Report and Commentary on Cases treated in the University Clinical Medical Wards. 1903 - 04.

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Candidate for the WIGHTMAN PRIZE.
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There is no evidence that the observer's line head of the lecture is accepted for the New Year.
CASE No. 1.

RUPTURE of the UTERUS.

Professor Simpson.
Mrs. Isabella Ferguson:— This patient was admitted on May 18th, suffering from general Peritonitis subsequent to Rupture of the Uterus. She complained of pain in her abdomen; Her face shewed the so called 'Hippocratic' countenance; the tongue was dry; the Urine scanty; her abdomen was markedly tumid all over, did not move in respiration and was very tender on palpation. There was a dark reddish brown discharge from the Vagina, and on Vaginal examination a tear was found in the Cervix on the left side, extending downwards for about an inch, and involving the left lateral Fornix. The finger could be passed through it into the Peritoneal Cavity. The patient was collapsed, the pulse was small, wiry, and rapid, 188 per min.; the respirations were short and hurried, 32 per min. but the temperature was only 99.2.

The patient was douched and the Vaginal Cavity was packed with Iodoform gauze; stimulants were given liberally—Tinct. Strophanthis 10 minims every two hours, to endeavour to slow and strengthen the heart, and Brandy 2 drachms every two hours.

She was very restless; she vomited several times on Wednesday and was very sick on Thursday. She was quite constipated. She gradually sank; the pulse became weaker
and running, increasing greatly in rate; the respirations were shallow and accelerated, and at 6–30 p.m. on Thursday May 19th, about 96 hours after the Uterus was ruptured, she died. The Pulse:— The pulse was small, wiry, and rapid, and ranged from 118 to 160 per min. It rose steadily from admission, the increase varying from 2 to 16 per 4 hours. Average pulse rate over the 24 hours was 136 per min. The Respirations were also much more rapid than normal. They seemed to increase and decrease without relation either to temperature or pulse rate. On admission they were 32 per min.; within four hours they had risen to 40, and then they as abruptly fell again to 34 per min.; just before death they were again 40 per min. The average rate was 36 per min. The Pulse Respiration Ratio was on the average 3.7:1. The Temperature showed a mild degree of fever but nothing indicative of the seriousness of the condition. On admission it was only 99.2; 4 hours later, 20 hours prior to death, it was normal; it fell to 98°F. and then on the morning of the 19th, it rose to 100.2; this was the highest temperature recorded and it remained practically at this level till death. Abdominal Symptoms:— There was more or less continuous vomiting; the patient complained of pain in her abdomen; the abdomen was markedly tumid; there was Tympanites and the liver dullness was almost obliterated; there was diffuse
tenderness and the patient was quite constipated.

The History is very interesting. Here we have a multipara 39 years of age with a contracted pelvis such that all her labors have been either instrumental or prematurely induced. She becomes pregnant, foetus dies in Utero, and she subsequently aborts about the end of the 4th month, the foetus presenting by the breech. There had been no "pains" and the Cervical Canal was undilated. The foetus was soft, and on attempting to remove it dismemberment took place. The trunk and limbs were removed, but the Head and the Placenta remained. This procedure would necessitate considerable and maybe some forcible manipulation, but the Uterus was probably uninjured, for the woman did not shew and any symptoms of Rupture; on returning several hours afterwards to complete the removal the medical attendant did not observe any change in her condition. The woman was then Chloroformed; the Cervix was dilated with the fingers; the hand was passed into the Uterus and the contents were removed. It was here the Rupture must have taken place, probably in the insertion of the hand. The lesion was not discovered till next day.

The patient was Anaesthetised and could not thus present any symptoms at the moment of rupture; the hae-morrhage which occurred was attributed to the removal of the Placenta, and the patient's enfeebled condition to the very trying condition.
trying ordeal through which she had just passed. It is somewhat inexplicable however, how such a large laceration was not detected during the manipulation, even if it produced gradually.

The microorganisms may have arisen from the dead foetus. The facts that the woman was a Multipara of somewhat advanced age; that all her previous labors had been either instrumental, or prematurely induced, and that there was advanced fatty degeneration of the Liver and Kidney, render it extremely probable that the tissue of the Uterus was not in an normal healthy condition; the muscular fibres may have been in a state of premature fatty degeneration rendering the Uterus very friable and predisposing to Rupture.

The site of predilection was on the lateral aspect of the Cervix on the Left side; the Rupture was complete opening posteriorly into the pouch of Douglas where there was a large accumulation of blood stained lymph found post-mortem.
Record of Previous Labors from the Simpson Memorial Maternity Hospital.

1902.

May 19th.: The child presented by the Vertex in left Occipito-Anterior position.

The Pelvis was a simple flat Pelvis — Conjugate Vera= 3 inches.

Dr. Barbour induced premature labor at the eight month; the Os was dilated; turning was done; the child was delivered by the breech. There was considerable haemorrhage and the Uterus was packed with Iodoform gauze.

The child—female, died 4 hours after birth.

1900.

June 9th.: Dr. Underhill induced premature labor by means of Bougies, at the eight month. Presentation= Vertex.

Position L.O.A.

The labor was laborious but was not aided artifically.
A male child was born alive but died in the course of a few hours.

1896.

March:— Dr. Underhill induced premature labor at the eight month. The labor was complex and lasted 24½ hours. The child was weakly, female, and died shortly afterwards.
RUPTURE OF THE UTERUS.
Isabella Ferguson, Age 36.
Married. 6 para.
Occupation: Laundry work and house work.
Admitted: 18th, May 1904.
Complaint: Pain and swelling of Abdomen.
History of present illness:
Whilst the patient was on her way to church on Sunday morning 15th. May, she suddenly became ill and "water" came away from her.

She was then about 4 months pregnant.
She returned home; a doctor was immediately called in. On Examining the patient per Vaginam he found a foetus presenting by the breach.

It was a macerated foetus; he removed the limbs and trunk but in so doing the head became detached and remained with the Placenta in the Uterus.

There had been no "pain".
A few hours afterwards the doctor gave Chloroform; dilated the somewhat contracted Cervix with his fingers and cleared out the Uterine contents with his hand.

Next day, Monday 16th. May, the patient was in an alarming state of collapse; the pulse was small wiry, and rapid and the Abdomen was distended and painful. On Vaginal examination a rent was discovered in the Cervix Uteri through
which the fingers could be passed into the Peritoneal Cavity.

On Wednesday May 18th. she was sent to the Royal
Infirmary, Ward 3

Previous Labours:— There was great difficulty in the birth of
the first child; it was carried to full time and then Craniotomy
had to be performed. In several other cases premature labour
was induced at the seventh and eighth months, by the passage
of bougies, at the Maternity Hospital. Her labours have
been either Instrumental or prematurely induced.

Physical Examination:—

General Condition:— Patient is obviously in a very collapsed
state; her face is thin drawn and shallow; her expression is
anxious; her eyes are sunken; her respirations 32 per min.;
her pulse is very weak and running; rate—rapid, 120 per min.;
Temperature 99.2 F.

Abdomen:—

Inspection:— There is general and well marked tumidity; the
skin is sallow; the Umbilicus is somewhat depressed; there
are no movements; the Linea Nigra is only faintly marked and
there are many Striae Gravidarum.

Palpation:— It is very tender all over.

Auscultation elicited nothing.

External Pudenda:— A dark redish brown discharge with a foul
odour, is issuing from the Vagina. There are no fresh tears
in the Per

Per Vaginam:— The Orifice is patulous and very large;
the cavity is capacious; the Vaginal walls are smooth lax, and extremely moist.
The Roof:— In the Left lateral Fornix a deficiency can be felt, continuous with a tear in the Cervix on the left side.

The Cervix is large and looks directly downwards; the hips are soft and there is a deep laceration on the left side. On passing the finger into the Cervical Canal an aperture is perceptible on the Cervix and lower Uterine Segment at the left border. Through it the finger can be passed into the Peritoneal Cavity, a large amount of foul discharge escaping.

The Os Externum was widely patulous. The Bimanual examination was impossible owing to the distention of the Abdomen.

Treatment:— Patient was given Tinct. Stroph. 10 m. every 2 hours, and Brandy, 2 drachms every 2 hours. The Vagina was packed with Iodoform gauze.

12 Midnight:— Patient very restless; she has vomited several times; her pulse is 120 per min. and very weak. Temperature 98.

Thursday, May 19th.:— Patient has been very sick; her bowels are confined; the stimulants have been continued; the pulse is weaker and has increased greatly in rapidity, 140 per min. Respiration 36, Temperature 100 F.

6–30 p.m.:— Pulse became more rapid and weaker, and patient died.
POST MORTEM:—There was very considerable distention of the Abdomen. The internal coils were distended and glued together with recent lymph. There were no ulcerations over the sites of this lymph deposit.

Some of the coils were adherent in the left iliac region just above the Pelvie Brim.

There was a large amount of purulent blood stained lymph, apparently of some days duration, in the Pouch of Douglas; there were also some adhesions there.

The Uterus was ruptured on the left side, at the junction of the body with the Cervix. The edges were ragged. The wound extended slightly into the roof of the Vagina and measured one inch in its greatest length. It opened posteriorly into the pouch of Douglas.

There was no perforation or rupture of the intestine.

The Liver and Kidney showed well marked fatty degeneration; the spleen was acutely congested.
CASE No. 3.
SCLERODERMA. DIFFUSE.

Professor Wyllie.
DISEASE.
Scleroderma

Notes of Case.
Name: Mary Ballou
Age: 17
Diet: Light Diet
Case Book No.

Date of admission: August 8th, 1903

Result:

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<tr>
<th>Day of Dis</th>
<th>Pulse</th>
<th>Resp.</th>
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Temperature (Fahrenheit):
- Normal temperature of body: 98.6°F
- Results:
  - 96°F: 5
  - 95°F: 6
  - 94°F: 6
  - 93°F: 6
  - 92°F: 6
  - 91°F: 6
  - 90°F: 6
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  - 35°F: 6

Temperature (Centigrade):

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Graph: Temperature and pulse changes over time.
SCLERODERMA.

Mary Callery, Age: - 17
Occupation: - Cotton Mill Worker, "Dover".
Address: - 6 St. Mary's Wind, Stirling.
Admitted August 8th, 1903 to Ward 34.
Complaint: - Stiffness in legs and arms.

History of present attack.

About the beginning of April 1903, Patient noticed a swelling on the back of the right hand. It gradually increased in size, but was neither red nor painful. After about three weeks it reached its maximum, and three weeks later had almost entirely disappeared. In actions such as cutting bread she felt pain in the tendons on the back of her hand. The fingers became stiff; she was unable to flex or extend them fully. Three weeks later the right elbow began to get stiff.

About the middle of May the right palm was hard to the touch. The fingers and elbow gradually became stiffer; the skin in the bend of the right elbow being hard also.

The right upper arm was next involved; the skin became hard; it felt cold and tighter, and she could not move it freely or pinch it up.

About the beginning of June patient first noticed
brown spots on the front of the right upper arm, extending from the shoulder to the elbow. At the same time white spots appeared on front and outer side of forearm and radial side of dorsum of right hand. The skin of the forearm and hand were not noticed to darken.

The left calf muscles next became stiff, the skin over them hardened, and felt as if it were tightly tacked down in places; it was covered with brown patches about the size of a penny.

Patient consulted Dr. Caverhill and received some medicinal treatment.

On June 23rd, she entered Stirling Infirmary. Dr. Duffus rubbed the arms and legs with olive oil and gave medicines internally: Mercury and Potass. Iodide. She, however, grew steadily worse. Her right arm became stiffer, the forearm somewhat flexed on upper arm, and the fingers bent. The left leg was drawn up a little. The left ankle was very stiff, and she could not bend her toes.

On July 14th the right leg was noticed to be affected also. The peroneal aspect of the right leg and foot gradually became hard and covered with brown spots; the ankle became stiff, and shortly afterwards white spots appeared on the outer side of the right thigh from knee to hip. A brown patch appeared on the inner side of the right knee about a week subsequently and became as large
DISEASE.
Scleroderma

Notes of Case.

Name: Mary Halling
Age: 17
Diet: Light Diet
Case Book No.

Date of admission: August 3rd 1903

Result

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Temperature (Fahrenheit):
as the palm of her hand.

At the end of July the left elbow and fingers became stiff and she was unable to extend or flex them fully; some white spots appeared on the radial aspect, extending from the hand half up the forearm.

About this time also, white spots were noticed on the front and back of the chest, mainly on the right side. A hard patch of skin, the size of a crown piece, appeared over the right iliac crest.

About the beginning of June she noticed she could not stoop to pick anything from the floor, and her feet ached when she rose in the morning.

About June 20th., before entering Stirling Infirmary, patient could put both heels to the ground in walking. Three weeks later she could not stand; in walking with assistance, only the toes of the left foot touched the ground, and she placed the right heel right down.

About the end of July a slight sore throat and difficulty in swallowing first appeared. It occurred every morning, and gradually disappeared as the day wore on.

Since April patient has been greatly troubled with drowsiness sometimes falling asleep out of doors. When the swelling first appeared on the hand—April—she was suffering from a severe cold in the head, sneezing, "running from the nose", but no coughing. No headache nor vomiting. The spots were never itchy.

On August 8th. patient left Stirling Infirmary for Royal Infirmary.
<table>
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<th>Date of Admission</th>
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<tr>
<td>Name</td>
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**Notes of Case:**
- **Disease:** Typhoid
- **Symptoms:** Bowel
- **Temperature:**
  - 101°: 9
  - 102°: 15
  - 103°: 20
  - 104°: 25
  - 105°: 30
  - 106°: 35
  - 107°: 40
  - 108°: 45
  - 109°: 50

**Laboratory:**
- Blood: normal
- Urine: normal

**Diagnosis:** Typhoid Fever

**Treatment:**
- Bed rest
- Fluid intake
- Nutritional support

**Outcome:**
- Recovery

**Discharge:**
- Aug 30 1903

**Follow-up:**
- Weekly checks
- Symptom monitoring

**Precautions:**
- Isolation
- Hygienic practices
- Nutritional advice

**Follow-up notes:**
- Aug 31 1903
- Sept 1 1903
- Sept 2 1903
- Sept 3 1903
- Sept 4 1903
- Sept 5 1903
WARD 34.

Social Conditions:-
Patient is a "Dover" in a cotton factory; she has to take two full bobbins off a frame—flexing forearms on upper arms; next to reach up for two empty ones to put on the frame—full extension of forearm. She stands from 6 a.m. to 6 p.m. with two intervals of one hour at 9 a.m., and one at 2 p.m. respectively. There are 60 women working in this room; it is well lit but close, and they perspire freely. None of them have been affected similarly to patient, within her knowledge.

