Reports and Commentaries on

Six Cases

Treated in Professor Annandale's Wards.

R.I.C.

Summer Session 1844.

(For the Pattison Prize.)

Robert W. = MacKenna, M.A.
26 Pitt St.
Index

I. Carcinoma of Oesophagus (Malignant) - Excision p. 1
II. Syphilitic Ulcer of Larynx - - p. 15
III. Tubercular Disease of Elbow Joint - Excision p. 25
IV. Otitis Media with Facial Paralysis - p. 34
V. Interarterial Arteritis simulating Appendicitis - p. 41
VI. Malignant Disease involving the Bile Duct and causing distension of Gall-Bladder - Cholecystotomy - p. 50
Case of Oesophageal Stricture (Malignant) treated by Gastrostomy.

DISEASE. Oesophageal Stricture (Malignant) — Gastrostomy.

RECORDS of Temperature, Pulse, Respiration, and Stools, from 12th day of... Human... 1894.

In the case of: Thomas Atkinson  Age: 53  Sex: M  Occupation: Baker

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E. & S. Livingstone, 15 Tavistock Place.

DISEASE. Oesophageal Stricture (Malignant) — Gastrostomy.

RECORDS of Temperature, Pulse, Respiration, and Stools, from 24th day of... Human... 1894.

In the case of: Thomas Atkinson  Age: 53  Sex: M  Occupation: Baker

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E. & S. Livingstone, 15 Tavistock Place.
Case of Oesophageal Stricture (Malignant) - treated by Gastrostomy.

Name - Thomas Atkinson - 53 - Widower.
Occupation - Baker.
Address - West End, Newtown.
Admitted - May 24th 1894. Ward X.
Discharged - June 25th 1894.

History of Illness.

About two months before admission to the R.I.E. patient was suddenly seized at 3 a.m. when in bed with a severe shivering fit. This he believed to be influenza, which he had had two years before. He rose about 4 a.m. still shivering. When taking his breakfast (of coffee, bread & butter) patient felt a difficulty in swallowing, which he describes as "a stiffness in the throat." The shivering continued intermittently for 3 days, during which patient felt feverish, and the difficulty in swallowing increased. After the dysphagia had continued for some ten days he consulted Dr. McLean, Bermick, who said he was suffering from a larynx attack, & prescribed accordingly; but the difficulty in swallowing continued. Fluids could be ingested fairly easily, but an attempt to swallow
History of Illness (continued)
to swallow solids produced marked pain.Forty

day after the Dysphagia first became appreciable
patient could not swallow solids at all. If he did
put any solids over he could feel them lying at the

cardiac orifice of his stomach for a minute or two;
then a paroxysm of pain would set in and the bolus
was regurgitated. In the vomit patient never observed any blood.

After he had been ill for a month he came to see
Dr. DeMandels who made an examination with an
oesophageal bougie, and then sent him home, to come
back if worse.

The difficulty in swallowing continued to increase, and
patient began to lose flesh and pins weaker. For
the month before admission to the R.I.C. his diet
was restricted to liquid foods such as gruel, tea and
milk.

He was admitted to Ward IX on May 24th.

Family History:

Grandfather on father's side died at 70 - of Paralysis. Father
died at 84 of old age. Grandmother on father's side
long lived. Grandmother on mother's side died at 85
of old age. Mother died at 35 - of cancer of left
breast after smoking a family pipe. Brothers, sisters, all healthy.
Previous Health.

Patient had Rheumatism (acute) 13 years ago.
Diphtheria in 1742. Encephalitis of head followed diphtheria.
Had an abscess in back of neck 3 years ago.
Believes he had the illnesses of childhood.

Habits.

He is not a total abstainer — but is temperate.

State on Admission.

Patient is well-built, 5 ft 6½ inches. Somewhat thin, muscles rather soft and wasted. Legs much weaker than he used to be.

Swallows with great difficulty. Food seems to stick at lower end of sternum. He can't take more than a small mouthful of fluid at a time. He can take no solids, for they come up almost immediately after he takes food. Acute pain darts upwards from the stomach. In character it is burning, and sometimes it shoots up into under the left shoulder blade where it often lingers for a minute or two. After vomiting the pain gradually disappears. Sometimes patient vomits considerable quantities of phlegm — coughing often bringing this on. Tongue puréed and yellow. Bowels regular. Slight pain on deep palpation in the
State of Admission (continued)

in the gastric region. Patient has no enlarged lymphatic glands palpable. Urine normal.

