History of Present Illness: -
About a fortnight ago patient was 
out walking in a cold wind & 
contracted what he believed to be 
a chill. On getting home he had
A severe attack of sneezing & mucus
watery discharge from the right nostril.
He went to bed 1 1/2 hours later & a severe headache came on, which has been constant ever since, keeping him from sleeping.
Patient says he has not had 6 hours' sleep during the last fortnight.

The pain was severe at its onset & was general all over the head, but was worst over the right temple. It was relieved by heat.

On the night he took ill & every night since, patient has had to get up every hour to pass his water. He was not troubled with frequency of micturition during the day while he remained at work, & did not pass water more than once every 5 or 6 hours, but after it became necessary for him to keep his bed altogether, the
frequency became as bad during the day as through the night.

About a week after the onset of his symptoms, patient was reading the "Evening News" and noticed that he could only see one word in a line at the same time, that he had therefore to move his head in order to read. This was the first occasion he noticed that there was anything wrong with his sight. He thought the right eye only to be affected.

Patient remained at work until a week later [i.e. for 2 weeks after the onset of his first symptoms] when the headache which had remained constant suddenly became much worse. He then sent for his doctor who gave him 2 powders. One of these was taken at night reduced the pain enabling patient to sleep. The effect was only temporary.

The second powder was taken next
morning had no effect on the again pain — which, by this time, had become as severe as ever.

Dr. Brillard then gave patient a note to Dr. Sym, of the Eye Department, Royal Infirmary.

Dr. Sym examined patient’s eyes & sent him back again to Dr. Brillard with a letter. He was then advised to come to Ward 34.

**Previous Health:**

Patient’s health has always been good.

He had a severe attack of diarrhoea when a soldier in Malta about 30 years ago. Shortly afterwards he had a severe attack of gonorrhoea. He says he has never had syphilis.

Two months ago patient was in Ward 34 suffering from Brown-Sequard’s Paralysis 4 & was completely cured. There has been no recurrence.
Social Conditions & Habits:

Patient's work is very unhealthy: he works 10 hours per day, 8 of which he spends in the sewers. Smokes 2 ounces of tobacco per week.

Has taken no alcohol for the past 6 or 7 years but formerly was a very heavy drinker.

Family History:

Father died at 66 of old age.
Mother died at 55 of bronchitis.
Two brothers & one sister dead—cause unknown.
Two sisters & one brother alive well.

Patient has 3 sons alive & well: he had 3 other children who died in infancy, the oldest being 10 months old. They were the last three born.
Present Condition.

General Condition

Patient is a well developed man - height 5 ft. 5¾ ins. - weight 11 stones 7¾ lb.

His general muscularity is good but the muscles are flabby.

He is confined to bed that a somewhat anxious & at times dazed expression.

Temperature 98°F. with very little variation.

Skin, Subcutaneous Tissues

Patient is not troubled with perspiration at present, but he often has severe sweating of the head, neck lasting all night.

This has no connection with his present illness.

There are no skin eruptions & no jaundice, lividity or droopy.

There is considerable patchy pigmentation of a dusky brown colour.
on the back of the neck; & a small scar over the occiput. Also the marks of 2 blisters on the back about the level of the 4th Dorsal vertebra.

Patient is somewhat pale. He has a good many teeth, but they are very bad & a number are quite loose. He says at one time he had a double row below, but there are no signs of this now.

**Haemopoietic System.**

There are no enlarged lymphatic glands. Spleen & thyroid are normal.

**Nervous System.**

Patient is a man of average intelligence. He has no impairment of consciousness & his memory is good. He has no abnormality or interference.
with spoken speech, he has never had any.

Written speech is imperfect owing to his defective vision. He cannot read small print or writing, but can read large print without much difficulty.

He writes very badly and makes mistakes in spelling, occasionally adds extra limbs to letters “m,” “n,” “v.” This is however presumably due to ignorance; patient says he was never a good writer or speller. He never was at school to learn.

Patient is a bad sleeper: he has great difficulty in going off to sleep. Wakes regularly almost every hour during the night. Of late patient’s sleep has been further disturbed by the necessity of rising to make water; this, he has had to do every hour.

There is no paralysis of any sort. No incoordination of movement. Muscular sense is unimpaired & there
is no Rombergism & no abnormality of gait.

Reflexes:—
The knee-jerks are slightly exaggerated especially the left. Babiński’s sign is present well-marked equally so on both sides. There is slight ankle-clonus on the left side but none on the right. There is no knee-clonus.

Patient has considerable incontinence of urine which causes him much inconvenience.

Sensory functions:—
Patient feels quite well except for his constant headache. He has no vertigo.

His headache is all over the head but is worst at two points:—
1. Over the eyes—especially the right.
2. One & a half inches behind the left ear.

The headache is always worse at night & often keeps patient from sleeping.
There is no pain on pressure over the skull.

Tactile sensibility is unimpaired except over a small area on the dorsum of the right foot. This area is a little larger than a crown piece and is bounded as follows:

In the inside by the outer margin of the tendon of the Extensor Proprius Hallucis; below by the bases of the 3 middle toes; above by a line corresponding to the bases of the
metatarsal bones: internally by a line half an inch internal and parallel to the outer margin of the foot (see diagram). Over this area tactile sensibility is much diminished. Patient cannot distinguish two points as two even as far apart as 1/4 inches. On the other foot he can distinguish them when only 1/6 of an inch apart.

Sensibility to heat and cold is normal all over the body excepting in this same area on the dorsum of the right foot. Here, the patient calls everything that touches him hot, even though it is extremely cold.

Sensibility to pain is everywhere normal.

Vision:

The pupils are equal, react readily both to light and accommodation. Patient is blind in the left half of each retina. He can see
objects in front of him & objects on his left, but nothing at all on the right. This is the case whether the eyes are tested together or singly.

This defect so far as the patient knows began only 10 days before admission. He referred his blindness to the right eye only.

The sight is bad for reading: he can see both near & distant objects distinctly but all print seems to him long lines with no definite form of letters. If the print however be very large he can make it out all right.

Ophthalmoscopic examination show nothing abnormal excepting some congestion of the fundus.

Hearing:
This is deficient in both ears.
Smell & taste are normal.
Genito-urinary System:

Patient passes water every hour, night and day as already stated. He has to make his water the moment he feels the slightest need or it commences to dribble; he is unable to retain it even a few seconds.

He is perfectly conscious of the extent of the dribbling. For about an hour after he has made water he remains perfectly dry; then has another attack of incontinence.

This incontinence is not present when patient is working but always comes on at night or when patient is unoccupied.


Circulatory System:

Pulse - 70 per minute. Regular.
Heart walls slightly thickened.
Radial pulses equal & synchronous.
The heart sounds are very faint.
sometimes the first is reduplicated.
There are no bruits to be heard.
The apex beat is in the 5th
intercostal space, one inch below, 1/2
an inch internal to the nipple, &
3/2 inches from mid-sternum.
The superficial cardiac dullness
is undiminished. The heart is
not dilated.

Respiratory System.
No dyspnoea or trouble with
breathing, no pain in the chest.
Percussion note & vocal fremitus
resonance normal.
The breath sounds are faint &
vesicular in character.

Digestive System.
The tongue is clean. The appetite
good.
Patient has no trouble with digestion.
He is inclined to be constipated.

Summary of Treatment & Progress:

Has practically complete right homonymous hemianopsia [i.e., blindness of the right side of the field of vision of each eye (temporal of right, nasal of left)]. Has also headache & some frequency of micturition.