Food:-
6 a.m. :- Tea, one to two cups, ½ slice of bread and butter, 9 a.m. :- little porridge and milk, tea, toast, cheese, sometimes ham.
2 p.m. :- Soup or tea, potatoes, fresh herring, beef once or twice per week.
6 p.m. :- Tea, sometimes egg, bread and butter.
No supper.

Habits:- Regular. Sometimes went walks in the evening; always in bed by 10 p.m.

Previous illnesses:- Bronchitis in childhood.

Family History:-
Mother, alive and well, somewhat rheumatic, age 52.
Father, dead—52—"gravel in kidney"
Two brothers alive and well, 1 dead, cause unknown.
6 Sisters alive and well.

No relatives similarly affected.

Present Condition:

Height - 5ft.
Weight - 6 stone, 0 lbs.
Temp. - 98.4°F.
Pulse - 124.

Patient is well developed, though somewhat emaciated; expression pleasant, forehead prominent; no lividity, nor dropsy; intelligence normal; no disorder of speech, sight, or hearing. She is very drowsy, sleeping the greater part of the day. Co-ordination and muscular sense are good.

Specimen of handwriting: -

Mary Calley

Grasp of both hands defective:

Dynamometer: - Right .... 25
Left .... 20

Movement at shoulders unaffected. On movement of left arm to opposite shoulder there is pain on inner side of left upper arm. Right arm muscles tense; arm cannot be extended over a right angle. Left arm extension also impaired.

Circumference at middle of Upper Arm: - 7½" in each.

When the forearm is under way between pronation and supination she can offer considerable resistance to an opposing force; when fully supine very little resistance with right, more with left.

Wrist movements are very limited.

Right no lateral and very little anteroposterior movement. Left: - somewhat better.
Fingers clawed—sclerodactyle—permanently fixed in right, slight power of extension in left.
The interossei are not atrophied. Patient cannot separate her fingers, and in the right hand cannot touch the little finger with the thumb.

Patient cannot touch the shoulders with finger tips of either hand. All the flexor muscles are contracted and "boardlike" and resist extension, the right more than the left. In walking only the tips of the toes of the left foot touch the ground; the right foot is brought down heavily, the sole striking the ground. The heel of the left foot never touches the ground. On closing the eyes and standing heels together, there is no swaying.

The peroneal muscles of both legs are rigid and tense. There is pain on pressure in both calves, and in right peroneal aspect. Movement at knees restricted slightly, and at the ankles very imperfect,

Knee Reflexes — exaggerated slightly.

Plantar " " "
No supinator, Triceps nor Babinski; no ankle Clonus. The muscles are poorly developed.

Trunk:— Bending forwards is difficult and accompanied by pain in the small of the back.

Abdomen:— Just above the right iliac crest is an area of hardness about the size of a crown piece. Stiffness and soreness in right Sterno Mastoid, and also in swallowing in the morning.
General nutrition of the skin is good.

Skin: When sleeping, patient perspires freely on palms and face; other surfaces neither too dry nor too moist.

Pigmentation: Right forearm and hand.

White spots extend from the base of the distal phalanx of the under to the dorsum of the hand above the knuckle. They occur on the radial aspect of the hand and forearm and the posterior aspect of the forearm is covered with them. They appear as lighter, shiny areas in the midst of a brownish zone deeper coloured than the surrounding skin. On the inner and anterior aspects the spots are much fewer but the pigmentation is somewhat deeper, especially about the middle.

Right Upper Arm:

On the anterior-inner aspects are well developed patches of brown pigment, extending from the flexure of the elbow to the Anterior Axillary fold and 3/4" to 1" in width. On Post-External Aspect there are a large number of small round white spots, extending up over the shoulder joint to the Anterior and Posterior folds, and thence over the chest and back. There is an area extending from the Inner Aspect of the Upper Arm, upwards and outwards to the great tuberosity of the Humerus, about one inch wide over which there is no pigmentation.

On the Postero-Internal surface of the Humerus extending from the internal Condyle to the posterior Axillary fold is a patch of brown spots, best marked on the lower half.
On the left forearm and hand there are many white spots most numerous on the radial aspect posteriorly extending half up the forearm. There are white spots on the chest and back especially on the right side and on the upper half.

Right Leg:— The peroneal aspect of the right leg and foot are covered with brown spots. Inner side of right knee large brown patch 2½" to 3" diam.. Outer side of right thigh—from hip to knee—white spots in large numbers and spreading somewhat to the back and front of the thigh. Thursday August 8th. Posterior aspect right knee white spots.

Left Leg:— There are a number of large brown patches over the calf muscles about one inch in diameter, extending from the popliteal space to the ankle.

These patches were never red, raised, nor itchy.

Cardiac System.

Pulse small, easily compressible scarcely palpable, rhythm regular rapid. Radial pulses equal and synchronous. Apex beat in 5th. inter space ½" inside the right mammary line.

Superficial Dullness:—

Upper limit 4th left costal cartilage.

Right border:— Mid-line of Sternum.

Base line 3½".

Deep Dullness:—

Extends 3½" round superficial.

Sounds:— closed in all areas, but somewhat faint.
Respiratory:— No abnormal physical signs.

Digestive System:— Appetite, not so good as it was, otherwise normal.

Genito Urinary System:— Urine acid—no abnormal const.

20-40 ozs. per day

Blood:— Red blood corpuscles. 4,340,000

White do. 11,800.

No enlarged glands.

Treatment and progress:—

Medicinal— Oleum Morrhuae and Maltine ter in die from Aug. 8th to Sept. 5th. For a time she thought she was slightly improved and could extend the fingers of the right hand somewhat, but latterly there was no improvement.

On Sept. 3rd. Electric baths were started and were started and continued twice a week till Oct. 3rd. She was also massaged daily.

On Sept. 5th. Thyroid treatment was commenced two and a half grains being given ter in die of Thyroid Extract. There was a very pronounced reaction, the temperature rose to 101° F. The pulse continued rapid, she sweated a good deal and the urine increased somewhat.

Sept 8th. she felt the skin somewhat looser on her right arm.

The condition seemed to be stationary in spite of this very energetic treatment. On Oct. 2nd. she has lost 4½ lbs since Sept. 4th.

Oct. 3rd. the Electric were replaced by hot spray baths
the massage being continued.

On Oct. 11th. Oleum Morrhuae and Maltine ter in die Tryroid Extract 2½ grains morning and evening.

On Oct. 20th. Dr. Allan Jamieson saw her. He was not hopeful, but said there was occasionally a spontaneous cure in these cases.

On Oct. 31st. patient went home having derived practically no benefit from 2½ months treatment, during which every means that our limited knowledge of the condition could suggest, was tried.

On Nov. 12th. she was re-admitted to the Royal Infirmary. Professor Greenfield then tried Pituitary Extract extensively without significant improvement.

<table>
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<tr>
<th>Weight</th>
<th>May 1903.</th>
<th>6 stone 11lbs.</th>
<th>Oct. 30th. 1903.</th>
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This an extremely rare condition. McCall Anderson had two cases in 11000 of skin disease and Crocker 2 in 10000 (Lancet vol.1.1885). It occur in women more frequently than in men, and usually at a more advanced period, rarely as in this case, before 20 years of age. The onset was comparatively sudden, and excepting for the swelling on the right hand, there were no prognomnal symptoms. There was nothing in the previous or family history with any bearing on the condition, but the excessive muscular exertion to which she was subjected in her laborious employment might have had very far reaching consequences on a young girl of her age. Crocker (Lancet vol.1.1885) notes that exposure to cold is a common exciting cause; as a mill worker she was subjected to draughts and frequent change of temperature, and it is significant that when the first signs of the disease appeared, she was suffering from a severe cold in the head.

The order in which the affection spread was somewhat atypical. For a long time it was confined solely to the limbs. What could determine its spread from the right hand to the left leg? It was at first localised but became diffuse and is now somewhat symmetrical. It is not confined to the skin; there are deep seated changes especially in the muscles. There seems to be some Myositis accompanying there transformation. In the case of the calf muscles, back muscles, and scapular muscles etc. there was pain on movement, and the calf muscles were painful on pressure. There was also tenderness of the Sternomastoid, and some pain in swallowing. The disease advanced in peculiar halting fashion, but more or less steadily.
Its progress was very rapid from the second week in June till the third week in July, but there was then a decided lull till the end of August. The History is very unsatisfactory as regards the cause. As far as I can ascertain there was no condition analogous to it either among her relations or in the district. It may have arisen owing to some congenital pathological condition.

Thyroid Extract received a thorough trial in Professor Wyllie's hands without any appreciable benefit, thus confirming the experiences of Osier, Heller, and others. On the other hand Singer records a case in which one lobe of the Thyroid was reduced and fibrous, and Hektoen describes one in which the glandular part was quite atrophied. March and Lustgasten also say they have had beneficial results from Thyroid Extract in this condition, but these latter results may have been attained by the amelioration of some accompanying condition not due to the same cause as the scleroderma or they may have been due in reality to the natural cause of the disease. Pituitary Extract also proved unsuccessful.

Thus, in the treatment of this disease the theory that the condition is caused by a deficiency in some of the internal secretions received, as regards the thyroid and pituitary Bodies, at any rate, practically no support.

Sir Dyce Duckworth attempted to trace in it a neurotrophic influence but Kaposi found no anatomical alterations in the nerve. In this case moreover there was no definite localisation of the
condition to the distribution of any particular nerves as was stated by Hutchison. It was asymmetrically distributed and there were no vasomotor or sensory phenomena.

Before any administration of thyroid the temperature was characteristic of a remittent fever; it was constantly above normal, sometimes as high as a 100 to 102 degrees F. falling two or three degrees towards morning; the pulse was very rapid, occasionally 130 per minute; the respirations were also frequent, 28 to 40 per minute. There was free perspiration on the face and on the palms of the hands, especially at night, and the patient was habitually drowsy. These signs seemed to indicate a more or less profound toxaemia, perhaps, microbic in origin. The condition is somewhat analogous to that seen in the Anaesthetic form of leprosy and Bancroft records a case in which he found a filaria in the blood.

Whatever its cause may be we have not arrived at any satisfactory method of treatment. Massage has been employed since June 23rd, and she has had electric and spray baths without any significant improvement. In June she was given Mercury and Potass Iodide, and in Sept. and October Thyroid Extract was tried extensively. She has since had Pituitary Extract without deriving any benefit. She made most progress when she was receiving only Oleum Morrhuae and Maltine during August.
CASE No. 3.

PNEUMOCOCCAL MENINGITIS.

Professor Wyllie.
PNEUMONIA with PNEUMOCOCCAL MENINGITIS.

James Finnerty, Age 15:-- This patient was admitted on the 7th. day of his illness, complaining of headache, cough, and pain in his back, and was found to be suffering from Bronchopneumonia.

At five years he had had Bronchitis and Whooping Cough.

His occupation exposed him to sudden changes of temperature.

He had been indifferently well for some time, and just two days before the commencement of his present illness he had had his tonsils cut because of an acute attack of Tonsillitis.

The initial symptoms were a feeling of Malaise and pain in the back, in the region of the spine; he developed the typical pneumonic cough, but the sputum was not rusty. Definite physical signs were present, first in the Right Lung: there was also Herpes Labialis.

Leucocytosis was present largely Polymorphic although the Lymphocytes and to a less degree the Mononuclears were also increased; there was some Anaemia and the Chlorides were absent from the Urine.

Temperature:-- On Feb. 1st. the 8th. day of the disease, the temperature was 100.2 F. as will be seen from the
accompanying charts, it was subject to great variations; on Feb. 3rd. it rose 5°F. in 8 hours, and on the day he died, Feb. 6th., the temperature reached its maximum, 104.4°F. There was no definite "Crisis" although on the 10th. day, Feb. 3rd. there was a fall from 103.8° to 99.2°F. in 8 hours, and the pulse and respirations also diminished greatly in rate; this however was only transient.

Pulse:— The pulse was but slightly dicrotic, full, bounding, and regular, and only 76 per min. on admission; in four hours it had risen to 100; only on three occasions was it below 80 per min., and on each of these there was a great remission of temperature which was probably an important factor in the diminution of the rate; the rate varied considerably, even by as many as 54 per min., which proves effectually the absence of any stimulation of the inhibitory Vagal centre; this is somewhat remarkable for Post-Mortem, although the vertex was found to be affected mainly there was a well marked purulent exudate at the base.

Respirations:— The respirations were short, but not greatly hurried; excepting in the Agonic period when they rose to 68, they average 29 per min., varying between 24 and 40.

Pulse Respiration Ratio:— Annexed is a graph shewing the curve of the pulse respiration ratio throughout the disease. It was usually about 3:1, but it rose
as high as four-one, and just before death it was two-one.

When did the Meningitis commence?

Was it a sequel to the Pneumonia, or was the onset of the two simultaneous?

The wounds from the excision of the tonsils by would afford channels/which the organisms might readily have gained access to the blood stream.

Head retraction, which was found by Lees and Barlow to be the first sign of the disease in 25% of the cases they analysed, was not present here till within 6 or 8 hours of death. It was not very pronounced as is customary in implication of the Vertex.

Kernig's sign appeared 36 hours previously, but there was one symptom which was present as early as the 2nd day of the disease, namely Headache. It was persistent throughout and was the chief cause of complaint. Headache is frequently associated with simple Lobar Pneumonia but is seldom of so severe and constant a type. It rendered him very restless; he did not sleep; he was noisy and somewhat delirious and semicomatose for two days before his death. There was no vomiting, no special points of tenderness about the head; no Nystagmus nor Strabimus till within 6 hours of death, when conjugate deviation of the eyes to the right was noticed.
Quincke's Lumbar Puncture was made half an hour after death and a pure culture of Frankel's Pneumococci was obtained. By its means the onset of the Meningitis might have been ascertained by determining the presence of Pneumococci in the Cerebrospinal fluid. There is very little risk attending this procedure and it has been employed with considerable advantage in many cases of doubtful diagnosis.

Treatment:— Everything was done to allieviate the patient's sufferings, and the symptoms were treated as they arose; he was put on a diet of beef-tea and milk; the heart's action was strengthened and steadied by small doses of Tinct. Digitalis frequently repeated; a mixture was given to increase the amount and fluidity of the Sputum and thus diminish the difficulty of expectorating; the restlessness and sleeplessness were treated with various Hypnotics—Phenazomum, Sod. Bromide and Tinct. Hyoscyaminae and when the pain became excessive 1/6th grain of Morphinae Tartras was injected.