Mr. Amandale exhibited patient at the Clinique on the day of admission. In passing a billows oesophageal longue he found it stopped by a spasmotic stricture of the oesophagus, at about the middle of the sternum. When the spasm had relaxed he passed the longue until it reached a tight structure just a little above the cardiac orifice of the stomach. The case was one admirably suited for operation, so on May 26th Mr. Amandale performed Gastrostomy.

**Operation**

May 26th. The anaesthetic used was Chloroform administered by Dr. Carmichael. Patient did not take it very well, and during the operation his breathing became so bad that his tongue had to be drawn forward with tongue-forceps, after which the breathing improved considerably.

The anaesthetic used was Carabolic Lotion 1:60.

Following the modern method the operation was performed in two stages.

Mr. Amandale made a vertical incision about 3 inches long parallel with the left border of the Rectus muscle,
Operation (continued)

The muscle fibers were then separated, and when the peritoneum was reached a brief halt was made in order that all bleeding points might be secured. When this had been accomplished the peritoneum was opened with a probe-pointed bistoury and the stomach secured.

The wound was then covered with antiseptic dressings, and a curved incision was made about 2 inches long over the lower ribs, and about 1/2 inch from the first incision. The subcutaneous tissues between the two incisions were then broken down, and a "kneval" of stomach was then brought out at the second wound. There it was stitched with silk sutures — 4 to prevent the stomach dragging it was stitched to the edges of the first wound also.

The divided peritoneum was then sutured; the muscles divided by the first incision were stitched with cat gut and the skin etc. approximated with sutures of wire and horsehair.

The upper and lower ends of the second incision also received a stitch. The wounds were dressed with gauze wrung out of weak carbolic — patient was sent back to bed. Altogether he was on the operating table less than 25 minutes — abdominal
Operation (continued)

the abdominal cavity being open for some seven minutes only — a very important consideration in abdominal surgery.

Operation, Second Stage.

In May 1914 as the adhesions of the stomach round the second incision were strong, Dr. Annandale punctured the stomach with a tenotomy knife, and inserted a No. 6 rubber catheter through which patient was therefor fed.

Progress of Case.

For three days after the first part of the operation patient got nothing by stomach except an occasional small soft water. He was fed per rectum by nutritive mixtures every three hours. He suffered only slight pain on the afternoon of the first day. Slept well, and his temperature kept good.

After May 29th when the catheter was inserted into stomach he was fed by sterilised milk & eggs through the tube every 6 hours.

This progress continued good & nothing though it tunes his bowels were sluggish. The skin round the margin of the wound showed slight reddening from a slight escape of pustic juice.
Progress (continued)

In June 25th Mr. Annandale replaced the rubber catheter by a large drainage tube.

June 27th Stitches removed. Patient had some purridge & milk by the tube. Aged very well.

June 14th A No. 14 rubber catheter was inserted.

June 19th Patient received some mixed meat through the tube.

June 21st Got up. Felt wonderfully well.

June 25th Patient says he has been gaining strength ever since the operation and feels quite fit. Has increased in weight.

June 27th Left Hospital. His convalescence having been uninterrupted, and his temperature having kept remarkably even. (See Chart.)

Before leaving he was supplied with a tourniquet through which to feed himself.

Commentary:

There could be no doubt that this was a case of Malignant Stricture because:

1. There was no history of injury — or swallowing caustic fluids.

2. Age of patient — about 50.

3. Sex of patient — esophageal cancer being more frequent in men than in women.

4. The rapidity of the growth of the structure.
Commentary (continued.)

It would be out of place here to enter into a discussion as to the causation of Cancer, but there are one or two points in the case which call for special reference in this connection.

It has been pretty conclusively proved that long-continued local irritation is a potent factor in predisposing to cancer: e.g., we have cancer of the tongue, cancer of the rectum, or cancer of the oesophagus. In the present case we find the cancerous growth occurring just above the cardiac orifice of stomach, where the oesophagus has narrowed down prior to widening out in a funnel-shaped manner into the stomach, and where, consequently, there would be greater friction than higher up in the oesophageal tube.