Urine contains a trace of albumen but no casts.

Given R. Potass. Iodic. gr v.
Let in die re agua.

Feb. 12th 1910. Given Phenaliaq. gr x at 1 a.m. as headache unbearable. Much relieved.

Feb. 13th 1910. Given in addition to the first prescription, Ung. Hydargyri at night.
Feb. 25th 1910. The headache is not nearly so severe now & patient is sleeping at night. There is still some frequency of micturition. The hemianopsia is not now nearly so marked as on admission.

Feb. 28th 1910. Headache has now quite disappeared, the field of vision is much greater. The fundus still shows some engorgement of the veins, but the discs are clear & apparently quite normal.

Mar. 1st 1910. Got up today. Feels very well indeed.

Mar. 3rd 1910. Has had no more headache. Feels very well, but still has frequency of micturition with a trace of albumin. All trace of his hemianopsia has almost gone; he can see far out on the right side now & can read the papers.

Discharged today. Give prescription for Potass. Iodide.
Subsequent History:

A week or so only, after his discharge, Cavins again returned to the Royal Infirmary, suffering this time from Aphasia, but with no trace of his hemianopsia. He was readmitted, & in due course recovered again.

He seems to have remained well ever since.

Notes:

This case is of special interest as recording one of a series of three rare conditions, from which, in close succession, the patient suffered.

In the middle of November 1909, Richard Cavins was admitted to the Royal Infirmary, suffering from Brown-Sigward's Disease. After five weeks' treatment he completely recovered & was discharged on Dec. 24th (1909).
Six weeks later he became afflicted with Right Homonymous Hemianopia – of which the foregoing is an account. He recovered, and was sent out about the beginning of March (3rd).

About 10 days after his discharge he again returned, this time suffering from Aphasia.

Each of these 3 conditions is rare, and each would be of interest in itself, but occurring all three in one patient in rapid succession, one after another, the case is perhaps unique.

Although described above as distinct conditions – Hemianopia & Aphasia are really symptoms, & from the patient’s history plus the examination of his Nervous System, there is little difficulty in coming to the conclusion that they are the result of a cerebral lesion.

Homonymous Hemianopia is due to a lesion of the brain occurring somewhere between the Optic Chiasma
...the higher visual centres in the occipital lobe: it may be anywhere between these limits.

Hemianopsia also occurs in children but is of short duration. The Aphasia, very probably, was due to the same lesion as produced the Hemianopsia.

In many cases patients with Hemianopsia are also aphasic. In this case the symptoms succeeded one another instead of occurring together.

It is probable then that this patient suffered from two distinct lesions of the Central Nervous System, one of which produced the Brown-Squard Disease, the other the Hemianopsia & Aphasia. It is however possible that these two last were produced by separate distinct lesions.

After careful consideration it was thought most probable that the lesions from which the patient suffered were syphilitic in origin.
there are many facts which support this conclusion:

1. That patient suffered from more than one lesion; that his condition might be due to syphilis.
2. That his headache was constantly worst at night in the early morning, keeping him from sleeping.
3. That for many years he was a soldier & was stationed in Malta, where syphilis is very prevalent.
4. That he admits having had gonorrhea; further states that he used to be a very heavy drinker. It is very probable that he may have contracted the disease while intoxicated. Moreover syphilis would probably be obtainable from the same source as the gonorrhea.
5. That of patient's 6 children — while the first three are still alive, the last three died in infancy. It is presumable that the disease had been contracted between the births of
number 3 & number 4, this would account for the very early deaths of numbers 4, 5 
& 6.

2 The results of treatment — the disease becoming cured by the use of antisypililitic remedies.

While no one of the above facts taken alone is absolutely diagnostic of syphilis, yet taken together they form very strong evidence of its probable presence.

Wassermann’s Reaction was not done.

Against the Diagnosis of syphilis we have:

1 That there is not much arterio-sclerosis.

2 That there are no scars which are absolutely diagnostic.

3 Patient’s statement that he has never had that disease.

There is a saying current in the Skin Klinik in Vienna, that “anything a patient says is probably untrue.” It is well known that
patients who have had Syphilis will deny it through thick or thin, even to their medical attendant; it must also be borne in mind that the disease may be innocently acquired; if the patient may not know he has contracted it.

Only positive history is of value in this condition. If the patient denies having had it, one is no further on than before asking the question.

When the patient first came into hospital, suffering from Homonomous Hemianopsia he complained of:

1. Headache — worst at night.
2. Loss of sight in the right eye — of sudden onset.
3. Frequency of incontinence of urine.

He was also found to have the further defect of vision whereby all print (unless very large) appeared as long lines with no definite form
of letters. He had therefore some
degree of word blindness, but that
this was not true complete word-
blindness is shown by the fact
that he could read very large
print.
It is of interest that the patient
first referred his blindness to the
right eye only. As a rule patients
suffering from Homonymous Hemianopia
complain of blindness in one eye
only—the eye corresponding to the
field of vision involved.
The causes of Frequency of
Frequency & Incontinence of Urine
are manifold. In this case no
doubt, there also were of central
origin; but if the other symptoms
pointing to central lesion had not
been present, diagnosis would have
been most difficult—indeed, a certain
diagnosis would have been impossible.
The further point of great interest
in this case was the area of
perturbed sensation on the dorsum of the right foot. This seemed to be the last relic of the Brown-Séquard's Disease; but that it too, tended towards recovery, was shown by sensibility to pain having already returned, while the senses of touch & temperature still remained abnormal. Before the patient was discharged this curious anomaly of sensation had completely disappeared.
The case of

Annie Ballingall

(Kenasthemia: Movable Kidney)

Taken by permission of Prof. Wyllie
by W. D. D. Small.
Annie Ballingall  Aged 37
Unmarried
Occupation - Housewife
Native Place - Edinburgh
Present Residence - 145 Fountainbridge, Edinburgh
Recommended by the Medical Waiting Room admitted to Ward 24 R.I.E. on November 15th 1909

Complaint:
1. Dull pain in the back, worse on exertion, not so severe on lying down.
2. Headaches.

History of Present Illness:
About 3 years ago patient was lifting the end of a heavy bed trying at the same time to put some wad cloth underneath it, when suddenly she felt a sharp pain in the back. She
thought "something" had gone out of place. The pain continued & she had to go to bed where she remained for two days. She did not call in a doctor. The pain gradually got less & patient was soon able to go about again, but a sense of weakness still remained in the back.

The discharge at her next 2 or 3 menstrual periods was considerably increased in amount, but there was no change in character & no dysmenorrhea.

About a year later (i.e. 2 years ago) patient somehow or other got a violent twist to which she attributes her present illness. She is quite aware of the circumstances under which this took place, but will not disclose them: it seems to have been an assault of some sort.

She felt her back rose at the
time, but the pain became much worse at her next menstrual period, which, she thinks, was a few days late in coming on & lasted a shorter time than usual. Patient became alarmed at the pain & sent for her doctor, who told her there was something the matter with her kidneys. He gave her a tonic & told her to wear a flannel binder.

Patient was much better while wearing the binder, but at night when she took it off, she says "she felt as if she were coming to pieces.

The pain never went away completely & patient has had it constantly since its onset except when lying still in bed. As a rule it was dull in character & not very severe; but at times it became much worse & was boring in character."
These attacks of more acute pain might come on at any time but usually did so after patient had been working about. They also often came on during her monthly periods but not at every period. The attacks lasted for from 2 or 3 hours to a whole day. Sometimes they were so severe that she had to go to bed; at other times she did not do so.