Operative interference has been tried in these cases but without satisfactory results.
DISEASE.
Pneumonia and Pneumococcal Meningitis

Notes of Case

Name: James Kennedy
Age: 15
Diet
Case Book No.

Date of admission:
January 31, 1904

Result: Death
James Finnerty:— Age 15.

Page in the Caledonian Hotel.

Present address:— 3 North St. James Street, Edinburgh.

Admitted:— Jan. 31 1904 to Ward 36.

Complaint:— Headache, cough, pain in the back.

History of present attack:— About a fortnight ago he had an acute attack of Tonsillitis and Saturday Jan 23 his tonsils were cut by Dr. Brewis.

On Monday Jan. 25th. he complained of pain in his back in the region of the spine, about the level of the 6th Dorsal Vertebra. He had no appetite, felt cold and shivery, was unfit for work and had to go to bed. He lay for two days in the Hotel and a Doctor gave him some powders.

On Wednesday Jan. 27th. he was removed home, and there he was seen by Dr. Sanders. He had then a severe constant headache, and a short, sharp painful cough.


On Sunday Jan. 31 he was admitted to the Royal Infirmary, Edinburgh.

Previous Health:— The only thing of note was an attack of Bronchitis and Whooping Cough at the age of five.

Last December he was troubled with deafness.

Family History:— Father—34, Mother—34, and three sisters alive and well. Two brothers died, cause unknown, one of them being subject to fits.
Social Conditions:— As page in an Hotel he has long hours but his work is light. He is much exposed to variations in temperature. He had plenty of good food and a comfortable sleeping apartment on the premises.

Present Condition:— February 1st.:— Patient is lying more or less flat in bed; he is somewhat restless; his face is flushed, his lips are dry and cracked, and there is well marked Herpes Labialis; his pulse is full, bounding regular, and only slightly dicrotic, rate 76 per minute; his temperature is 99.4°F; his respirations are somewhat short and hurried and painful, especially on taking a long breath, rate 28 per minute; there is, occasionally a short, sharp cough accompanied by an agonizing pain, which is referred to the Left Infra-scapular region about the level of the 6th. Dorsal spine; the sputum is difficult to cough up; it is viscid, tenacious, and scanty; white, not rusty; and contains many Lenzocytes,

Lungs:— On Inspection:— There are no abnormalities of shape no undue bulgings, nor indrawings. The Alve Nasi move in respiration. The breathing is somewhat shallow; there seems to be no local lack of expansion but on palpitation it is found to be somewhat deficient posteriorly on both sides, particularly in the Infra-scapular regions.

On Percussion:— a dull note was elicited over a small area 3" by 2", immediately below, and encroaching upon the inferior angle of the Right Scapula. A similar area on the left side is somewhat hyperresonant.
The Vocal Resonance was increased over the right side posteriorly and the Vocal Fremitus over both bases.

On Auscultation over both bases posteriorly, harsh vesicular breathing was heard; breath sounds in other areas normal there was no friction.

Heart:— The Heart was not enlarged. The sounds were closed and pure in all the areas but the Second Sound in the Pulmonary Area was accentuated.

Blood:— Red Blood Corpuscles — 4,000,000

Haemoglobin 66%

White Blood Corpuscles — 22,186

Polymorphonuclears 68%

Lymphocytes 27%

Mononuclears 5%

Digestive System:— The appetite was much diminished. The teeth were good and the tongue was moist and coated with yellow fur. He complained much of thirst. His bowels were regular, no constipation nor diarrhoea, one motion per day, usually.

Nervous System:— Patient is restless and sleeps very little. There is a severe and constant headache and pain in the back in the region of the spine, which is aggravated on coughing. There has been no vomiting. There are no points of special tenderness about the head. The pupils are somewhat dilated, equal and react to light and accommodation;
There is no Strabismus nor Nystagmus.

Treatment:— He was given a diet of Milk and Beef-Tea and 5 Minims of Tinet Digitalis every two hours.

Monday Feb. 1st. at 4 p.m. his temperature had risen to 104 F. with a pulse of 100 and respirations 20 per minute.

On Feb. 2nd. the 9th. day of the disease he was somewhat better—temperature 100, pulse 88, respirations 30 per minute. The Tinet Digitalis was given every 4 hours together with the following mixture to lessen the viscosity of the Sputum:

Vin Ipecae. 20m.
Spir. Ammon Arom. 20m.
Ammon Carb. ad 2grs.
Infus Senegae ad ½oz.

On Feb. 3rd. the patient was much worse. He slept very little and was very noisy. He received various hypnotics during the night. His breathing is shallow and hurried, and his Alae Nasi are moving vigorously, 40 per minute. He complains greatly of headache. Pulse 100 Temperature 103-103.8 F..

On Feb. 4th. patient became somewhat delirious. The temperature reached 104.2 F., Pulse 120, respirations

He received early in the day Sod. Brom. Pot. and Tinct. Hyoseyamus; towards night 1/6 gr. of Morphia was injected.

On Feb. 5th. there was no improvement. Kernig's sign was now present.
The temperature was 103°F. and over the dull area described above there was well marked tubular breathing with fine crepitations at the end of inspiration. The patient was only half conscious, occasionally moving restlessly, and uttering a peculiar cry. He was sinking fast.

Early in the morning of Feb. 6th. the head was noticed to be retracted; there was conjugate deviation of the eyes to the right, the abdomen was not Scapboid; the temperature rose to 104.40°F.; the pulse to 144, the respirations to 68 per minute, and the patient died.

Shortly after death, puncture was made and Frankel's Pneumococci were found in pure culture. There were no Diplococci Intracellularis Meningitidis.

**POST MORTEM:**

- **Left Pleural Cavity:** no fluid; dense adhesions: over the upper lobe, recent.
- **Right Pleural Cavity:** Contained 1 ½ oz. of turbid fluid; there were some adhesions easily broken down.
- **Left Lung:** 17 oz.; the bronchi were congested; there was well marked Pleurisy over the upper lobe.

  On section— the lung was congested; there were patches of Broncho pneumonic consolidation; there was also a small patch in the upper part of the lower lobe.

- **Right Lung:** 17 oz.; there was a slight amount of organising Pleurisy over the upper lobe; in the interlobular fissures there was much recent Pleurisy; the Bronchi were congested.

  On Section— there were found patches of early
Broncho Pneumonia in the Upper and Lower lobes. There was marked consolidation at the Base.

Brain:— 3lbs. 10oz.; there was a well marked Septic Meningitis, diffuse, with here and there purulent patches ½" in diam. especially at the Vertex. There was a well marked purulent exudate at the base.

Spinal Cord:— Well marked Spinal Meningitis with purulent exudate.

Heart:— There was some nodular thickenings at the edge of the Mitral Valve; the Myocardium of the left Verticle was cloudy.
CASE No. 4.
PNEUMONIA PNEUMOCOCCAL PERITONITIS.

Professor Wyllie.
PNEUMONIA with PNEUMOCOCCAL PERITONITIS.

Alexander McDonald, Age 17:— This patient was admitted on Friday, Feb. 19th, 1903 complaining of cough and pain in the chest. On the previous Tuesday night he had caught a chill and next day felt too ill to go to his work. He could not retain anything excepting a little whisky; he vomited several times on Wednesday, and also developed a short cough. Towards night he was somewhat delirious; the coughing and vomiting continued on Thursday and next day he was sent to the Infirmary.

His only previous illness was an attack of Bronchitis and Whooping Cough in July 1902, which lasted one week. He was a teetotler and non-smoker. He worked behind the ovens in a large bakery and frequently came out into the open air perspiring freely and thinly clad.

On admission the physical signs indicative of Pneumonia were present in the right Lung (for details see subjoined case). The Sputum was scanty, viscid, tenacious rusty, and contained many of Frankel's Pneumococci Leucocytosis Leucocytosis:— The number of leucocytes was no index to the severity or progress of the condition. There was here an intense septic infection and yet it was only 10,000 per c.mm. on Feb. 20th, the first day on which he complained of abdominal pain. This is less than half the number in the preceding case of Pneumonia with Pneumococcal Meningitis although the latter was less rapidly fatal.

The disease advanced steadily to its fatal ter-
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DISEASE: Pneumonia
Name: [redacted]
Age: 1
Diet: [redacted]
Notes of Case: [redacted]

Date of admission: February 19, 1904
Result: [redacted]
mination the poison accumulated in the body but the number did not increase; on Feb. 22nd it was still 10,000 per c.mm. and on Feb. 24th, the 4th. day of the Peritonitis it was seen only 9,800. I have much higher counts in Lobar Pneumonia without any complication.

The Urine was high coloured and shewed the typical diminution of Chlorides.

The Temperature on Feb. 19th. was 100.6°F.; next morning it had fallen to 100°F., but during the course of the day, the first day on which he complained of pain in his abdomen it rose to 103°F. It remained high for 8 hours and then sank almost continuously for 40 hours; in this "Crisis" the respirations also diminished although the pulse was not much affected. For the subsequent four days it shewed daily remissions of about 2°F.—morning readings of 99°F. and evening of 101°F. For the last 24 hours before death the temperature was very irregular; at 8 a.m. it was 101.2 F.; it then fell abruptly to 98.4 F. in four hours; rallied slightly and continued down to 98°F.; it swung up again to 102°F. which it reached at 12 p.m. having risen a degree per hour for four hours; by 4 a.m. on the 28th it had sunk to 99.4; it rushed up again and the end came about 8 a.m. with a temperature of 105.4°F.

Pulse:— On Feb. 19th. the pulse was regular, of large volume, easily compressible and markedly dicrotic; rate 108 per min.. The Heart's action was fairly sustained and
4 HOUR CHART.

DISEASE: Enteric Fever

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Temperature (in degrees F):
- 101°
- 102°
- 103°
- 104°
- 105°
- 106°
- 107°

Pulse:
- 100 beats per minute
- 102 beats per minute
- 105 beats per minute
- 108 beats per minute

Respiration:
- 24 breaths per minute
- 27 breaths per minute
- 30 breaths per minute
- 33 breaths per minute

Date of admission: January 19, 1916

Printed and Published by Waddington & Co.

Entered at St. John's Hill.
forcible, the valves were competent, and the sounds pure and distinct.

On Feb. 20th. the rate increased to 126 per min. and on the 21st. to 128. Thereafter till the day he died, it did not increase in rate; it remained fairly constant from day to day, but varied considerably throughout the night, low readings, not always, though often coinciding with remissions of temperature; it remained above 110 per min. Towards death it quickened rapidly and was 154 per min. 8 hours before the end. The Heart became gradually weaker and the pulse became small, running and irregular.

Respirations:— The respirations were short, shallow and hurried. On Feb. 19th. they were 36 per min., but later in the same day they rose to 50 per min. Corresponding to the fifth day of the disease there was the marked continuous fall of temperature for 40 hours, mentioned above, during which the respirations markedly diminished, falling as low as 28 per min. on Feb. 22nd., and throughout the rest of the disease the average rate tended to keep lower; thus before this "Crisis" the average rate per min. was 44.5, during it 34.3 and after, 35. Just before death it fell to 28 per min.

The Pulse—Respiration Ratio:— The annexed graph shows the average up to the 5th. day of the disease to be about 2.8:1; coincident with the fall of temperature on the 5th. and 6th. days it rose to 4:1, and towards the end it lost all its
Graph of the Pulse-Respiration Ratios in Pericarditis with Peritonitis

Day 1 5 6 7 8 9 10 11
3 1 5 1 4 1 3 1 1 1
Discussing Pneumococcal Peritonitis, Sir Frederick Treves (Albutt's "System of Medicine," 1897. p.607) says:—
"It has not been certainly shewn that this variety of Peritonitis exists......Peritonitis is a very rare sequel of Pneumonia but Pneumonia is a common complication of Peritonitis". This case does not confirm his views, for the sequence of the symptoms proves conclusively that the Pneumonia was the primary condition; that the Peritonitis occurred subsequently; and as the Bacteriological examination shewed, it was immediately Pneumococcal.
### Notes of Case

**Name:** Alexainers  
**Age:** 17  
**Diet:**  
**Case Book:**

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<tr>
<th>Date of admission</th>
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#### Temperature Chart

- **Body Temperature (°F):**
  - Feb. 17: 102
  - Feb. 18: 100
  - Feb. 19: 101
  - Feb. 20: 102
  - Feb. 21: 100
  - Feb. 22: 99

#### Other Observations

- **Pulse:**
  - Feb. 17: 102
  - Feb. 18: 100
  - Feb. 19: 101
  - Feb. 20: 102
  - Feb. 21: 100
  - Feb. 22: 99

- **Respiration:**
  - Feb. 17: 22
  - Feb. 18: 23
  - Feb. 19: 21
  - Feb. 20: 22
  - Feb. 21: 23
  - Feb. 22: 24

- **Result:**
  - Death
Pneumonia with Pneumococcal Peritonitis.

Name:-- Alexander McDonald, 17.
Occupation:-- Baker.
Address:-- 15 Wardlaw Street, Edinburgh.
Birth Place:-- Kimberley.
Admitted to Ward 34, 19th Feb. 1904.
Complaint:-- Shortness of breath and pain in chest.
Duration of Illness:-- Two days.

History of present illness:-- On Tuesday night, Feb. 16th, he caught a chill, and next morning felt as if he had been beaten all over, and was unable to get up to go to work. He took a dose of Liquorice powder without obtaining relief and then he had a tumbler of rum toddy, but he vomited it immediately. He was able to retain some neat whisky. Towards night he became somewhat delirious.

On Thursday, Feb. 18th. he vomited twice; he had a short painful cough, and Dr Jones who was called in recommended him to come to the Royal Infirmary Edinburgh.

He was admitted on Friday Feb. 19th. to Ward 34.

Previous Health:-- He had enjoyed excellent health. He never had Scarlet nor Rheumatic Fever. In July 1902 he was ill for a week with Bronchitis and Asthma.

Family History:-- Father died age 38. Brain Fever.

Mother alive, age 46 Exophthalmic Goitre

Social Conditions:-- Patient works behind the ovens in a big
bakery. He gets very warm and sweats copiously. He does not wear flannels; he wears cotton shirts which are frequently very wet when he comes out from the bakery into the open air. He is teetotal and, except for an occasional cigarette, a non-smoker.