Previous Health has always been good; patient knows of no previous illnesses.

Social Conditions & Habits.
Patient has a house with two rooms & a kitchen. She does not keep any lodgers, with whom she has at times a good deal of trouble. Patient is in a position to get plenty of good food, but often has
so much to do that she can neither get time to prepare it nor time to take it comfortably. She says also that lately she has had no appetite and no heart to eat anything; she wonders what she has lived on lately. She has taken so little. She used to take tea 4 or 5 times per day, but of recent she has taken less. She is teetotal.

Family History

Father died 11 years ago aged 64 of bronchitis & asthma with heart complications.

Mother died 3 years ago of jaundice & an enlarged liver at the age of 72.

One sister died 20 years ago in the Dispensary of "fits" at the age of 21.

One brother died 17 years ago of scarlet fever at the age of 12.

Two brothers & two sisters alive &
well. None of them suffer from nervousness.

Present Condition.
Patient is a slightly built woman; height 5 ft. 3 in.; weight 7 st. 9 lb. She wears glasses.
She is slightly nervous & very depressed; it is extremely difficult to get any information out of her; she lies on one side with her knees drawn up & her face half covered with the bed-clothes.

After she is asked a question she does not answer for some moments & often not until the question has been repeated several times.

If asked a leading question she always gives the answer expected, but if the question is asked again (in a different form) she frequently gives the opposite answer. At times she shows very markedly
that she would much rather be left alone.

Patient is confined to bed: her expression is melancholic in the extreme.

Temperature is about a degree subnormal in the morning, rising to normal in the evening: it is very constant in its variation.

**Haemopoietic System.**

The spleen & thyroid are normal: there are no enlarged lymphatic glands.

**Genito-Urinary System.**

Patient has at times had pain at the commencement of micturition & occasionally involuntary dribbling of urine, but neither was severe. Frequently micturition is irregular: one day patient will pass a great deal of urine the next day none at all. This has no relation to
the amount of fluid drunk.

Patient has constantly had the dull pain in the back already described, & at times more acute attacks.

Urine - about 20 ounces in the 24 hours. Acid. Sp. Gr. 1017. No sugar or albumen. The urine is often very high-coloured & has an offensive odour.

The right kidney is easily palpable in the right lumbar region as a rounded tumour which moves with respiration becomes as low down as the umbilicus. It tends to slip upwards from between the fingers when it does so it disappears completely.

Palpation causes the patient no pain. There is no feeling of resistance & no tension of the abdominal muscles.

The left kidney is not palpable. Menstruation began at 13 & is of the 28 day type. It used to last
for 4 or 5 days but lately has lasted only 2 or 3. The amount of discharge is considerably diminished & its character altered. Patient describes it as being "dirty black stuff."

**Circulatory System.**

Patient has no pain that she refers to the heart, but she says her left breast often "burns" as if it were suppurating. The pain has no relation to her monthly periods with regard to its onset but she thinks it is worse at these times.

Pulse 80 per minute, regular, force, fullness & tension moderate. Vessels not thickened.

There is marked pulsation in the supra-clavicular notch towards its right side. A vessel is distinctly palpable & seems to be a thyroidal tine artery.
Both Superficial & Deep Cardiac Dullness are normal in size & position. The heart sounds are closed in all areas.

Digestive System
Since her "twist" patient has often had great uneasiness in the abdomen on getting up in the morning, but has never had any real pain. Frequently she had severe headache at the same time with vomiting.

Patient often vomited & was unable to eat anything: she did not notice the character of the vomit. She ascribed her symptoms to "biliariness."

Patient was not troubled in this way every day but very often: she used to be frightened to go to bed at night because of the thought of the sickness in the
morning. The symptoms described were never present before her accident.

Both headache vomiting usually passed off as the day advanced, but sometimes they lasted all day & occasionally patient was compelled to go to bed.

At times patient is troubled with gaseous eructations; they have no relation to the vomiting or to meals; she did not notice their character.

Patient is usually constipated; her bowels move about once in 3 days & frequently the interval is longer. She habitually takes purgatives — Compound Laxative Powders & Castor Oil.

The abdomen is not distended. Stomach & liver are normal in size & position.

Respiratory System

Healthy in every respect.
Nervous System.

Patient is a highly nervous woman & it is difficult to make much of her. She is very emotional; sometimes she laughs at nothing so much so that her whole bed shakes; usually however she is extremely melancholic & sighs continuously every minute or so.

Patient's eyes have never been good, of late her sight has been getting steadily worse. Dr. Mackay has told her that there is something serious the matter at the back of her eyes & that her sight will continue to get worse worse.

Patient can hardly see at all in artificial light or in the dusk. She is very nervous partly on account of this, the fact that her sight will gradually get worse seems to prey on her mind & she broods over it a great deal.

Patient attributes her nervousness...
chiefly to the fact that 8 years ago she fell off the platform of a railway station one evening in the dusk & narrowly escaped being run over by a train. The accident was due to her sight; patient got a great fright.

Patient wears glasses; from time to time she has had them increased in strength. Now wears very strong concave. Even with them she can only see distinctly objects within about 3 yards of her in broad daylight. She cannot see anything distinctly in the dusk. In artificial light all objects are blurred & she cannot even recognize a person within a foot of her.

All other special senses are normal.

Patient sleeps well but wakeens fairly often during the night. The knee-jerks & adductor jerks are
considerably exaggerated. There is no ankle clonus or Babinski. The motor function is good but walking or work of any sort increases the pain in the back.

Summary of Treatment & Progress:
Nov. 15, 1909. Admitted, put to bed, given light diet &
R. Ducis Domicio 97
Sp. Ammoniae Aromat. M x v
Sp. Chlorofomi M x x
Infus. Gentianae Co. ad 3 fdr.
Sig. Three daily after food.
Nov. 19. Dry cupping of the lumbar regions at night. Sipid bath & rough towel in the morning. Other treatment continued.
Nov. 24. Improving but very weak. Up for 3 hours.
Nov. 30. Up all day & doing some work in the wards. Much less nervous than when admitted.
Retic.

This patient suffered from two conditions, one mental, the other physical; both absolutely distinct and separate, yet each having a most important relationship to the other. Movable kidney and neurasthenia are often found associated together in the same person, and in many cases, the former is the cause of the latter.

This association is most important from the point of view of treatment, as surgeons are becoming more and more convinced that operative interference with the kidney is contra-indicated where the patient is neurasthenic. Neurasthenics are such bad subjects for operation that they seldom make good recoveries, if operated on in their last state, it is usually worse than their first.
Movable kidney occurs most frequently in women between the ages of 20 and 40; the right kidney being twelve times more often affected than the left.

In many cases a mobile kidney gives rise to no trouble whatever, and may only be discovered by chance on making an examination of the abdomen. In these cases when it does cause trouble, the symptoms are very variable indeed. The most constant are:

1. Dragging pain in the back.
2. Digestive disorders.

Very common also is irregularity of micturition: one day the patient will pass a large quantity of urine and the next day none at all. The urine passed is often high-coloured and offensive in odour.

Further, constipation is a common sequence, which is supposed to be
due to a dragging down of the hepatic flexure & thickening of the ascending colon.
This patient presented typically all the symptoms.
The causes of movable kidney are many. Most cases are said to be predisposed to the condition by loss of fat, a congenital lax condition of the peritoneum.
Of exciting causes - violence & the lifting of heavy weights seem to be the most common.
In this case, patient's repeated mishaps certainly provided ample opportunity for such a condition to be established.
The further point is noteworthy: it is a commonly known fact that in movable kidney which gives rise to trouble, the patient's symptoms are worst when for any cause he is below par. In this case the patient was frequently worse when menstruating.
From the history of alteration in
the character of her menstrual discharge, it is probable that in addition there may have been some uterine affection, but owing to the very nervous condition of the patient no examination was made.

Neurasthenia has been defined as "an irritable weakness of the nervous system, which may arise from a great variety of causes and may result in many various symptoms of nervous, mental, and bodily insufficiency." (Smillie, System of Clinical Medicine, Second Edition p. 742.)

The pathology of this condition is quite unknown, but it seems to belong more to Psychiatry than to general medicine, as it is closely allied to, often merges into, melancholia; it differs however from this latter in that there is always a definite cause.

Melancholia is usually stated to be an unhealthy state of melancholy, a morbid depression without a cause, in contrast distinction to the depression
which is liable to come upon anyone after hearing bad news or from other such-like causes. There is however little doubt that depression long continued even although there is a definite cause may lead on to melancholia.

In this case the patient was something more than merely neurasthenic: she seemed to be verging on true melancholia and already developed the slow speech so characteristic of that condition. And yet she had plenty to cause her depression. She was a solitary woman, with no friends for whom she cared or who cared for her: she was in bad health, in poor circumstances, her sight was very bad, further she knew that certainly within a few years she would become totally blind. Surely she had plenty to cause her depression.

In addition there were present numerous other factors which play
A part in the etiology of neurasthenia, such as—dyspepsia, chronic constipation, movable kidney, malnutrition, wrong, also the mental shock she received when she had the accident at the railway station, 8 years before. With so many factors present, it is very difficult to say what was the original cause of her neurasthenia. The fact that her sister died of "fits" would suggest a hereditary predisposition. Then, the various accidents and mishaps to which she had been exposed, would be sufficient to develop the condition, but it was no doubt aggravated by the movable kidney and the loss of sight.

I have endeavoured to show that the definition of melancholia, as at present given by Psychiatrists requires revision; for although, as a rule, there is no definite cause, there is a group of cases which are undoubtedly true melancholias, in
which a definite cause is present, but which, by being constantly in the patient's mind so weakens his brain power that he is unable to raise himself from his depression.

With regard to treatment — in cases such as this, operative interference is out of the question.

It has been said that to fatten a melancholic is to cure him.

In cases of movable kidney also, the patient often becomes much better if he or she puts on weight.

In a case such as this therefore perhaps the best lines to go on are: — Endeavour to fatten the patient & improve her general health by cod-liver oil, good feeding & tonics. Endeavour to remove the irritation of the movable kidney by a properly fitting belt & pad. In addition adopt these auxiliary hygienic methods as useful in neurasthenia — cool baths, rough towel &c. — also correct the
tendency to constipation. In some cases a modified Weir Mitchell treatment is useful.

Neurasthenia, in an advanced state is often very intractable and in many cases the prognosis is not good. More especially in a case such as this where there is an incurable condition of the eyesight. This will act as a continual source of irritation which will keep up the neurasthenia, and tend to hinder recovery.
The case of

John Lindsay

(Otitis media: Aortie incompetence: Kyphosis)
(Adenoids.)

Taken by permission of Professor Wyllie
by W. D. D. Small.
John Lindsay  Aged 11th
Occupation - Schoolboy
Born in Edinburgh.
Present Residence - 12 Bryson Road, Edinburgh.
Recommended by Dr John Thomson & admitted to Ward 34 R.I.E. on May 28th 1910.

Complaint:
Discharge from the left ear.

History of Present Illness:
On May 23rd 1910 patient took a severe aching pain in his left ear. This pain was most acute, & at night kept him from sleeping; it was however a little relieved by heat.

A day or two later the ear commenced to discharge & then the pain became much less severe; but it never went away entirely, & both pain & discharge continued up till
admission on May 28th.

Before admission patient was confined to bed and the ear treated by syringing.

Previous Health:
4 years ago patient had rheumatic fever.
10 years ago he had "spine disease" during which illness he lay in bed in splints for 2 years + 5 months.

Patient has a good home and plenty of good food.

Family History:
Father, mother, 2 brothers and 3 sisters alive and well.
Father has had rheumatic fever once. Otherwise nothing to note.

Present Condition:
Patient is a thin, poorly developed boy, who looks years younger than
his age & weighs only 3 st 5 lbs.

He is pigeon-chested, has a well-marked Antero-posterior curvature of the spine involving the lower 3 cervical & all the Dorsal vertebrae. The convexity of the curvature is backwards & corresponding to this a large rounded prominence may be seen on the back.

From the upper limit of this prominence on both sides a strong muscular slip takes origin & runs outwards & upwards to become attached to the vertebral border of the scapula opposite the root of its spine.

The prominence extends down as low as the first lumbar vertebra.

Patient's general musculature is very poor.

Skin, Subcutaneous Tissues.

Patient does not perspire abnormally. There is no skin eruption, pallor, jaundice, lividity or dropsy. Then
are no marks of syphilis.

Haemopoietic System.
Spleen & thyroid are normal.
There are a few small lymphatic glands to be felt on the left side of the neck, & near them is a small scar \( \frac{3}{4} \) of an inch long.

Circulatory System:
Patient suffers from shortness of breath — worse on exertion.
He has never wakened at night with it, yet really has never given him much trouble.
He has no pain in the praecordia, palpitation or cough & has never had any fainting fits.
Pulse 92 per minute, Regular.
Rice is very sudden & fall equally so: the pulse wave is not sustained at all. Tension is moderate. The radial pulses are equal and
synchronously.

There is nothing to note on inspection of the aortic region & of the pericardium. The aper-beat which is rather diffuse may be seen in the 5th interspace.

There is marked pulsation visible at the root of the neck: it is arterial.

In auscultation:

In the aortic area a harsh rough diastolic bruit may be heard which is propagated down the sternum & also up along the aorta.

Although diastolic in time the bruit is heard most distinctly over the 2nd right costal cartilage. It is also heard very distinctly up along the carotids in the neck (especially the right.) In the aortic area the first sound of the heart is accentuated while the second sound is entirely absent being replaced by
the trunk above mentioned.
In the central area the aortic
trump may be heard faintly.
In the other areas the sounds
are closed but the second sound
is faint.
The apex-beat is situated in
the 5th interspace 2½ inches from
mid- sternum 4 1/2 inches below the
nipple. [Note:—The nipple is abnormally
high being situated over the 3rd rib.]
Superficial Cardiac Dullness:
the right border is the middle
line of the sternum; the left
limit commences at the lower
border of the 4th costal cartilage
and runs downwards and outwards in
a curved manner to the Apex-beat.
Base line 2½ inches.
The deep Cardiac Dullness exceeds
the superficial by half an inch
on all sides.
There is no coldness of the hands
& feet & no clubbing of the finger
nails. The general circulation is well maintained. There is no dropsey.

Respiratory System.
Patient breathes entirely through the mouth, & can only breathe through the nose with great difficulty. There is marked nasal obstruction & the alae nasi are slightly drawn in.
The tonsils are much enlarged & patient has adenoids.
There is no cough, no pain in the chest & no expectoration.
The chest wall is poorly clothed: patient is markedly pigeon-breasted & the lower intercostal spaces are somewhat drawn in; there is a distinct Harrison's sulcus.
The chest does not move at all with respiration. Respiration is abdominal in type - 22 per minute.
Local fremitus is equal on both sides of the chest.
The percussion note is everywhere normal; the breath sounds are muecile.