Present condition- Feb. 19th. patient is lying on his back he is very restless, his cheeks have a slight malar flush; there is no Herpes Labialis. His Alae Nasi are moving vigourously. He has a more or less continuous cough which is very painful. The Sputum is small in amount, rusty, viscid, and contains Pneumococci pulse 108; temperature 100.6; His breathing is hurried and shallow; respirations 36.

There is no abnormality of shape of the thorax; the expansion is small and is especially diminished over the lower half of the right side, both anteriorly and posteriorly. The vocal Resonance and Fremitus are increased over this area. On Percussion, there is marked dulness over the right base posteriorly extending as high as the inferior Angle of the Scapula and passing also on to the anterior aspect of the chest at this level. On Auscultation harsh vesicular breathing is heard over this area. The breath sounds over the rest of the chest are normal.

Circulatory System:- The Radial pulses are visible, equal, and synchronous; the arterial walls are not thickened; rate 108; the pulse is regular, large volume, easily compressible and markedly dicrotic.

Heart:- Apex beat is in the left 5th. intercostal space,
and is fairly sustained and forcible. The Heart is not enlarged, and the valves are competent, the sounds being pure and distinct.

Urine:— High coloured, orange, clear, Acid, Sp. G. 1025, no albumen, chlorides diminished greatly, no abnormal constituents.

Blood:— Feb. 20. White Blood Corpuscles:— 10,000
Feb. 22. Ditto 10,000
Feb. 24. Ditto 9,800

Digestive System:— The tongue is moist and furred; there is no difficulty nor pain in swallowing; patient has a appetite, and vomits almost everything—food or drugs. He is constipated.

Nervous System:— Patient is slightly delirious; he is restless and his sleep is much disturbed by coughing. His pupils are somewhat dilated, equal, and react to light and accomodation. No Strabismus nor Nystagmus. There are abnormal sensory disturbances.

Treatment:— Feb. 20th. Patient was given Tinct. Digitalis. .5m Spir. Ammon. Arom...20m. every 2 hours.

He complained of pain in his abdomen especially on the right side.

On Feb. 22nd. the pain was much worse and was present. The abdomen was slightly distended.

On Feb. 24th. the abdomen still showed and there was marked tenderness on palpation. The circumference at the Umbilicus was 28½". Mr. Caird saw the patient but did not advise operation. The temperature was 100 F., pulse 112, and respirations 44.

On Feb. 25th. patient seemed quite sensible during
semblance to a Pneumonic curve and reached 5:1. This this is interesting as showing how the rapid pulse characteristic of the Peritoneal affection first minimised the rapid respiratory rate of the Pneumonic tending to keep the ratio normal and secondly completely obscured it as the pulse continued to increase in rate although the respiratory rate fell until the curve was typical of the Peritoneal condition in spite of the presence of Pneumonia.

Abdominal Symptoms:— The disease was ushered in by repeated attacks of vomiting; there was complete Anorexia and in addition the patient was constipated. On Feb. 19th. his tongue was moist and furred; he vomited everything, food and drugs; he was still constipated and remained so till the 20th.; then a period of looseness of the bowels set in culminating in Diarrhoea on Feb. 24th.

On Feb. 20th. he first complained of pain in his abdomen, especially on the right side. It increased steadily the abdomen became somewhat tumid; there was marked tympanites; the liver dullness was almost obliterated and there was marked tenderness on palpation.

On Feb. 24th. Mr. Caird saw the patient and thought that operation was not advisable; the circumference at the Umbilicus was 28 3/8" but next day it had diminished to 26 1/8"

POST MORTEM:— In addition to the Lung condition a general Septic Peritonitis was found. The pus was stained and cultures were made and it was proved to be due to Frankel's Pneumococcus.
the day. The abdomen was not so tender—measured $26\frac{1}{2}''$. He was fed with brandy nutrient enemata. His temperature sank to normal.

On Feb. 27th at 9 a.m. his temperature rose to 105·4 his pulse to 154, and he died.

**POST MORTEM.**

Left Pleural cavity contained about 8–10 oz. of purulent fluid but there were no adhesions.

Left Pleural Cavity adhesions over the Upper Lobe.

Left Lung:— Recent empyema limited to lower lobe; grey hepatisation; apex congested.

Right Lung:— In the upper lobes and middle lobes there was well marked Pneumonic consolidation in the stage of grey hepatisation; the lower lobe was collapsed.

Pericardium:— There were well marked adhesions between the Epicardium and Pericardium.

There was well marked general Pneumococcal Peritonitis. The pus stained and cultures were made so that it was conclusively proved to be due to Frankel's Pneumococcus.

The spleen was small and soft, and the liver fatty.
CASE No. 5.

CHRONIC AND ACUTE NEPHRITIS.

Professor Greenfield.
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Mrs. Margaret Mackenzie, age 49.--- This patient was admitted on May 27th, 1904, complaining of swelling of her body, face, feet, breasts, etc., of about a fortnight's duration.

She had been quite well until the middle of April 1904. Since then she had had a bad cough, with a copious, greenish, somewhat thickish, frothy sputum. From the beginning of May she had had severe frontal headaches and she also had had some pain during the last three weeks, before passing her water; the quantity was not much altered but she micturated several times during the night; the urine had been like blood.

The history did not throw much light on the condition; she was moderately addicted to alcohol; there was no evidence of Syphilis, and she had had neither Rheumatic nor Scarlet Fever.

Urinary System:--
Color:-- On admission the urine had a peculiar, diffuse, bright red color, not smoky, which continued throughout the subsequent course of the disease.
Specific Gravity:-- On admission the Specific Gravity was 1003; it was persistently low, varying between 1003 and 1005.
Reaction:-- The reaction was at first acid, then it became alkaline on June 1st. and remained so.
Ounces of Urine per Diem - Black
Ounces of Albumen per 24 hours - Blue
Ounces of Mass per Diem - Green

May 1862
27 28 29 30 31 June 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Quantity:— The amount of urine passed was persistently greater than normal from May 27th. to June 7th.; On admission it was 64 ozs. per 24 hours; it increased steadily, though not in any regular proportion, till June 1st. when it was 186 ozs.; it then fell to 145 on June 2nd. and then it then increased again and on June 3rd. it was 165 ozs.; two days later, June 5th. it reached its maximum, 228 ozs.; it then fell rapidly; by June 8th. it was 45 ozs., this being the nearest approach to the normal amount recorded; next day, June 9th. there was a sudden onset of retention and 70 ozs. were drawn off by the catheter; then ensued a period of Anuria which lasted till Sunday June 12th. at 5 p.m., when after dry cupping over the right Kidney three ozs. were passed voluntarily; after this the Anuria recurred and persisted till Thursday June 16th.; that day she was operated on by Mr. Caird and that evening she passed three ozs. of urine; On Friday June 17th. she passed another 3 ozs.; she subsequently passed small quantities occasionally; she died on Saturday 18th.

Blood:— Blood was present in the urine constantly although not always in equal quantities.

Albumen:— On admission there was 5 grains of Albumen per oz. it was uniformly present varying from .43 to .85 grains, the average amount up to June 9th. being .60 grains per oz.; it varied roughly inversely as the quantity of urine; it diminished as the quantity of urine increased, and vice versa;
On June 5th. when the quantity of urine reached its maximum 228 ozs. the albumen was at its minimum .43 grains, and on June 9th. when only 7 ozs. of urine were obtained the Albumen reached its maximum of .875 grs. per oz.; this correspondence however was not absolute; thus, on May 31 with 144 ozs. per diem there was .65 grs. of Albumen whilst on June 4th. with 167 ozs. there was only .7 grs. of Albumen per oz.; this a remarkable fall of .42 grs. of Albumen from .85 to .43 grs. on June 5th.; this was coincident with 61 ozs. increase in the amount of urine; the change also affected the Urea markedly; the whole character of the Urine underwent a change. The total amount of Albumen varied roughly as the quantity of urine, increasing as it increased and diminishing as it diminished although the variations did not have any ratio to one another; the only exception was on June 5th. when with an increase of 61 ozs. there was a diminution in the amount of Albumen equal to 43grs.

Urea— On admission the Urea was .5 grains per oz.; the patient was placed on milk diet; the Urea increased till May 31st. when it was 1.5 grs.; it diminished by 1 gr. per ox. on the next two days, till June 7th. when it was 1.4; by June 9th. it had risen to 2.0 grs.; there does not seem to be any correspondence between the Urea excretion and either the amount of Albumen or the quantity of Urine.

Pus.— Pus was present throughout the greater part of the disease.
Triple Phosphates were observed on June 2nd.
Oxalates were present on June 7th.

Casts:— There were granular and epithelial casts on June 1st. next day there were none; on June 9th. there were again many granular casts and these are again recorded on June 12th.

The Urine after the operation shewed a considerable alteration in the Albumen and Urea; the first urine passed contained 7.37 grains Albumen per oz. there being 22.11 grs. passed altogether; this was in part due to the presence of an excessive amount of blood; it fell to 1.57 grains per oz within the next 12 hours.

The Urea was remarkably increased; the first specimen contained 3 grs. per oz. and the second 4 grs. They both contained casts granular and hyaline.

There was never any Sugar present. The Chlorides were not estimated.

The primary persistent increase of urine was due solely to chronic inflammatory condition of the Kidneys; there was no cardiac murmurs on admission and the valves were found competent after death; the amount of urine, its low specific gravity, the presence of blood, pus, and casts, all pointed to the affection and the diagnosis was confirmed Post-Mortem.

The concurrence of Oxalates, pus, and blood in the urine on June 7th. together with pain and tenderness on the right side and the somewhat abrupt suppression of urine on June 9th. seemed to indicate the presence of a Renal
Calculus in the right Kidney. A Calculus in the Pelvis or Ureter of the right Kidney might cause suppression of the urine from that Kidney; there was possibly a vicarious hypersecretion from the left Kidney thus explaining the initial increase; the subsequent Anuria might then have been due to some cause nervous or mechanical, interfering with the blood supply or obstructing the Ureter of the left Kidney.

In seeming confirmation of the presence of a Calculus obstructing the flow of urine from the right Kidney there was an area of dullness in the right Hypogastric and Lumbar regions extending towards the right flank which was on palpation tender both anteriorly and posteriorly. There did not seem to be any connection between the tumour like mass and the Liver for there was a semiresonant area extending vertically for $\frac{1}{2}''$ between them; the part furthest from the Liver was the least resonant; the mass did not move with respiration and it had a soft semifluctuating feel which was in no way suggestive of Liver. Taken in conjunction with the other facts in relation to the urine it was supposed to be the right Kidney with Hydronephosis and Mr. Caird operated. He found no Calculus nor Hydronephosis but evidence of an acute inflammatory condition of the right Kidney which had supervened upon a more chronic condition.

Although there was Anuria for almost 9 days before death there was no Dropsy and excepting some vomiting, and Retinitis there were no symptoms of Uraemia. Post Mortem it was very instructive to find that in spite of the signs to the contrary, the mass in the right hypochondriac
and Lumbar regions was Liver-, a portion of the right lobe which was projecting downwards over the right Kidney.

**Post Mortem:**

The right Kidney was found much enlarged; the right renal artery was much thickened and narrowed; the right renal vein was thrombosed; although the site of the thrombosis was near the incision; this may have accounted for the sudden and very acute congestion of the right Kidney. The scar of the operation was observable on the surface, and could be traced into the Pelvis. Microscopically there was evidence of extensive old disease, arterial degeneration and wasted glomeruli.

The left Kidney was much enlarged; the capsule was not adherent, the surface was smooth and there were no cysts. On section the deep cortex was relatively increased; the pelvis was hyperaemic; and there was extreme engorgement and some haemorrhage accounting probably for much of the haematuria. Microscopically there was internal inflammatory change, very acute changes in the epithelium, and very acute hyaline degeneration of the arteries.

There was thus an acute pyelitis supervening on a chronic condition.

**Cardiac System:** The heart was enlarged; the sounds were clear and ringing; the second sound was accentuated and reduplicated but on admission there were no murmurs and post mortem the valves were found competent. There was nothing to indicate degeneration of cardiac muscles.
The arteries were thickened and tortuous; the pulses were equal and synchronous; they were regular in force and rhythm; on admission it was moderately full and very forcible; the tension was high the top was well sustained and double, and the fall was slow. As will be seen from Sphygmogram No.1, on June 7th at 10 p.m. the rise was very rapid; the fall was at first rapid then there were two marked secondary waves and then it tailed off till the next rise. Contrasting it with No.2, taken on the same night at 11-20 p.m. just after the hot air bath it will be seen that the two are practically identical in character although their rates were respectively 96 and 120 per min.

In No.3, June 10th, the rise was rapid as before; the fall was extremely rapid, and the pulse was slightly dicrotic; the beat was forcible; the tension had become lower but the pulse was quite regular.

Rate:— On admission the pulse rate was 84 per min.
It reached 100 per min. on the evening of June 1st, but with this exception remained fairly constant till June 6th, the average being 84 per min.; on that evening it reached 98 per min.; 180 per min. is the rate recorded for June 8th; this is the morning subsequent to the Hot Air bath and is coincident with a fall in temperature of 103.7 F. The onset of Anuria on June 8th saw a pulse rate and on the 4th day, Sunday June 12th, it had fallen to 68 per min.

Respiration Rate:— On admission respiration was slightly
hurried, 24 per min.; it did not vary much till June 6th.,
the average being 23.3 per min.: on June 7th. it had risen
to 28 per min.; it continued to increase in rate and on June
8th. was 36 per min. The increase was not a mere transient
effect; on June 12th. the rate was 38 per min. and the average
for the week beginning June 7th. was 34.5 per min.

Pulse Respiration Ratio: The Pulse Respiration Ratio from
June 5th. to June 13th. is interesting.

June 5th. and 6th. give the standard almost since
admission, practically a straight line the ratio being 4:1.
On June 7th. it drops to 3.2:1; ignoring June 8th. with its
inconceivable pulse rate of 180 per min., we find on June 9th..
the same ratio as on June 7th.; on June 10th. it fell to 12:
1.9 to 1, quite suggestive of a pneumonic pulse respiration
ratio.

Temperature: On admission the temperature was 97.4;
for the first week it tended to remain subnormal; there was
no pyrexia. In the second week there was a marked change in
its character; on June 3rd. it reached 100 with a daily remis-
sion of 1.4°; it continued to swing a little till June 6th.;
on that day there was no evening rise, the temperature remain-
ing 98.2°F.; next morning it had dropped to 98.7°; and then
it began to rise steadily till 36 hours later it was 103°F.
The Hot Air Bath was administered on June 7th. about 11 p.m.
and next morning the temperature had risen 2.6°F.; from
103 on June 8th. it dropped abruptly to 99.4° but rose to
102°F. again on June 10th; On June 10th. it again became subnormal and remained so. I am not, unfortunately sure of the pulse rate of June 8th. and cannot therefore draw any inferences as to the general relations between the pulse and temperature of this very interesting period, but I might point out that the 3 highest pulse rates, 100 on June 1st., 98.2 on June 6th., and 108 on June 9th., corresponded respectively with temperatures of 97.6, 98.2, and 99.4, and that on June 12th with the lowest recorded pulse rate 68 per min. the temperature was 99.6.

Treatment:— On admission Patient was put on milk diet being allowed in addition a little tea; copious diuresis took place. The bowels were kept regular by Pulvis Jalapae Co., Henry's solution, and Enemata.

On June 5th. Erythrol Tetranitrate $\frac{1}{2}$ grams twice daily was given and this coincided with the maximum quantity of Urine secreted, 228 ozs. per diem.

On June 7th. it was increased to $\frac{1}{2}$ gram twice daily and in addition 5 minims of Tinct. Strophanthus was given twice daily, this being increased to 8 minims on June 9th.

From 10-30 to 10-45 p.m. the Patient received a Hot Air Bath temperature 110-119°F.

On June 9th. Sodium Phosphate was added and as the patient was somewhat weak $\frac{1}{2}$ oz. of Brandy was given 4 hourly
On June 12th, Patient was dry cupped over the Kidneys with some success patient passing 3 ozs. of Urine voluntarily, but the operation was not repeated.

On June 17th, the Right Kidney was exposed and excised by Mr. Caird; this relieved the acute distention and the Patient passed several small quantities of Urine. The Patient was found after death to have an intercurrent attack of acute Lumbar Pneumonia. On admission she was suffering from a certain degree of Bronchitis. The Pneumonia was not diagnosed ante mortem. Its onset probably occurred about June 8th, and the incident pyrexia was just subsequent a Hot Air Bath administered the previous night at 11 p.m.; but the respiration rate had increased from 22 to 28 per min. which gradually increased to 38 per min.; the pulse respiration rate, vide supra was Pneumonic. The onset of pyrexia was also coincident with the diminution of the amount of Urine from 120 to 45 ozs. per day on June 8th., and on the following day total suppression occured.
Mrs. Margaret Mackenzie, Age 49.
Charwomen.
7 St. Mary's Street, Edinburgh.
Admitted:— May 27th, 1904. Ward 24
Complaint:— Swelling of the whole body.
History of present illness:— For the last six weeks patient has had a bad cough especially at night. It is accompanied by a good deal of expectoration; the sputum was greenish thick, and somewhat frothy. She has also been very thirsty but when she drinks it makes her sick. She is very short of breath and often feels faint. For a month previous to admission she was troubled with a severe frontal headache especially in the morning when she rose. It gradually abated as the day wore on.

She has had pain before making her water for the last three weeks; the act is accomplished without difficulty and is quite under the control of the will. The quantity is not much altered but she micturates somewhat more frequently often 2 or 3 times in the night. The urine has been like blood for about three weeks.

About a fortnight ago the whole body swelled up the breast, face, feet, etc. She has also had pain in the left side just below the breast, aggravated on coughing.

Previous Illnesses:— Always very healthy until six weeks ago; she has had neither Rheumatic nor Scarlet Fever. She was never abroad nor has she had a similar attack.
Social Conditions:— Patient says she has a comfortable home with plenty of good food and clothing; she indulges moderately in Alcohol. She has to work hard as a charwoman.

Family Health:—

Father died, age 31, Consumption.
Mother died, age 67, Cause Unknown.
One Brother alive and well, he has had Rheumatic Fever
One Son, alive and well, age 32.
No miscarriages.

State on admission:— The general development is fair; nutrition and muscularity are good.

Face:— The face is full and puffy though not specially in the lower eyelids. There are some venous radicles in the face, considerably dilated.

There is no lividity, pigmentation nor eruption.

There is marked Oedema in the back legs, feet, etc. The skin is glossy with many dilated venous radicles. There is no enlargement of glands; no clubbing, nor incurving of the fingers.

Scars:— On the inner and anterior aspect of the right leg is the scar of an incision 3"-4" long, from an operation for Varicose Veins, by Mr. Cotterill; there is also a scar on the front of the right ankle; there are others, round with thin cicatrices on the anterior and exterior aspect of the left leg. Cause unknown.

Pupils:— The pupils are small, equal, regular, circular, and react to light and accommodation.
Tongue:— There are fine tremors of the tongue.

Circulatory System:—
Subjective:— There is considerable shortness of breath on exertion; frequently palpitations, and she often feels faint. There are no noises in the head, she sleeps fairly well,
Arteries:— The pulse is invisible, regular in force, and rhythm; it is moderately full and very forcible; it rises slowly; the top is well sustained and double, and then it falls slowly the tension is high. The vessel walls are thick and tortuous.

Heart:—
Inspection:— There is no visible pulsation over the heart, in the Epigastrium, to the right of the Sternum or over the neck.
Palpation:— There is faint pulsation in the 4th. & 5th. left interspaces out to the apex beat which is in the 5th. interspace $4\frac{1}{2}$" from the middle line.

Percussion:—
Right Border— 3rd. rib—$1\frac{3}{4}$" from middle line.
Sup. Border — (In left parasternal line) 3rd. rib.
Left Left " at 3rd. rib 2" from middle line
— at 6th rib $4\frac{1}{2}$" " " "

Auscultation:—
Base:— 1st. sound distant and heaving.
2nd. " accentuated and reduplicated.

Aortic Area:—
1st. sound distant and heaving.
2nd. " loud and reduplicated with
an almost clear metallic sound.

Pulmon Area:

1st sound fainter than at the base.

2nd. " distant accentuated, reduplicated, but not so close nor so loud as in the Aortic Area.

Tricuspid Area:

1st. sound loud, heaving; reduplicated.

2nd. " accentuated and reduplicated.

Mitral Area:

1st. sound loud, nearer than in Tricuspid Area, but the reduplication is not so well marked.

2nd " accentuated and reduplicated.

There is neither friction nor murmurs.

Respiratory System:

Subjective:— There is pain behind the Sternum on coughing. Her cough is worse in the morning and is not constant; there is some shortness of breath.

Objective:—

Sputum:— Copious, greenish, thick, viscid, and somewhat frothy.

Breathing:— Thoraco-abdominal; regular, rate 28 per min.

Thorax:—

Inspection and Palpation:— The chest is square and flat; the Pectoral muscles are well developed; the Clavicles are
imbedded in soft tissue. The movements are small; the chest moves as a whole; the ribs move but little on each other; the voice is weak and so also is the Vocal Fremitus. Percussion:— There is deep resonance all over the Anterior Aspect and in the Axillae. Posteriorly there was some dulness over the lower part of the Left lung.

Auscultation:—

Anterior Aspect:— Inspiration is slightly roughened; there is no pause between Inspiration and Expiration; Expiration is about 2/3 as long as Inspiration and is accompanied by Rhonchi. Vocal Resonance was absent.

Posterior Aspect:— Breathing is the same as in front somewhat harsh Vesicular. At the Left Base Inspiration is accompanied by numerous fine crepitations.
Treatment and Progress:

May 1st.: The breath sounds are fainter at the bases especially at the right base. There are no crepitations at the Left Base.

June 4th.: There is dullness at the Right Base. The breath sounds are dim but are still audible. There is no sign of fluid.

Patient complains of feeling worn out.

Pulse: Tension moderate. Headache is constant - both Frontal and Vertical. There is no vomiting.

June 5th.: There are some indications of fluid at base of right base.

June 7th.: 11 a.m.: Patient vomited much since last night. Erython Tetranitrate $\frac{1}{4}$ gr. twice daily has not had much effect.

11 p.m.: Hot air bath - 110-119 F. given from 10-30 to 10-45 p.m.

The pulse remains of good force, rate 96 per min. Respiration not increased; complained of some shortness of breath.

12 midnight: pulse 120 per min.; tension moderate - patient felt very weak.

Brandy $\frac{1}{2}$ oz. four hourly.

Tinct. Stroph. 5m. do.

2 a.m.: feels better; pulse 120; tension moderate.

10-30 a.m.: pulse very rapid. The temperature had risen to over 103 F. and again fallen considerably.
Erythol Tetranitrate reduced this morning to $\frac{1}{2}$ gr. and strophanththnthus increased; pulse 100, regular, rapid rise and fall, slightly sustained, no dicrotism.

Heart:--
Apex:-- 1st. sound, reduplicated, not so heaving; loud and clear.
Mitral Area:-- Sounds loud and clear, especially the second which is sharp; there is a soft systolic murmur, not propagated.
Base:-- 1st. sound, distant and muffled.
  2nd. " slight, accentuated, sharp and clear.

There is a faint Systolic murmur.

Aortic Area:-- Sounds much as before. Systolic murmur, slightly clearer at the base, and increasing as you proceed to base.

Pulmonary Area:--
  1st. sound, well heard.
  2nd. " accentuated.

There is a short Systolic murmur lower than at the Aortic Area.

Tricuspid Area:-- Sounds much clearer than at the base. There is a loud Systolic murmur limited in area.

The Urine has diminished to 450x. per 24 hours.

June 9th:-- Patient passed no urine voluntarily during the day. Seven oz. were drawn off with Catheter. The temperature has fallen to 99.4 F.; pulse 108; respirations 36 per min.

June 10th:-- Anuria; the temperature rose to 102 F.
the pulse and respiration rates have fallen. Since yesterday there has frequently been repeated vomiting with pain in the right Flank. There is some resistance over the upper part of the right side of the Abdomen.

June 12th.—Sunday:— Anuria from June 10th. Friday Morning to Sunday at 5 p.m. She was dry cupped over the Kidneys and shortly afterwards 3 ozs. of blood like Urine was passed voluntary. The pulse is only 68 per min.; the temperature reached 100.2 F.

The patient continued to vomit occasionally. She had been constipated for two days and Jalup given by the mouth had been rejected. An Enema was given and the bowels moved.

June 13th.:— There is again Anuria. Patient received Henry's solution and the bowels moved freely.

June 15th.:— 12 a.m. Patient lay on her back and complained of feeling weak; she was entirely free from Dropsy or Uraemic symptoms, although during the last four days she has only passed 3 ozs. of Urine; the catheter
was passed but no water was drawn off.

**Abdomen:** There was tenderness with a sense of resistance over the right Hypogastric and right Lumbar regions, extending to within half an inch of the Umbilicus. This area is slightly more prominent. There is a continuous diminution of resonance from the Liver downwards over this area, interrupted by a slightly resonant zone about half an inch vertically between the dull area and the liver. Just below this dull area there is an abrupt transition to colon resonance about one inch above the Anterior Superior Iliac Spine. The dullness extends towards the right flank. There is tenderness on pressure, both in front over this area, and in the right loin behind. The area of **dullness** is not altered in position by respiration.

The number of leucocylis has risen to 37,000 per c.mm. The leucocytosis is polymorphonuclear.

Patient is quite sensible, but very weak and prostrate.

June 16th:— Pulse good; no vomiting. The anuria continued.
Operation for a possible renal calculus obstructing the right ureter seemed practicable, and Mr. Caird accordingly saw her in the afternoon and decided to operate.

5 p.m. operation. Incision made in right loin; right kidney protruded readily into opening. It was very large and engorged with deep red blood. Exploration with the finger failed to detect any evidence of a calculus in the ureter or pelvis of the kidney. The capsule was then incised; it was slightly adherent. An incision was made into the cortex; haemorrhage copious, was easily controlled. No calculus was felt. A piece of kidney was extracted for microscopic examination.

The operation lasted 20 min., and the pulse remained good throughout.

June 17th.:-- During the night, after the operation, 3 ozs. of urine were passed, and later a similar quantity. The first was like blood, and contained much blood and pus, some granular casts, albumen 7.37 grs. per oz., and Urea 3 grs.
per oz.. The second was straw coloured; contained blood, pus, and granular casts, though much less marked than in the first specimen; a few hyaline casts also; albumen 1.57 grs. per oz. and Urea 4 grs. per oz.. She was very restless during the night.

June 17th.:– She passed a small quantity of Urine similar to the last.

June 18th.:– Patient continued in a prostrate condition; she gradually sank and died in the afternoon.

Mrs. Margaret Mackenzie, Age 49:— There was general Rigor Mortis.

There was an incision 3½" long in the Right Lumbar Region which shewed no trace of union at the edges.

Heart:— 110 ozs. The epicardium was slightly thickened in patches especially over the right Ventricle. The Aortic valves were competent. The Pulmonary segments were healthy though blood stained and slightly thickened at the margins. The Mitral orifice was not dilated. The Mitral Cusps shewed small patches of thickening near the attached margin; the Chordae Tendinae were slightly thickened and the Papillary muscles were slightly hypertrophied. The Tricuspid orifice was dilated—the cusps healthy. The Left Ventricle was not dilated; there was evident Hypertrophy of its walls. The Left Auricle was neither dilated nor hypertrophied. The Right Ventricle was dilated and slightly hypertrophied. The Right Auricle was also slightly dilated and hypertrophied. The Cardiac muscles at the Apex shewed fatty infiltration. That of the Left Ventricle was yellowish, pale and friable. The Coronary Arteries were dilated and shewed patches of Atheroma. The Aorta shewed some patches of Atheroma at its origin.

Left Lung:— 1 lb. 9 ozs. Old Emphysema was present along the Anterior margin. Adhesions were scattered over the whole especially the Lobe. The Bronchi were congested but the
Bronchial Glands were not enlarged. The upper Lobe showed pneumonic consolidation in the stage of Gray patisation and some oedema. There was a pigmented area near the Apex with much fibrous tissue. The lower Lobe was congested and collapsed.

Right Lung: 7 lbs. 7 ozs. There was marked Emphysema of the Upper and Middle Lobes. The Bronchi were congested.

Upper Lobe: There was some old fibrous scars, but no pneumonic consolidation. The whole Lung was Oedematous and congested, especially the Lower Lobe. There was nothing normal in the Stomach or Intestines.

Liver: 3 lbs. It was rotated to the Right on an Antero posterior Axis. The Right Lobe was almost divided into two by a fibrous scar—the right half projecting downwards over the Right Kidney external to its lower part.

There was much fatty change and some cloudy swelling.

Spleen: 5 ozs. The pulp was soft; the Malpighian Bodies prominent and some areas of haemorrhage.