Nervous System.
Patient is most intelligent. The sleep function is good.
The kneejers are very sluggish for a boy of his age. There is no ankle-clonus or Babinski.
Patient walks quite well but he is very easily tired. There is no Rombergism.
The sensory functions are normal.
Sight is good.
For a week before admission, patient suffered with pain and discharge from the left ear as already described.
Hearing is very defective. With the right ear he can hear the ticking of a watch at a distance.
of 12 inches. With the left ear he cannot hear it further away than 4 inches. The watch used is easily heard by the normal ear at a distance of 3 feet.

Dr. Logan Turner reports that the patient is suffering from acute otitis media of the left ear and that the membrana tympani is perforated.

**Digestive System.**

The appetite is good. There is no pain or un easiness in the abdomen and no vomiting. The bowels are regular there is no diarrhea.

The teeth are good and the gums healthy. The tongue is somewhat furred especially towards the edges.

The abdomen is prominent and moves freely with respiration.

The stomach is slightly smaller.
than usual. The liver is normal.

**Genito-Urinary System.**

Patient has no trouble of any kind with micturition. There is no frequency.

Urine 30 ounces per diem. Sp. Gr. 1024 Neutral. No blood or sugar. There is a trace of albumen.

Neither kidney is palpable.

**Summary of Treatment & Progress.**

On admission on May 28th the left ear was syringed with a half saturated solution of Boracic Acid. This was repeated at frequent intervals. By May 30th the ear condition had much improved; the syringing was continued at less frequent intervals.

In a day or two more, the treatment was stopped as the ear had stopped discharging & the pain was quite gone.
No further treatment was adopted beyond light diet rest in bed. The cardiac condition did not call for treatment as it was giving the patient no trouble & compensation was well established.

Notes.

This patient presents 4 distinct conditions, each of which exhibits certain features of interest.

I. Hyperphoria.

This is the result of what the patient calls “spine disease” which he had when only 4 years old. The deformity left is very great, involving the lower 3 cervical and all the dorsal vertebrae.

From the upper limit of the “hump”
so formed a strong muscular slip runs outwards upwards on each side to become attached to the vertebral border of the corresponding scapula opposite the root of its spine.

What this is, is not very easy to say. It seems to be the Rhomboideus Minor, as it corresponds in its attachments to that muscle; yet normally the Rhomboideus Minor lies deeply, being covered entirely by the Trapezius. There are two possible causes for the patient's spinal curvature:—

1. Pickett's.
2. Pott's Disease.

Which of these actually was responsible it is quite impossible to say definitely as there are now no reliable indications present to go upon; the balance of evidence however seems in favour of Pickett:—

The points in its favour are:—

1. That it is a much commoner condition than Pott's disease, & is very prevalent in
certain localities.

2. That a very large part of the vertebral column is involved; the curvature does not seem angular enough for Pott's Disease.

3. There is slight thickening of the ends of some of the long bones—notably the right radius.

4. The chest is deformed. (But this no doubt is in great part due to the adenoids.)

Against rickets we have that:

1. There is no curvature of any of the long bones.

2. There is no "rickety rossary."

On the other hand—the scar on the neck indicating the removal of tubercular glands favours Pott's Disease: was also does the history that patient was confined to bed for two years and five months.

No information is obtainable which might throw further light on the subject.

II. Aortic Incompetence.

Aortic Incompetence is frequently a
Consequence of Rheumatic Fever seems to have been so in this case.
As a rule Rheumatic Fever prefers the Mitral valve but often enough the Aortic is attacked.
If all heart lesions Aortic Deteriorance is the most serious. It is remarkable how any person can develop such a serious condition as this without the slightest indication of its presence and yet it is well known as one of the commonest causes of sudden death; moreover it gives no warning—not even a minute.
In this case compensation was so efficiently established that the patient complained only of slight breathlessness on exertion—so slight that he did not volunteer any information about it until asked.
Perhaps the reason this heart has troubled him so little is that he has always been more or less of an invalid, and much of his time is spent in bed.
hence his heart has never really been put to the test.
Regarding the bruit itself, it is somewhat exceptional in character. In auscultation, it sounds - from its harshness - and from its propagation - exactly like a systolic bruit, that it is really diastolic is only made out on careful timing.

III. Adenoids.
Only comparatively recently has it come to be recognised, that pharyngeal obstruction due to adenoids produces most wide-spread & disastrous effects on those persons who happen to suffer from the condition. These effects are both bodily & mental. As a rule, the child with adenoids becomes stunted in growth, dull & heavy in mind. In addition he develops a characteristic facies - open mouth & pinched in nostrils - which gives him anything but an intelligent appearance.
Such a patient breathes entirely through
the mouth usually snores loudly at night; in addition his sleep is frequently disturbed by “night terrors.” Further he is predisposed to diphtheria & scarlet fever.

The interference with the free inspiration of air often produces marked deformities of the chest: of these the commonest is the “pigeon breast”; also a drawing in of the ribs along the attachments of the diaphragm constituting a “Harrison’s Scoliosis.” Less common are the “barrel chest” usually associated with Rickets; the “funnel-shaped chest” (trichter-brust) about whose origin there is still considerable controversy. These deformities of the chest increase very much the seriousness of any pulmonary affections which the patient may contract— as well as predisposing to them.

Further, adenoids by interfering with the supply of air to the middle ear, upset the Auditory mechanism & cause the membrana tympani to be drawn in (by the negative pressure produced) = deafness results. If the adenoids be removed in time the deafness will be only temporary, but if not
thickening of the drum takes place producing permanent change resulting sometimes in permanent deafness.

Whenever a child with adenoids complains of deafness, they should be at once removed: the risks of delay are too great.

As in this case—adenoids are a frequent cause of Otitis Media, with all its attendant dangers. From them, organisms travel up the Eustachian tubes and up suppuration in the Middle ear.

Lastly—so wide-spread are the evil effects of adenoids that they may produce Encephalitis sometimes even convulsions.

Wherever practicable their early removal is the sapest treatment.

IV. The Otitis Media in this case was no doubt secondary to the adenoids as already stated. Prognosis is very difficult. Patient's life will probably end suddenly as a result of his cardiac condition, but how long hence it is not possible to predict.
The case of

Annie Purcell

(Gyasthenia Gravis)

Taken by permission of Professor Wyllie
by W. D. D. Small.
Annie Fairclough Aged 40. Single.
Occupation - Housewife.
Native Place - Austrnther.
Present Residence - 15 Clevedon Inn.
Edinburgh.
Recommended by Dr. Cattani & admitted to Ward 24 on June 11th 1910.

Complaint:—
Severe headaches in the back part of the head.
Tiredness in all the muscles of the body but especially in those of the face & jaws. Great fatigue on the slightest exertion, & on eating or speaking.

History of Present Illness:—
In April 1905, patient began to feel weak & was very easily tired.
At first the tired feeling was chiefly in the abdomen & she felt as if she needed something to support
her. Shortly afterwards the face became involved & patient had great difficulty in eating or speaking: at the same time she had a general aching all over the body but worst in the face.

The exertion of chewing made the patient dizzy & dazed to the point of stop - foods to avoid the necessity of mastication, as it exhausted her so much.

About the same time patient became subject to attacks of severe headache, her tiredness gradually got so much worse that she could not take hold of anything - her grip having quite gone.

When lying down at night, she secreed large quantities of saliva, which she had to constantly keep swallowing - so much so that this kept her from sleeping.

All patient's symptoms became much worse as the day wore on. She
also felt especially unwell when she was excited by any emotion, falling at her menstrual periods.