Kidneys:

Left: 8 ozs. Much enlarged. The capsule stripped readily; the surface was smooth; no cysts.

Section: Brownish; the cortex was swollen especially the deep cortex; the Pyramids were slightly congested and the Pelvis was normal.

Right: 12 ozs. There was a large cystic (haematoma) haematoma at the upper end. There was a small incision on the
surface. The vessels were thickened. Acute *Nephritis* with old Chronic Changes.

Ureters:— There was no evidence of dilation or thickening.

Bladders:— Nothing of note.
CASE No. 6.

EXOPHTHALMIC GOITRE.

Professor Greenfield.
EXOPHTHALMIC GOITRE.

This was a typical case of Exophthalmic Goitre occurring in a woman age 39. I have now seen eight cases; their ages varied between 19 and 60, and they were all women with one exception. Buschan places the age incidence between 16 and 40, and the relative proportion of women to men affected as 9:2; Von Graafe as 6:1 and Eshner as 4:1.

All the cardinal symptoms were present here:— Enlargement of the Thyroid; Tachy cardia and palpitation; Exophthalmos; Tremors; Mental disturbances and Emaciation.

The disease set in acutely without any obvious cause, the thyroid first enlarging, the eyeballs protruding subsequently.

Thyroid Enlargement:— Two years ago the Thyroid began to enlarge; the increase in size proceeded rapidly for a short time and then ceased; since, the swelling has remained stationary. The whole gland was involved, but the right Lobe seemed to be most affected; the gland is normally asymmetrical the right Lobe being the larger and the increase may have been proportionate. The swelling was soft, freely movable, and quite regular; without fluctuation or "thrill"; over it a systolic murmer was audible and it pulsated synchronously with the vessels of the neck.

The Exophthalmos:— This sign was subsequent to the Thyroid
enlargement both eyes became more prominent and they have persisted thus ever since; beyond the staring appearance, and the exposure of a large area of the Sclerotic, there was nothing of note; Von Graaf's sign was not present; there was a slight increase in the Palpebral Fissure; the frequency of winking did not seem to be diminished; the vision was unaffected; the pupils were moderately contracted, equal regular and reacted to light and accomodation; there was no Strabismus, Nystragmus, nor Ptosis, and the field of vision was undiminished.

Tachycardia and Palpitation:— The pulse was persistently rapid, seldom slower than 88 per min. and frequently over 100; it was very constant, in 7 weeks it varied only within 24 per min. the lowest being 82, and the highest 108 per min. the rate was increased on slight exciting cause; the pulse was of small volume, regular and easily compressible; there was no dicrotism; it rose rapidly, the summit was not sustained and it quickly fell.

In addition to the arterial pulsation there was distinct nervous pulsation in the neck; there was pulsation also in the Left Infraclavicular Region, in the Praecordia— in the 6th. and sometimes also in the 4th. inter spaces, and in the Epigastrium; the abdominal Aorta throbbed forcibly also.

The Heart was not enlarged; the Apex beat was sustained, forcible and diffuse; there was a slight presystolic thrill.
The Heart sounds were loud and systolic bruits could be heard in all the areas. There was Dyspnoea and Palpitation on exertion.

Mental Disturbances:— There was marked excitement and nervousness; the patient was very restless, easily worried, frightened, and somewhat irritable; the voice was thin and high pitched; sleep was not interfered with; the intelligence was good and there were no headaches nor fits, and no delusion or mania.

The muscles were small and flabby. The face flushed frequently, especially when under observation.

There was an itchy papular eruption all over the body, probably due to interference with trophic influence; in a case I had in June 1902 of a young girl age 23, the trophic disturbance manifested itself in a series of very intractable ulcers on the heels and toes.

There was no sensory disturbances.

The superficial and deep reflexes were exaggerated.

Tremors:— The tongue was tremulous and fine tremors were occasionally seen in the extremities on both sides of the body.

Emaciation:— She has been gradually losing weight and strength; in the last two years she lost two stones; she is well formed but emaciated, the muscles being small and flabby.

There were no digestive disturbances beyond a tendency to constipation.
<table>
<thead>
<tr>
<th>Date of admission</th>
<th>Notes of Case</th>
<th>Result</th>
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<td>March 1, 1904</td>
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**DISEASE.**

**Notes of Case.**

<table>
<thead>
<tr>
<th>Age</th>
<th>Diet</th>
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**Diet**

<table>
<thead>
<tr>
<th>Bowels</th>
<th>Urine</th>
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**Temperature (Fahrenheit/ Centigrade).**

- 107°
- 106°
- 105°
- 104°
- 103°
- 102°
- 101°
- 100°
- 99°
- 98°
- 97°

**Pulse.**

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**Respiration.**

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**Entered at Stationer.**

Printed and Published by W. J. Trollope, 6, Gate Street, Lincoln.
Menstruation is somewhat deranged; the quantity has been growing gradually less and the period is now overdue 10 days; the woman is however fast approaching the climacteric period and these disturbances may be physiological.

There is a slight deposit of oxalates and stellar phosphates in her urine but no albumen nor casts.

The condition is complicated by some oedema of the lower limbs and Bronchitis.

Temperature:– Ord and Mackenzie state that in this disease the temperature is elevated in contra-distinction to that in Myxoedema. In this case however the temperature was usually low, frequently reaching 97°F. On admission it was 100°F. but this probably due to the fatigue and excitement attendant on her journey to the hospital; next morning it was 97°F.; it was subject to considerable remissions daily; on two occasions for a lengthened period it was subsistently sub-normal, from March 21st. to April 1st. and again from April 20th. to 28th.

Respiration:– The respirations were increased in rate; the average rate for seven weeks was 24.6 per min.; they were frequently increased by 6 or 8 per min.

Etiology:– The cardinal symptoms of this disease are also those of intense fear; it occasionally follows fright, and hence, has been supposed to be due to some disarrangement of the Emotional Nervous System; together with some alteration of the Thyroid Glands which serves to maintain the
DISEASE.

Name: No. 4.14AZ-

Age: 38

Diet: Case Bk.

Result

Date of Admission: Friday, 16, 1904

Notes of Case.

Yanze 4.14AZ-
b'ookt. P

Date of admission.

Temp.

Time.

Normal.

Temperature (Fahrenheit)

38.5

107°

106°

105°

104°

103°

102°

101°

100°

99°

98°

97°

96°

95°

94°

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10°

9°

8°

7°

6°

5°

4°

3°

2°

1°

0°
the condition. The symptoms can be produced in healthy subjects by excessive administration of Thyroid Extract with the important exception of Exophthalmos. From this it has been argued that the disease is not due solely to the overaction of the Thyroid but in addition to a perversion of its secretion.

Professor Greenfield in the Bradshaw Lecture in 1893 maintained that the condition was one primarily affecting the Thyroid Gland; both in symptoms and in pathology it was in marked contrast to Myxoedema; the gland resembled an organ in the hyperplasia of full functional activity, its relation to the normal gland being comparable to that between the mammary gland in quiescence and in lactation; the essential alteration is one of structure not size; the cubical epithelium lining the follicles is replaced by columnar; the colloid material by mucinoid; there is a large formation of tubules like those of a salivary gland; and there is a round celled infiltration of the stroma which may lead to fibrous tissue formation and ultimate atrophy.

Surgical and medicinal means have been tried to diminish or antagonise the excessive secretion. Lister, Kocher, and others have removed greater or smaller portions of the enlarged Thyroid, but the results have not been very
encouraging; Starr collected 145 cases; 23 died as the immediate result of the operation; 3 were not improved; 45 improved; and 74 were cured entirely. The mortality under other treatments is computed to be 25% so there seems to be very little advantage in operative interference, whilst there is the prospect of immediate death in 16% of the cases.

As regards the antagonising of the secretion by medicinal means a great number of drugs have been used:—Iodides, Bromides, Arsenic, Belladoma, Strophanthus, etc.; some benefit seems to have been derived from treatment with Sodium Phosphate; Antithyreoidin a serum obtained from the blood of animals from which the Thyroid Glands have removed about six weeks previously has been tried with much success in this case as in many others.

There is an obvious fallacy in attributing to any substance improvement or retrogression of a condition when these effects are due in reality, to the natural course of the disease. For twelve days in this case, from March 17th. — March 30th., the patient was kept on light diet the only drug given being Sodium Phosphate in doses of one drachm.on March 17th—two drachms—March 21st.—three drachms—March 23, and four drachms March 30th. the standard by which the state might be measured was obtained; there was no alteration in the weight, it remained 7stone 11lbs.; the pulse respirations,
and temperature were not markedly affected. On March 30th, she was placed on ordinary; on March 30th she received 10 mgms of Antithyroidin; increased to 20 mgms. on April 11th.; the temperature rose somewhat but was not on the whole affected to any extent; the respiration rate was slowed; the pulse remained high. The patient however began to improve steadily; she gradually grew less nervous; the tremors became much less frequent but the most pronounced and satisfactory effect was upon the general nutrition; she began to regain strength and weight:—

On April 1st her weight was 7 stone 11\(\frac{1}{2}\)lbs

" 8th. " 7 " 12 "

" 22nd. " 7 " 13 "

" 29th. " 8 " 2 "

May" 6th. " 8 " 11\(\frac{1}{2}\)lbs.

In five weeks she had thus gained one stone in weight.
Name:-- Mrs. Clarkson, Age 38, Married.

Housewife.

Address:-- Hartwood Row, West Calder.

Admitted March 16th. 1904.

Examined March 16th. 1904.

Complaint:-- Swelling of Legs and Lump in the Neck.

Present illness:-- About 2 years ago patient first noticed the swelling in her neck; it grew rapidly and reached its present size in a short time. It has remained stationary since then. Her eyes became more prominent than formerly and they have persisted thus ever since. Within the last two years she has become very nervous and excitable. She is restless and easily frightened; she is troubled frequently with spontaneous flushing of the face; she flushes on the smallest provocation; she is also troubled with palpitations on exertion. She has been losing weight, about two stones in the last two years. 12 months, with a thick stringy sputum which comes up fairly easily. There are no night sweats.

A year ago on consulting a doctor she got some pills which she took only for a few weeks, and since then she has had no medicinal treatment.

During the last year her legs have been swollen at intervals. They have been worse during the last two weeks, and she has been confined to bed for a fortnight. Menstruation has been regular but her period is now overdue about 10 days. The quantity has been getting gradually less.

Previous Illnesses:-- She has always been very healthy
Measles as a child. No rheumatic nor scarlet fever.

Social Conditions:— She has always been a very hard working women, and has always had a comfortable home, with a good food and clothing.

Family History:— Father died— young man— cause unknown. mother alive and healthy.

Two brothers alive and well.

Two brothers died in childhood— cause unknown.

Two sisters alive and well.

l Sister died at 22, from

She has had one child, 3 years old, strong and healthy.

No miscarriage.

Present state:— Height––5'–6½"

Weight––7st. 11 lbs.

She is an excitable nervous women, fairly well developed, though somewhat emaciated, the muscles being small and flabby. Her face is flushed, her eyes prominent. There is no lividity nor jaundice. Over her body there is a general eruption of small and red spots, very itchy, most of them having the tops broken off by scratching. There is no pigmentation. The terminal phalanges of the fingers are flattened. There is considerable oedema of both lower extremities.

Neck:— The thyroid is considerably enlarged, especially in the isthums and right lobe. The right lobe extends upwards almost to the level of the angle of the right jaw. The swelling is soft and freely moveable: there is no fluctuation. It transmits a well marked pulsation. Over it a bruit is distinctly audible. The left lobe is also enlarged.
The Tongue is clean dry and red; The median raphe is deep.
There is much fine on its surface, and it is slightly tremulous.
The Pupils are moderately contracted, equal, react to light and accomodation. No Nystagmus, nor Strabismus, nor Posis.

Circulatory System:- There is evident dyspnœa with palpitations on exertion; no giddiness nor fainting. Several years ago she fainted frequently, but has not done so for twoer al years.
The radial pulses are not visible; the Arterial walls are not thickened. Rate-108; the pulse is regular small of volume, easily compressible; rise rapid, summit not sustained; falls quickly, no dicrotism.
The veins in the neck are much dilated. There is venous and artifical pulsation in the neck, and in the left infra space.

Heart:- Inspection and Palpitation. There is visible pulsation in the praecordia, in the 6th. and also sometimes in the 4th. intercostal spaces, and the apex is palpable in the 6th. Interspace, in the anterior axillary line, 6½" from the middle line it is sustained forcible, and diffuse. There is a slight precystolic thrill.

Percussion:- Right border 2" from the middle line.
Left border (at level of thàrd rib) 4" from middle line.

Auscultation.

1st. sound loud and followed by blowing systolic
murmer. 2nd. soft and distant
Pulmonary Area: 1st. sound loud, followed by rough systolic
murmer. 2nd reduplicated. Tricuspid Area.
Tricuspid Area: 1st. sound loud, followed by rough systolic
murmer. 2nd. somewhat reduplicated.

There is a presystolic murmer about one inch
interval to the left mammary line.

Respiratory: System: There is dyspnœa on exertion.
The Respirations are thoracico, abdominal, no accompaniments.
There is a frequent short cough, with a copious frothy sputum,
sometimes bloodstained. There is no pain and no hoarseness,
nor loss of voice.

Thorax.

There is flattening in both infraclavicular regions.
The muscles are somewhat emaciated.

1. Anterior and
Percussion. Resonance is good at both apexes and in the
axillae.

Auscultation. Expiration is prolonged at both apices;
there are some rhonchi at the right apex, and vocal resonance
is increased there.

2. Posterior.

Percussion. The right apex is dull; a good note is obtained
over the rest of the chest.

Auscultation. There are occasional rhonchi but no crepitation
The Vocal resonance is increased at the right apex, but
the other areas are normal.
Alimentary System:— Appetite, fair, no difficulty nor pain in swallowing; some flatuence; no eructations, nausea, nor vomiting; often thirsty.

The bowels are regular; no diarrhoea; slight tendency to constipation.

The Abdomen is retracted and somewhat irregular on surface, there are old striae gravidarum present; no visible peristalsis. Marked pulsation in the epigastrium. Very forcible pulsation of the abdominal aorta. In the middle line something moves with respiration; over which there is no marked muscular resistance, but no tenderness. No tumour is palpable.

Percussion. Dulness in epigastrium, right and left hypochondriac regions, down to the umbilicus. No dulness in the flanks.

Lower:— Upper border, 5th. rib.

Lower border, 1" below
Vert. Diameter, 7¼"

Nervous System:— Sleep function normal. Marked excitement and nervousness. Intelligence good. No delusions, fits nor headaches. The voice is somewhat thin and high pitched.

Voluntary Movements:— Patient is somewhat restless. The muscles are small and flabby.

Involuntary Movements:— Slight tremors are occasionally present. No sensory disturbances. She flushes frequently. Trophic. Itchy papular eruption all over the body.
Reflexes.

Plantar:-- Extensor is present on both sides.
Exaggerated, especially the left.
Ankle Clonus is present on both sides occasionally.

Eyes.

Exophthalmos fairly well marked. Pupils moderately contracted, equal regular, and react to light and accommodation. No ptosis. No obvious squint. No Nystagmus. The field of vision is not diminished.

Genito-Urinary System:-- The period is overdue about 10 days. The quantity is growing gradually less. Previously she was very regular. There is no pain nor difficulty in Micturition. The urine is acid; sp.g. 1009-1019; no blood nor albumen, nor pus; a slight deposit of oxalates; stellar phosphates
CASE No. 7.

CEREBRAL TUMOUR AND NEPHRITIS

Professor Greenfield.
Mrs. Mc.Leay, 41:— This patient was admitted on May 31, 1904 to Ward 24.

At the date of her admission the most notable features of Mrs Mc.Leay's case were: first, her sleepy, lethargic condition; second, her great restlessness the almost constant tossing to and fro of her legs and arms; third, the pain in both eyes and the associated double optic neuritis; fourth, the inability to turn the eyes; fifth, the ptosis and dilated pupil of the right eye; sixth, the constant frontal headache; seventh, the thirst, furred tongue, and loss of appetite; eighth, the urinary conditions and ninth, the leucocytosis. Diagnosis was difficult from excess not from lack of symptoms. Clearly, there were at least, two conditions a Nervous and a Urinary, of these, the Nervous was obviously the more acute and therefore the more important: there was a considerable quantity of albumen (1½ grs. per oz.) as well as casts in the urine yet the large quantity of urine passed indicated that the renal condition was of long standing.

The frontal headache and the Retinitis might have been consequent on the Albuminuria but, the co-existence of symptoms obviously cerebral tended to indicate that this was their origin also.

The cerebral symptoms were those due to the paralysis of ocular/
ocular muscles; the right eye was mainly affected: there was marked ptosis, external strabismus; paralysis of accomodation, and dilation of the pupil. The pupil reflexes of the left eye were unaffected, the pupil was not dilated, the only pronounced change being a limitation of the external movement.

These signs were in great measure referable to an affection of the right 3rd nerve, the ptosis from paralysis of the right Levator Palpebrae Superiors; the external strabismus to the unopposed action of the External Rectus and Superior Oblique (4th and 6th nerves respectively); the dilated pupil to paralysis of the Sphincter Iridis; the loss of accomodation to paralysis of the Sphincter Iridis, Ciliary Muscle, and Intercerbal Rectus.

Between the 6th nucleus of one side and the opposite 3rd nerve fibres pass, but the partial paralysis of external rectus of the left eye might have been due to an independent affection of the 6th nerve.

The diagnostic possibilities included an Alcoholic or Hysterical condition, a Meningitis, a Cerebral Tumour, and a condition mainly Renal.

The symptoms were probably too severe to be attributed to a merely alcoholic condition; but there were no tremors and there was no definite alcoholic history.

The/
The jactitating movements might have been hysterical but the ocular phenomena rendered a Cerebral condition the more probable; e.g. Meningitis, may be Syphilitic or a tumor syphilitic or Malignant or Gliomatous. The nervous symptoms were those usually found in cerebral tumors, viz: altered mental condition, optic neuritis, and headache. There was no vomiting but the digestion was much deranged although this might have been due to the renal complication. There were no paralytic phenomena except those of the eye. The knee jerks were inconstant but frequently they were exaggerated, especially the right.

The affection of the 6th left nerve afforded no clue to the site of the tumour because on account of its long course it is much exposed to variations of intracranial pressure.

A meningitis could give most of the symptoms without any additional hypothesis: the subnormal temperature was consistent with a Syphilitic Meningitis.

There were three indications for treatment (1) Milk diet because of the alimentary and Renal conditions (2) Ammonium Bromide to control the restlessness (3) Anti-syphilitic remedies in the hope of benefitting the cerebral condition and perhaps also the renal. It also was diagnostic.

Under the energetic antisyphilitic and other treatment she gradually improved. From June 8 to June 16 the urine shewed a/
a profusion of casts but there were no constant alterations in quantity. The eye movements gradually improved at the same time.

About June 16 flatulent dyspepsia occurred with frequent eructations and dyspnoea, probably due to the irritative action of the Potass. Iodid. upon the gastric mucous membrane. A fine scattered papular rash appeared on the anterior aspect of the chest;—The urine attained its maximum quantity; the pulse was accelerated, 120 per min; and rhonchi and crepitations were heard on auscultation, in fact, all the symptoms of an attack of Iodism.

The pulmonary conditions may have been due to oedema on consequent the commencing cardiac failure which in a few days became more pronounced.

By June 18th the headache had gone, and the eyes were greatly improved. From this time onwards to her death the condition of the urine remained fairly constant: there was an almost complete absence of casts, the Albumen remained steadily about 0.57 grs per oz. and the Urea at 3–4 grs per oz. She began to complain of extreme weakness. The signs of Pulmonary Oedema became more marked; cardiac murmurs were audible and she died on June 25.

The Post Mortem shewed evidence of Chronic interstitial Nephritis with parenchymatous changes in both kidneys: the heart was enlarged and there incompetence of the Mitral and tricuspid.
Tricuspid Valves with Pulmonary Oedema indicating that the immediate cause of death was Cardiac Failure consequent on the failure of compensation in a heart enlarged from chronic Renal disease.

The examination of the brain was left over at the actual post mortem and I am not yet aware of the exact condition. Externally it shewed no signs of Meningitis: there was flattening of the Convolutions on the right side posteriorly consistent with the presence of a cerebral tumour.
URINE :- The colour of the urine was frequently smoky and almost invariably contained blood.

It was of a low Specific Gravity; it was as low as 1005 and as high as 1012, the average of three weeks observations being 1009.

The quantity of urine per diem varied considerably. The first four days the total amount was not estimated. On June 4th it was 104 ounces, and next day abruptly fell to 49 oz: the following day it was again excessive, 97 ounces. This periodic increase and decrease in the urine continued throughout, and is concisely indicated on the accompanying chart. It involved not merely the quantity of urine but also the albumen and urea, the absolute amount of each being increased when a larger quantity of urine was being excreted. The periodicity was fairly regular, the interval between two successive minima or maxima being about three days. The minima fell on June 5, 8, 10, 13, 17, 21; The maxima on June 4, 6, 9, 12, 16, 19.

UREA :- The amount was very irregular fluctuating between 2.6 and 6.25 grs per oz.; usually the larger amounts corresponding to the smaller volumes of urine but not absolutely. Thus the maximum 6.25 grs correspond to the minimum quantity of urine 34 oz per diem, but the minimum 2.6 grs of urea per oz occurred with a secretion of only 45 oz. per diem. The total quantity of urea/
Urea varied roughly as the total quantity of urine.

CASTS: These were usually present but especially marked from the 8th to the 16th.

Triple Phosphates were frequently present; more rarely there were Oxalates. There was no sugar nor bile.

TEMPERATURE: The temperature was persistently low. The great bulk of the readings lay between 97° and 98°. On June 18th it was as low as 96.4° and the highest recorded temperature is 98.8°.

RESPIRATION: The rate which on admission was 28 quickly fell to 24 per min. and remained fairly steady, the average from May 31 to June 22 being 24.

PULSE: The pulse was rapid on admission, 92 per min. It remained rapid throughout. The average for the first week was 94.5; for second week 106; and for third week 93. The high average was concurrent with the profusion of urinary casts.

BLOOD: There was no anaemia. There was well marked leucocytosis, average about 30,000 per c.mm. throughout.
Mrs. McLeay. Age 41.
Married.
Housewife.
Address: - 15 St. Mary's Street.
Date of Admission: - May 31st. 1904.

Complaint: - She has been stuporose and blind since May 28th. and has not opened her eyes since May 29th.

History of present illness: -

For the last six months patient has complained of uneasiness in her stomach. Her appetite was good; there was no difficulty in swallowing; no abdominal pain, no actual vomiting, but there was frequently nausea. She was constantly bringing up wind, sometimes with froth. She was constipated; complained of a choking feeling after exertion, and had two "funny" turns when the choking came on, causing her to throw everything off her. Occasionally there was swelling of the Abdomen, which however subsided rapidly in one or two days. She has frequency of micturation, passing water three or four times in a night. The quantity is apparently not much greater than normal. There is no pain nor difficulty in micturation, nor did she ever pass water involuntarily. She has been, and still is very thirsty, and drinks considerable quantities of milk and potash or water.

There was shortness of breath occasionally on
**DISEASE.**

*Ascend. Tumour.*

**Notes of Case.**

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<th>Name</th>
<th>Age</th>
<th>Diet</th>
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**Date of admission.**

May 31, 1904.

**Result.** Death.

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<tr>
<th>Time of Bowels</th>
<th>Time of Urine</th>
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<th>Date of Admission</th>
<th>Pulse</th>
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exertion. There was no palpitations, but constant faintness and giddiness. She slept very restlessly; her never swelled but there was frequently swelling under the eyelids. There was no cough nor spit. She had headache for a month from time to time, site not known. There were no fits, and speech was not affected till May 28th. when it became sluggish owing to the general mental lethargy. She was extremely restless; there is no paralysis, jerkings, nor twitchings. She occasionally feels the sensation of "pins and needles" in both hands. For some weeks she has complained of pain in the eyes, as if sand were in them. On May 28th. she thought the sun had blinded them. The eyes used to be equally open and there was no squint.

State on Admission:–

She lies in bed with her eyes closed, apparently asleep. She is extremely, and the ebd clothe have to be tucked in securely to prevent her kicking her legs out from under the blankets; she frequently calls "Katie give me a drink" and remonstrates with the imaginary Katie if she does not receive one. Her voice is strong and easily heard through the ward; she never opens her eyes unless pressed to do so and closes them very quickly again; there is considerable difficulty in rousing her, and in arresting her attention sufficiently to make her answer a simple question. She indicates the forehead as the site of her headache; she lies on her back, quite loosely and suddenly jerks her arms or legs, struggling if resisted. The lower limbs are
slightly drawn up and flexed at the knee as a rule, but often forcibly extended. She does not open the eyes spontaneously, complains of deepseated severe pain in the thum especially the right, and resists forcible opening of them. The left pupil is circular, central, moderately dilated, reacts to light and accomodation. The right pupil somewhat dilated, approximately circular, lies more to the inner than the outer cornea, and does not react to light. The right iris is quite clear, the edge perhaps slightly irregular. There is no

Ears:— Right ear apparently normal.

Left ear contains wax and watery looking material.

No pus microscopically. No swelling in neck; no glands palpable; no prominence of veins; no discharge from nose, and nothing special as regards the mouth.

Nervous System:—

May 31st:— Headache, apparently frontal; she frequently puts up her hand to her forehead; she has no fits; her speech is not affected, except that her replies are slow.

General Mental Condition:— Very much impaired; she is very stuporose, and either cannot or will not understand.

Motor:—

Voluntary:— No paralysis.

Involuntary:— No twiching nor jerking.

Sensory:—

Subjective:— Nil.

Objective:— Touch and pain sensations difficult to dis-
tistinguish because of her general mental condition.

Reflexes:— Plantar, both flexor. The right foot is more sensitive. Abdominal and epigastric absent. The knee jerks are both exaggerated; the organic reflexes are good.

Eyes:— She had pain in her eyes for some weeks before admission; it still exists and she keeps them closed; she resists the attempt to open them, especially the right.

June 1st:— General mental condition continues much the same as before.

Knee jerks:— Right exaggerated.

Left cannot be elicited.

Plantar reflexes:— Feet readily withdrawn, extensor reflex of right great toe.

June 2nd:— Grasp of left hand much feeble than of right; knee jerks of left knee distinct and somewhat exaggerated. Plantar reflexes much more active on right than on left side but both are flexor.

June 6th:— Ophthalmoscopic examination. This is difficult on account of the photophobia.

Right eye:— Good red reaction; Penuheral vessels clear more central parts very hazy. Vessels much engorged; they run on till part where disc should be seen, and there they are lost in an indistinct red haze; the disc appears red swollen and almost entirely obliterated.

Left eye:— Pupil contracts with light, and eye is more difficult to examine. Vessels much more clear and definite
than in right eye, become indistinct towards disc/in right eye.

Alimentary System:

Subjective:— No appetite; no difficulty in swallowing; some vomiting; considerable discomfort immediately after food; Bowels very constipated, move only once in two days.

Objective:— Lips very pale; teeth fairly good; tongue thickly furred.

Abdomen:—

Inspective:— The Abdomen is very full, especially on left side; rises from the costal margin to about 2 inches below the umbilicus, where it falls away; it moves well with respiration; there is no visible peristalsis.

Pappation:— The walls are fairly well nourished, lax as a whole; on the right side from the anterior superior iliac spine towards the umbilicus, there is a sense of resistance—continued on to the left costal margin; the lower edge of this resistant area (probably liver) is very irregular and moves with respiration; there is tumour in the left iliac region distinct from abdominal wall, probably faecal, but bowels had moved easily.

Percussion:—

Stomach:— The lower border in the middle line is 2" above the umbilicus; the other limits cannot be ascertained with certainty.

Spleen:— In the posterior axillary line the spleen extends from the 8th. to the 11th. rib, vertical diameter 3½"
The anterior border, measured along 10th. rib, is in the mid-axillary line.

Liver:-
Right Nipple line:-- Superior border--5th. rib.
" " " Inferior " 5½" below costal margin.
" " " Vertical diameter--3½".
Middle line:-- Inferior border--2" above umbilicus.
The lower edge of the Liver is very distinctly palpable; it is somewhat irregular and moves well with respiration; the surface of the Liver shews no definite irregularities.
The spleen is not palpable; there is no ascites.

Circulatory System:--
Objective:-- Left radial pulse: 83 per min., sometimes quite regular even for as long as one min.; usually it misses beats frequently; it is moderately full and forcible; the rise is gradual, the top slightly sustained, and there is a gradual fall. The tension is rather high; there are no secondary waves and the wall is somewhat thickened. The superficial carotid pulsation was markedly increased, the pulse beat being 5 to the left of the middle line. The 2nd sound was not much above the 1st, evidently accentuated.