Sometimes she became so exhausted that breathing became a labour and she often wished she did not need to breathe.

She called in her doctor, who treated her for nervous prostration, but she did not improve.

In October (1908), when the true nature of her malady was suspected, she was sent into the Royal Infirmary.

When admitted, she was so weak that she could not smile, could hardly eat or speak; her eyelids fell so heavy that she could not open her eyes in the ordinary way, but had to push the lids up with her fingers.

After admission, patient gradually got worse, entirely lost the power of swallowing, so that she had to be fed through a stomach tube.
After some months treatment with Formic Acid, Strychnine & Massage, she began to improve and went out at the end of May 1906, practically as well as ever.

She remained in good health until October 1907, when she was again admitted to the Royal Infirmary suffering from a similar attack. This time she was in for 12 months & again recovered.

She remained well from the time of her discharge until April 1910, excepting for occasional headaches in the back part of the head & behind the ears. In April 1910, she again began to feel weak & to have difficulty in chewing & swallowing. Some time later she went to Dr. Calmette, who, knowing her previous condition sent her at once to Ward 24, R.I.E.

At present she suffers from general tiredness, much aggravated by the slightest exertion; also a constant
dull aching all over the body - relieved by pressure or massage.
In addition she suffers from headache, aching in the eyes, dizziness on eating, stooping or any exertion. She also feels a constant throbbing all over the body, "as if she had a heart in every part of her." At times she hears hissing or rushing noises in her right ear.

**Previous Health:**

Had scarlet fever measles in childhood. As a result of the latter, her left ear discharged for some time & hearing in that ear became much impaired.

Some years later, patient had a polypus removed from the same ear, which was rendered stone-deaf by the operation.

Seventeen years ago, she had influenza with a relapse. As a result patient was unable to walk without support
for 2 years; she has had a slight stagger ever since.

In 1903 patient had a severe car accident; she fell on her shoulder, but no bones were broken, though she suffered a severe shock. She has never felt the same since. Patient has never had difficulties. She was in Ward 24, R.I.E. from October 1905 to May 1906 again from October 1907 to January 1908 with the same complaint as at present.

**Family History:**

Relatives are all well. None have ever had any nervous trouble. Social conditions are satisfactory.

Patient is tutored.

**General Condition:**

Patient is a slightly built woman.

Weight 7 st. 7 lbs.

General musculature is fair, as far as development is concerned, but
all the muscles are weak.
She is confined to bed & has a placid and expressionless countenance.
Temp. 98°7.

Skin, Subcutaneous Tissues etc.
Patient perspires very profusely when tired, but never does so when she is well. Occasionally she wakes up at night to find herself soaking in perspiration.
There is no lividity or dropsy: the marks of Tubercle or Syphilis.

Haemopoetic System:
There are no enlarged lymphatic glands: spleen & thyroid are normal.

Nervous System:
Patient's general intelligence is good.
Since she first took ill in 1905, her memory has gradually got worse & worse & is now very poor indeed.
Speech is slightly nasal when patient
was at her worst. She could hardly say anything. She still sometimes has great difficulty in saying certain words.

Patient has great difficulty in writing; she cannot hold the pencil without effort. After writing 3 words her arm became so fatigued, that the pencil dropped from her hand. The writing was very imperfect, tremulous.

Signature: Annie B.  [signature]

Sleep function:

Patient sleeps fairly well, but has often difficulty in going off to sleep, being kept awake by the beating sensation all over her body. She often wakes at night with a start and finds herself covered with perspiration.

Motor function:

There is great weakness of all
the voluntary muscles, especially those of
the face, arms & hands.
The grip is completely gone in the
left hand & is only slightly present
in the right.
It causes the patient pain to completely
flex the fingers.
Extention of the arms against
resistance is very slight, & the
effort exhausts the patient very
much.
Coordination of movement is very bad
When asked to touch any part of the
face, with the eyes shut, patient is
always about two inches wide of the
mark. She says she cannot walk
with her eyes shut. There is a
slight stagger in her gait which
seems chiefly due to weakness.
When in Ward 24 on the two previous
occasions, patient showed very well
the Myasthenic reaction to the Faradic
current.
Sensory functions:

Patient has a great sense of weakness and is always tired. Frequently she has headache and is giddy whenever she stoops. There is a constant aching in the muscles. Tactile sensibility is normal to heat, cold, pain, touch.

Sight:

At times patient has drooping of the upper eyelids, and sometimes they feel so heavy that patient cannot open the eyes voluntarily, but has to push the lids up with her hands.

The pupils are unequal: the left is slightly larger than the right. Both react to light, but are very sluggish. Sight is fairly good; patient has never had hemianopsia or diplopia.

Hearing:

She is absolutely deaf in the left ear as already stated.

Hearing is also very defective in the right ear: she can hear a watch.
ticking 6 inches away only: the watch used should be easily heard at a distance of 3 feet.

**Circulatory System:**

At times patient has attacks of breathlessness which come on usually when she is very tired.

She has no pain in the chest beyond the general ache common to the whole body. Occasionally she faints.


Ventricular walls are not thickened.

Radial pulses are equal & synchronous.

The apex-beat is neither visible nor palpable. By auscultation it may be fixed in the 5th interspace, 3½ inches from mid-sternum just external to the nipple line.

The heart sounds are very faint.

In the mitral area is heard a systolic thrill which varies in intensity from day to day. Some days it is
Cord through other days it is much softer rather blowing in character. It is not propagated.
In all other areas the heart sounds are closed.
Superficial Cardiac Dullness:—The right limit is the mid-sternal line; the left limit runs downwards outward along the lower border of the 4th rib, towards the apex beat.
The Deep Dullness exceeds the Superficial by about half an inch on all sides.

Respiratory System:—
At times patient has attacks of dyspnoea as already stated. Often she feels too tired to breathe. She has no cough.
The chest is fairly well clothed. All over, the percussion note is normal. The breath sounds vesicular. There are no accompaniments.
Digestive System:

Patient's appetite is very poor; she is always too tired to eat. She has great difficulty in swallowing, it is a great effort for her to do so; hence she swallows as little as possible.

When very tired she often has pain in the abdomen. Also sometimes flatulence, heart-burn, indigestion & a feeling of sickness, but no vomiting. None of the foregoing have any relation to food.

Patient is too tired to defaecate; although the desire is there, she is too weak to carry out the act, thence she requires an enema every morning.

The tongue is clean but furrowed; the teeth are false. There is no tenderness in the abdomen. The stomach, liver are normal in size & position.
Urinary System:

Patient has always difficulty in commencing the act of micturition, and the flow of urine is therefore delayed. Urine - 45 ounces per diem. Neutral. Sp. Gr. 1019. No sugar or blood.
Contains 65 gr. of albumen to the ounce.

Micturition is usually regular, but of late has occurred every 3 weeks. At these times patient loses too much and is consequently considerably weakened.

Summary of Treatment and Progress:

On admission patient was put to bed. She was given strychnine and daily massage was commenced. Up till the present (25. 11. 1910) however she is still in the same condition as when admitted.
Myasthenia Gravis otherwise called Asthenic Bulbar Paralysis is one of the rarest diseases known. Although first brought into prominence in 1877-8 by Wilks & Drb, it was originally described nearly 200 years before (1685) by Willis in "The London Practice of Physic." (Savill) Up till 1900 some sixty cases had been recorded.