Notes on progress.
June 1st.:-- She lies on her back with both eyes closed, restlessly tossing her arms and legs about and complaining of great thirst.
June 2nd.:-- Lies torpid as before; the grasp of the left hand is much feebler than that of the right; the pulse is somewhat faint; varies extremely, frequently misses beats and is slow. The respirations are more regular; there are pains all over the head.
June :-- She opens her eyes with difficulty and cannot
keep them long open, as the light pains them; there is marked ptosis of the right eyelid; there is no oedema of either eyelid; conjunctivae show no anae mia, jaundice, nor inflammation; cornea normal; the left pupil is rather smaller than usual, circular and reacts to light, but very slightly to accommodation; the right is markedly dilated but though the outline is fairly circular the dilation is much more pronounced in the inner than the outer part of the pupil; hence the pupil is not the centre of the cornea, but more to its inner side. The right pupil reacts very slightly both to light and accommodation. She sees fairly well with the left eye but dimly with the right.

Movements:— The right eye moves fairly well to the outer side and very slightly downwards and upwards, but it does not move past the middle line internally. The left eye moves well inwards, upwards, and downwards, but only about 30 to the left of the middle line externally. The exact extent of the field of vision is difficult to obtain on account of her mental condition, but it is much less on the left than on the right. She can wrinkle her brow quite well on both sides.

June 5th.:— Headache over posterior part of head; Right eye moves little; good movement to right.

June 6th.:— There is an improvement in patient's mental condition; when asked, she opens her eyes, the left widely, the right about half; the right pupil is dilated and comparatively inactive. The left is slightly larger than before
It reacts well; the pulse is quite regular.

June 7th.:— Pulse still regular but less strong than on the 6th.; severe headache complained of over vertex; she still seems to think herself at home with her family. Knee jerks both elicited sometimes.

Plantar reflexes, both flexor; the left is more ready than the right.

Right eye:— Movements still very poor except to the right, and not at all internal to middle line.

Left eye:— Marked paralysis on looking to left.

June 8th.:— Pupils as before; eyes move as before only more freely; left eye moves well round to the left.

Right radial pulse:— Small more feeble than left, moderately regular in time, but very variable in force; knee jerks not elicited. Plantar reflexes as on 7th.

June 9th.:— Pupils as before; left slightly more dilated than before, and reacting well to light.

June 10th.:— Knee jerks both elicited sometimes. Plantar reflexes as before;

Pupils:— Left more dilated than right when eye is opened, but reacts very well to light.

Right eye moves well upwards and outwards, slightly downwards, and very slightly inwards.

Left eye:— External movements still impaired.

June 14th.:— Scattered fine papular rash especially on anterior chest wall.
June 15th.:
She continues to lie quietly upon her back in bed, still complaining of headache, frontal and vertical, and of pain in her eyes; she is not specially troubled with thirst, and her tongue is slightly furred; she now quite intelligent and is anxious to know if she is being made well but she is still somewhat languid in her responses. The Movements of the eyes are freer, but with the same limitations as before.

June 17th.:
Eyes:— Right pupil slightly dilated; reacts slightly to light. Left moderate in size, reacts readily to light. Movements of right eye fair; slight internal movement. Movements of left eye good, but still impairment of external movement remains.

Reflexes:— Plantar, both flexor, left especially marked. She has considerable gastric disturbance, with very frequent eructations of wind; some dyspnoea.

June 18th.:
Eyes not so sore, but still seem strange, "as if machinery were working along the eyebrows"; Headache greatly better to-day; much fewer casts and less pus in Urine than previously; the eructations and Dyspnoea are much worse; the temperature is normal; pulse 130; over the Anterior aspect of the chest sibilant rhonchi are heard; breathing is venicular in type with slightly prolonged expirations; fine crepitations are heard to some extent all over but especially marked at the end of inspiration in 1st. interspace on the right side.
June 19th.:— Patient still feeling better, except for Dyspnoea for which she is in orthopnoeic position; headache is practically gone; the ptosis of the right eye persists, though becoming less marked; the movements of the eyes continue to improve, and she sees somewhat better.

Up to this time the Urine has been of the characteristic smoky tint though shewing no blood under the microscope. It was yellowish green by transmitted light, reddish by reflected light; by transmitted light there was a reddish tint upon the top. This day the urine has not lost this character is of an opaque yellowish color, and contains no casts; it has ceased to give the blue reaction with Guiac and Ozonic Ether, indicating that by three days the iodide circulating in the blood has been excreted.

June 21st.:— Pulse irregular, small; tension moderate; Cardiac sounds as before.

June 25. Patient died very suddenly this morning. A few minutes before her death she was sitting up in bed talking. Since June 19 there had been no marked change in her condition. She continued to lie upon her back, and complained of weakness. Her face looked paler and thinner. There was no appreciable change in her urine. The quantity of albumen remained constant, about 0.57 grains per oz.; the urea from 3 to 4 grs per oz. A systolic murmur was heard in the mitral area during the last few days, and there were coarse crepitations with a few rhonchi over the chest. The breathing was vesicular with slightly prolonged expiratory sound, all over.
Post Mortem examination, June 27 1904.
Mrs Mc.Leay died June 25.

Left Pleural Cavity. There were adhesions over the upper lobe; there were a few ounces of serous effusion.

Right Pleural Cavity. This contained rather more effusion slightly blood stained.

Pericardium: There were several ounces of clear fluid in the pericardial sac.

Heart: There was chronic thickening of the Epicardium but no acute Pericarditis.

Right Auricle contained a mixed thrombus, mostly post mortem.

Tricuspid Orifice was slightly dilated.

Right Ventricle contained a mixed thrombus which passed up into the Pulmonary Artery.

Pulmonary Valve was competent. Edges of Pulmonary and Tricuspid Valves were normal.

Left Auricle contained mixed thrombus, mainly post mortem.

Mitral Orifice was distinctly dilated. Aortic Valve was competent - there was some thickening of the cusps. There was no evidence of Endocarditis.

Aorta and coronary arteries shewed well marked Atheromatous changes.

Myocardium shewed chronic Interstitial Myocarditis.

LUNGS :-
LUNGS :-

Left Lung :- The root glands were enlarged and pigmented. The Bronchi were not specially dilated. The Pulmonary Vessels were thickened and atheromatous. There was Chronic Pleurisy over the Upper Lobe; Emphysema was general.

On section the lung was found to be congested and oedematous - slight Chronic Venous Congestion. The Pulmonary Vessels were thickened throughout, but there was no Pneumonic consolidation.

Right Lung :- There was Emphysema especially in the Upper and Middle Lobes.

There was a large recent Pulmonary Infarction 3" x 2½" in the anterior part of the Right Lower Lobe over which there was some Acute Pleurisy.

There was oedema of the Upper and Middle lobes.

Liver shewed Chronic Venous Congestion - advanced, with fatty degeneration.

Gall Bladder shewed nothing abnormal. Spleen was also in a state of advanced chronic Venous Congestion; the vessels were much thickened.

Kidneys were not much altered in size.

Right Kidney :- Capsule was adherent leaving when stripped a rough surface, there were a few small cysts.

On section there was much mottling; the Malpighian Bodies were not prominent. There was some secondary fatty degeneration in the kidney substance but nothing of note in the/
the Pelvis. The vessels were thickened and the Cortex was irregularly atrophied. The left Kidney showed similar changes, chronic interstitial Nephritis with parenchymatous changes.

Brain: Weight, 2 lbs 14 ozs. There was marked flattening of the Cerebral convolutions on the Right side, mainly involving the posterior half. Unfortunately, no section of the brain was then made and I have been unable to obtain any particulars regarding it although there was probably a tumour of some description, Sarcomatous, Syphilitic, or Gliomatous affecting the right Cerebrum posteriorly.
CASE NO. 8.

DYSMENORRHOEA & ANTEFLEXION of the UTERUS.

Professor Simpson.
Dysmenorrhoea and Anteflexion of the Uterus.

Mrs. Russel:— This patient was admitted on March 9th, 1904. Her symptoms were dysmenorrhoea, sterility and a slight leucorrhoeal discharge. The dysmenorrhoea was severe; it had lasted since menstruation begun, 6 or 7 years before; it was premenstrual, menstrual, and postmenstrual, lasting for a few days before the flow till a few days after. The pain was aching and constant, referred to the back, abdomen, and left leg, and was so severe as to confine her to bed for 2-3 days before the flow commenced. She had been married two years and had no children. The amount of the flow was moderate, and there was no intermenstrual discharge except slight leucorrhoea occasionally. The type of menstruation was somewhat irregular.

Examination per Vaginam at once assigned a cause for the dysmenorrhoea, viz:— acute anteflexion and maldevelopment of the corpus uteri, with associated stenosis.
of the external Os. This condition is a frequent cause of Dysmenorrhoea but Vedler's statistics prove that in many cases this physical condition may exist with any associated menstrual pain. That the physical condition is the cause of the Dysmenorrhoea, when present, is proved by the fact that the removal of the stenosis and anteflexion effects a cure. The pain is due partly to a retention of the secretion, a clotting of the blood, and then expulsive efforts on the part of the Uterus, causing pains analogous to those of labour; and partly to the periodic increase in vascularity of the inflamed Uterine mucosa. The condition shows no tendency to spontaneous cure, but tends to become aggravated because of the irritation of the mucous membrane, and in view of the danger of treatment by alcohol or by opium, and the satisfactory results of operation, surgical interference is to be recommended.

The operation consisted in this case in a splitting of the Cervix, the cut edges being sutured so that they
might not unite again and bring about a recurrence of the stenosis. The cervical canal was then dilated, and the Uterine cavity washed out and temporarily packed, so that any inflammation of the mucosa might be got rid of. The packing was removed after 48 hours, and the patient treated by douches and tonics: in a fortnight she was perfectly well, and was discharged on March 23rd.

This mode of treatment cures both dysmenorrhea, and the sterility. The case illustrates the fact that the diminution of the menstrual pain may be gradual, the pain persisting for several periods after operation.

In some cases there is a recurrence of pain, so that in a year or two the patient is as bad as before. In these cases the operation has to be repeated. In other cases, where the now patulous Os and healthy endometrium have led to pregnancy, the cervix is at last dilated by the best of dilators—the foetal head.
Mrs Russel: Age 23.
Married 2 years. opasa.
Bakery, Main Street, Uphall.
Date of admission: - 9th. March 1904.
Case taken: - 9th. March 1904.
Date of Dismissal: - 23rd March 1904.
Complaint: - Severe pain at Menstrual periods.
Duration: - About 6 years
Diagnosis: - Ante flexion of the Uterus and
Prognosis: - Good.
Treatment: - The Cervix was "split" on the 10th. March 1904.
Result: - Cure.
History of the present attack: - Patient began to menstruate
when she was 16 years old. Since then she has always had severe
aching pain commencing a few days, sometimes a week before
the flow, and lasting throughout the flow. The pain is
constant aching in character, in the lower part of the back
and abdomen, occasionally shooting down the left leg. So severe
is it, that she has to keep in bed as a rule for 2-3 days before
the discharge commences. When the discharge does commence the
pain becomes less severe. After the flow ceases she has
aching pain in the left side for some days. There has been
Leucorrhæal discharge for some months. Menstruation rather
irregular, at varying intervals of 3, 5, or 6 weeks.

Previous illnesses: - She had Measles and Scarlet
Fever in childhood. She is somewhat subject to Rheumatism,
having occasional attacks affecting the wrists and ankles.

Social conditions and Habits:— Good.

Food and clothing satisfactory.

Family Health:— Good.

Sexual History:— Menstruation is normal and began at 16 years, somewhat irregular in type, periods of Amenorrhoea sometimes of 6 and 8 weeks.

Duration:— 5 days.

Quantity:— Moderate.

Morbid:— No Menorrhagia or Metrorrhagia.

Dysmenorrhoea:— as above since the age of 16.

There has been absolutely a slight Leucorrhoeal discharge.

No pregnancies.

Local Functional Disturbances:— No trouble with the bladder. The bowels are somewhat constipated.

Pelvic, Nerves and Muscles:— There is a pain aching in character, in the back and lower part of the abdomen before and during Menstruation. There are shooting pains in the left leg.

General Functional Disturbances:— Respiratory, Circulatory, Digestive, and Nervous Systems:— Nothing to note.

Physical Examination:— Patient is well formed, well developed though rather Anaemic looking.

Mammal:— The Mammae are small, nulli parous, undeveloped; the nipples are small, no secondary Areolae or Montgomery's tubercles. No Striae.
Abdomen:

Inspection:—The Linea Legra is very faint—no Striae gravidarum; Umbilicus depressed; slight general tumidity; no local bulging.

Palpation:—The Abdominal wall is thick, flaccid. There is no increased resistance in any area.

Percussion:—All the areas are tympanitic.

External Pudenda:—Nulliparous

Per Vaginam:—The orifice admits two fingers easily.

The Cavity is roomy, the walls moist and rugose. The Cervix can be fairly easily reached. It is small and conical in shape and hard in consistance.

The External Os is small and dimple like. The Anterior Lip feels Cystic. The Os looks directly downwards.

The posterior and lateral fornices are empty.

In the Anterior fornix a resistant body is felt which proved on bimanual Examination to be the Uterus, acutely anteflexed. It feels small and hard in consistance and is freely moveable. During examination the patient complained of pain.

The Append were not palpable.

10th March:—Patient was chloroformed and placed in the Lithotomy position. Examination with Speculum and sound confirmed the previous physical examination.
There was some difficulty in passing the hand especially at the internal Os.

The Uterus was somewhat small and acutely anteflexed.

The Cervix was pulled down by Volsella; Professor Simpson then split up the posterior lip by means of Scissors and brought the Cervical and Vaginal mucosa together, on each side with "No. 4" Chromic catgut Sutures. The canal was then dilated with Mackintosh's and Marion Sim's dilators; The cavity was washed out with Lysol and Tinctura Iodii (B.P.) was applied to the Uterine wall. The Cavity was then packed with Iodoform gauze.

The patient made a rapid recovery. On March 12th. the packing was removed; there was no discharge. The patient was douchéd every morning and evening. She was given Iron and Arsenic tabloids, one thrice per diem. On March 20th. she was allowed to rise, and on March 23rd. she left the Infirmary having been instructed to continue the douching and to return after her next Menstrual period.

Her progress was interrupted; the pain gradually diminished, persisting longest on the right side. The Cervical Canal remained quite patulous.