About this disease extremely little is known: the Pathology is obscure & we can only pursue that it is probably toxic in origin from the fact that it closely resembles diphtheritic paralysis. Still, certain changes are constantly found throughout the body. The thymus is often persistent & sometimes enlarged; minute masses of lymphoid tissue are so frequently found in the muscles.
that by some this change is considered to be a constant and characteristic feature of the disease. (Buzzard.)

Myasthenia gravis affects the sexes about equally; it may occur at any age, though it seems to have a preference for young adults.

The case of Annie Burrell presents all the characteristic symptoms of the disease.

The great muscular weakness affecting all the voluntary muscles, but more especially those of the face, eyelids, those concerned with mastication and swallowing.

It is extremely characteristic that the patient always becomes worse as the day wears on.

The extreme weakness is further exhibited in the Phoris, the difficulty in swallowing and the fact that the patient cannot...
defecate without the aid of enemata.

Also, by the effort of breathing, even, causing such tiredness; sometimes the respiratory muscles become nearly played out, as is shown by the periodic attacks of Dyspnoea.

That the heart also is somewhat involved is shown by the fact that the heart sounds are extremely faint; moreover the heart was probably responsible for the fainting turns which the patient occasionally had.

The muscles in Myasthenia Gravis react in a characteristic way to electricity: they become very easily exhausted by the Faradic current & refuse to respond to further stimuli. They react normally to Galvanism.

Other characteristic features are the nasal speech, & the curious...
expressionlessness of the face.
The nasal speech is fairly well marked in this case, but becomes much more evident after the patient has been speaking for some time.

In this disease the prognosis is very grave. There is no known treatment that can be relied upon, the condition is too rare to allow of much experimental work in this direction.

Rest, strychnine & daily massage do good in many cases, but though the patient improves from time to time, the disease tends to be slowly progressive.

It may take a number of years before it proves fatal, but in nearly all cases it ultimately does so.

Death is frequently due to asphyxia from extreme fatigue of the muscles of respiration,
or to some intercurrent affection.
The Case of
William Scott

(Progressive Muscular Atrophy)

Taken by permission of Professor Wyllie by W.D. Small.
Occupation — Rubber worker.
Native Place — Musselburgh.
Present Residence — 17 Caledonian Place Edinburgh.
Recommended by Dr. Craig.
Admitted on March 25th 1910 to Ward 34 (Side Room) H.I.E.

Complaint:
Patient first sought medical advice on account of progressive loss of strength in both arms.

History of Present Illness.
About January 1909, patient noticed that his arms and hands were getting weaker and that his grip was less strong than formerly. He also experienced considerable difficulty in writing.
At the same time he was troubled with slight pains in the hands and arms, which he thought were
rheumatic in origin. He never noticed any wasting of the parts & attributed his condition to being somewhat run down.
In a few weeks patient completely recovered & had no further trouble until January 1910 when exactly the same symptoms recurred. He again attributed his condition to being “run down” & did not seek medical advice. This time patient did not improve at all.
On March 21st (1910) patient happened to weigh himself & found that he was fully two stones lighter than he had thought for. This, combined with the fact that he had not been improving made him go to his doctor, & next day he was sent to the Royal Infirmary.
Patient knew of no cause for his illness — unless perhaps a chill. There is no history of
injury or heredity or of mental shock of any kind.
He has never been confined to bed.

Previous Health: Social Conditions: Habits:
Patient has always been healthy and knows of no previous illnesses.
When about 9 years old he was struck in the left eye by a nail and since then this eye has been practically useless.
He has a good home and plenty of good food.
Patient is temperate: up till 2 years ago he smoked about 4 ounces of tobacco per week—since then he has reduced one ounce.
Owing to his occupation—a "sprucher" in the rubber works—patient has to work in a very warm atmosphere. He is constantly working with naphtha, but never
with Carbon Disulphide.

**Family History:**

Mother died 4 years ago aged 66—"worn out".
Two brothers died in infancy—causes unknown.
Father alive & well aged 72—works regularly every day.
5 Sisters alive & well.

As far as he knows none of patient's relatives have ever had any condition resembling his.

**Present Condition:**

1. Patient is a rather poorly developed man—height 5 ft. 8 inches. Weight (on admission) 8 st. 10½ lb.
   Temperature 98°F.

2. On the face patient has a red eruption which he attributes to his work. It is distributed on the forehead, nose & both cheeks. The scalp is covered in places
with scales anchored together with serous material. The condition appears to be Rosacea.
Patient states that the eruption appears and disappears at intervals. The teeth are good.

Haemopoietic System

Blood (May 24th)
Red Blood Corpuscles 4,860,000.
White Blood Corpuscles 6,800.
Haemoglobin 75%.
Colour index \( \frac{75}{96} \) (178).
Film shows no abnormalities.
There are no enlarged lymphatic glands. Spleen and thyroid are normal.

Nervous System.
Patient is most intelligent; there is no loss of memory nor of the power of sustaining the attention. There are no disorders of speech. The sleep function is good.
Patient walks naturally & there is no Rombergism.

The knee jerks are exceedingly active & exaggerated; & the slightest tap on the patellar tendon produces marked contraction of the Tensor Vaginalis Femoris.

The Adductor jerks are very brisk & the Achilles jerks are exaggerated.

The Supinator, Biceps & Triceps jerks are present & normal in strength. There is a slight jaw jerk.

The Plantar Reflex is flexor & it also is very active.

There is no ankle- or knee-clonus.

Patient has no trouble with micturition or defaecation.

Coordination of movement and muscular sense are unimpaired.

Patient has considerable loss of power in both arms. He is unable to completely close either hand; when he tries to do so, the
ring & little fingers flex completely & at all joints; the index & middle fingers only flex completely at the metacarpo-phalangeal joint while the terminal joint does not flex at all. This is the case with either the right or left hand.

Patient is unable to move the dynamometer in the least (better hand) On inspection the upper limbs are seen to be much wasted.

On the hands the thenar & hypothenar eminences have almost disappeared & the hollow of the palm is not nearly so well-marked as normally. The Intercosei & Lumbrical muscles are much wasted so that there are well marked hollows on the dorsum of the hands between the metacarpal bones; & separation of the fingers (by the patient) is difficult. There is not however as yet any "Main in griffe."
Both forearms are much emaciated and a deep concavity is to be seen on the front of each especially on the left. All the muscles on the anterior aspect are wasted to a great degree except the Supinator longus which seems quite unaffected.

Patient has great difficulty in performing the movements of pronation & supination & attempts to do so by means of the muscles of his upper arm. The pronators of the forearm seem quite useless while supination is mainly effected by the biceps.

The extensors of the forearm are slightly wasted but not nearly so much as the flexors: the movements they effect are quite unaffected.

On the back there is a deep hollow between the scapulae & the muscles which lie between them have almost entirely disappeared.
The vertebral border & lower angle of each scapula are very apparent & project somewhat backwards; this is most marked on the right side where he has practically a "winged scapula".

On both sides the subscapularis is much wasted while the supraspinatus & infraspinatus are slightly so.

The upper part of the trapezius is distinctly less wasted than the lower portion.

The posterior wall of the axilla instead of being thick & fleshy as normally has almost entirely disappeared owing to the extreme atrophy of the Tens Major and Latissimus Dorsi muscles.

Occasional fibrillar twitches may be seen in all the affected muscles except in those which are extremely atrophied.

There is no apparent wasting of
the upper arm. The Deltoids are practically unaffected. The pectoral muscles are wasted especially near their attachment to the clavicles, where deep hollows may be seen.

The trunk muscles are a good deal involved - the intercostals, serrati magni & latissimi dorsi being very markedly affected. The recti muscles are feeble. The lower limbs & the face are quite unaffected.

Cutaneous sensibility is unimpaired, but patient always feels worse in cold weather: he is greatly troubled with cold hands.

Special Senses:

Sight is good in the right eye. The left eye is useless except for the perception of light - owing to the accident already mentioned. The aperture of the pupil is quite destroyed & there are several tears
in the iris. There are also numerous adhesions to the triradiate whilelear in the cornea.

Circulatory System

Pulse: 76. Regular. Tension moderate.
Radial Pulse: equal & synchronous.
Vessel walls slightly thickened.
The heart is not dilated.
The apex beat is behind the 5 1/2 in., half an inch lateral to
the nipple, 4 3/4 inches from the middle line.
The heart sounds are closed in all areas.

Respiratory System

Patient has no cough or shortness of breath. The percussion note is
normal all over the chest & the
breath sounds are vesicular.
There are no accompaniments.
Digestive System.

The tongue is clean & the teeth good.
Patient has a good digestion: the stomach & liver are normal in size & position.

Genito-Urinary System.

No sugar or albumen.

Summary of Treatment & Progress.

March 25th 1910: —

Admitted. Weight 80 lbs. Put to bed & given light diet. A day or two later daily massage & electrical treatment were commenced.
After about 10 days of this treatment the fibrillar twitchings became much diminished.

April 11th 1910: —

Gave in addition Potass. Iodid. gr. v
& Sp. Ammonii Aromati. M x 5 in die.
also dilluquent. Hydromyone at night
Massage & electrical treatment continue.
April 15th 1910:
Ordinary diet. Given work to
do about the ward.
May 25th 1910:
Patient’s general condition has
much improved. Weight now 9st 10\% 0z.
(I.e. one stone heavier than on admission)
The fibrillar twitchings have
practically disappeared, but other-
wise patient is in much the
same condition as when admitted.
There is no increase in the power
of his arms - but the disease does
not seem to be making any rapid
progress.
May 27th 1910:
Sent to convalescent home.

over: —
Notes.

Progressive Muscular Atrophy is a comparatively rare disease about which — beyond the Pathology — very little is known.
The case just recorded contains many points of interest, the following is a brief note of the more important.

Patient's age — Male aged 37.
The disease is said to occur chiefly in males over 30. This patient then is a typical subject for the condition.

Patient's occupation — a rubber worker who works with Naphtha but not with Carbon Disulphide. Judging by a few cases which have been treated recently in Ward 34, R.I.E., rubberworkers especially seem to be attacked by the disease, & in many, the circumstances pointed to Carbon Disulphide as the probable cause.

Cause — Many are the causes suggested for this disease — mental worry, chill, fright, exposure to cold, heavy work, etc.
but all of these (except perhaps chill) are absent in this case. There is no history of excessive use of alcohol. Two possible factors only seem to be present:—

1. Patient's occupation.
2. The large amount of tobacco smoked regularly by him. (At least 4 ounces per week).

Both of these however can be easily shown not to be the absolute or only causes because:

1. The condition occurs in people of other occupations.
2. The disease may occur in women who as a rule do not smoke — & in non-smokers.

In addition — although there is no history — syphilis must be kept in mind as a possible cause.

It is probable that these so called causes may only predispose to the disease & that further research will show an organisational or other definite origin.
Patient's Complaint. - Grip less strong than formerly & difficulty in writing. Also rheumatic-like pains in the arms, loss of weight.

This patient's complaint is more or less typical of progressive muscular atrophy. The disease seems as a rule to start in the lower part of the Cervical Enlargement of the Spinal Cord. Hence these muscles whose nerves take origin at that level are the first to become involved.

Since the nerve-cells supplying the small muscles of the hand (situated in the 8th cervical & 1st dorsal segments) are very early affected, the finer movements of the hand become difficult or lost, & the patient complains especially of difficulty in writing. No doubt the loss of "grip" was due to the wasting of the flexor muscles of the forearms & hands.

Pains in the affected parts are frequently experienced in the early stages of the disease, usually constitute the first symptom noticed by the
patient. Such pains occur very frequently in many diseases of the nervous system (tabes dorsalis, peripheral neuritis &c.) they are very liable to be mistaken for rheumatism treated as such.

It is very difficult to explain patient's supposed recovery from his first symptoms for while arrest of the disease may possibly take place, regeneration of the nerve cell - once destroyed - is impossible. Hence the only way to explain the betterment is to assume that patient's work at the time did not entail so much use of the affected muscles as formerly, therefore their loss of power was not so apparent. In addition, the disease may have temporarily ceased to progress & patient's general health may have somewhat improved.

Again - to what was the patient's loss of weight due? In great measure no doubt to the wasting of the muscles, but that that was not the only...
reason is shown by the effects of treatment — for while the patient put on a stone in weight during his stay in hospital, the wasted muscles remained in status quo. Patient’s loss of weight then was due very largely to general debility.

The skin condition on the face was typically Rosacea.

As a rule Rosacea is held to be of nervous origin. Dr. Norman Walker, however, holds the view that in the great majority of cases it is a result of Seborrhoea of the scalp; and this view is strongly supported by the effects of treatment — for, cure the scalp condition & the Rosacea disappears.

It is of interest to note that both the assigned causes (nervous & seborrhoeic) are present in this case.

Effect of the disease on the muscles: —

It is a remarkable feature of Progressive Muscular Atrophy that some muscles become wasted while others do not; moreover, often of two muscles which
derive their nerve supply from the same spinal segment, one will become atrophied while the other remains apparently normal. This is owing to the definitely selective action of the disease whereby some nerve cells of the anterior horns are destroyed, the others being left. In this case, the disease seems to have been most active in the upper and lower parts of the cervical enlargement, leaving the middle part comparatively unaffected; hence, the muscles of the shoulder girdle, the muscles of the hands and the flexors and pronators of the forearms are much wasted, while the upper arm, supinator longus and deltoid are almost unaffected.

The non-involvement of the Deltoid is very unusual; as a rule it is the first muscle of the shoulder girdle to be affected. Differentiation of the Trapezius muscle into two parts was most marked in this case — the upper part remaining strong and fleshy while the slightest wasted, while
the lower part was so wasted as to have practically completely disappeared. Most textbooks mention that the Trapezius is usually affected in this way, but none (that I have seen) give any reason why this should be so. Perhaps the following may be the correct explanation:

The nerve supply of the Trapezius is a double one: it is derived partly from the 3rd and 4th Cervical nerves partly from the Spinal-Accessory. The portion which wastes (the lower half) is that supplied by the cervical nerves. The upper portion is supplied by the Spinal-accessory remains unaffected until the condition becomes so far advanced that the medulla oblongata is involved. That the muscle is thus divided into two distinct portions each having as a rule its own distinct nerve supply, is shown by the fact that when the spinal accessory nerve is cut, the upper portion of the Trapezius becomes paralyzed.
while the lower portion does not. It would be interesting to note whether a like differentiation into two parts can be made out in the case of the Sternomastoid muscle, as its nerve supply is so similar. (Spinal Accessory + 5th Cervical nerve.)

Effects of Treatment: Prognosis:

Once the damage to the nerves + muscles is effected, treatment — so far as cure is concerned — is of no avail. The most one can hope for is that the disease will cease to progress.

Massage + electricity certainly do seem in this case to be checking the activity of the disease. The fibrillar twitchings which were well marked on admission had practically disappeared when the patient was discharged.

Unfortunately, at the present stage of our knowledge, the prognosis is of the blackest. Probably the disease will continue to make headway + the patient will tend to become a "living skeleton."