Another point of interest in this case is the influence of heredity. Patient had a good ancestral record. His Grandfather's, or Grandmother's all lived to a ripe old age. This Father also excelled the "allotted span" — all which facts prove that in this case the disease was not hereditary.

But there is an important point introduced from the fact that patient's mother died at 35 of cancer
Commentary (continued)

I cancer of the left breast after suckling a family of five. Many would therefore be inclined to hold that in this case the disease was hereditary—a view that would be conclusive to those who believe that acquired peculiarities are readily transmitted through the mother. But the difficulty is easily met. Patient was not the youngest child of the family. He was born before his mother developed the disease, although advanced pathologists might tell us it was latent in her before his birth. But, if the disease were directly transmitted to him we should expect to see it transmitted in a greater degree to those of her children who were born nearer the time when it became manifest in her, according to patient all his brothers or sisters younger than himself are perfectly healthy. So that the hereditary theory seems here to be fallacious. Besides does it not seem unreasonable that a disease which appears more than 50 years after birth, should in reality date from intra-uterine life.

It must be remembered that all treatment of malignant disease, short of complete removal
Commentary (continued)

is simply palliative. In this case removal of the disease was out of the question — a some method had to be adopted of making the patient able to receive his food.

Many cases of oesophageal structure, after the difficulty of swallowing has become very marked, have been treated solely with nutritive enemata. But this, while it sustains patient’s strength for a time, is a very miserable mode of sustenance; while, as has been said — “there is little appetite in the patient” — a rectal feeding is not conductive to the physiological ideal.

A more active form of treatment may consist in the introduction through the structure of a syringo-toe, which will enable patient to swallow with a greater comfort than previously.

But only some cases are suitable for treatment by this method.

Intubation is contra-indicated when:

1. The structure is too narrow — as in this case — to allow of anything but fluid passing.
2. When there are ulcerative processes in progress on the surface of the structure.
Commentary (continued)

(3.) When the structure is low down — as in the present case.

But undoubtedly the best method of dealing with cases of malignant structure of the esophagus is Gastrostomy, or that should be performed before the disease is too far advanced. There is always a tendency on the part of a physician to tinker away at cases of malignant disease with useless drugs until the case is in extremis, when he hands it over to the surgeon on whose shoulders the weight of blame falls should the patient die soon after the operation. His physician is fair to his patient, who delays too long in recommending such an operation as Gastrostomy. If performed in good time it is a pretty safe operation. Under antiseptic precautions the number of deaths has been reduced from 55% to 25% (Klein) — but this is every liberal allowance of mortalities, for during the two years in which I have worked in the Clinical Surgery Ward of the R. I. C. I have seen a considerable number of cases — not a single fatal one.
Commentary (continued)

The mortality is less too, when the operation is performed in two stages — for the risks of peritonitis are thus minimised.

The risk is also less if the surgeon is skilful & expeditious, for rapidity is a great consideration in abdominal surgery, as the danger of shock is thus lessened. In this case the patient's abdominal cavity was open for a very few minutes only, and there was little exposure of the abdominal contents.

The advantage of bringing the stomach out at a second opening is very great. In the old way, when the stomach was stitched to the margins of the single incision and afterwards opened, there was usually trouble with the escape of gastric juice or the regurgitation of food through the fistula. When the operation is performed as in the present case, patency has, as it were, a miniature oesophagus through which his food passes into stomach, or regurgitation of food and gastric juice is reduced to a minimum if it occurs at all. Should any gastric juice escape its effect on the skin may be prevented by alkaline applications.
Commentary (continued)

The efficacy of the antiseptic treatment is beautifully seen in this case, for after the operation, patient's temperature was not above 99°F.

It is impossible to predict how long patient will live. Since no food is now irritating the diseased oesophagus, it may become more quiet in a few months. In fact, cases have been known where the patient has lived for four to five years after a malignant structure of oesophagus was so urgent as to compel gastrostomy.

But however short the patient's subsequent life may be, it will be incomparably more comfortable as a result of the operation—and next to cure the noblest aim of surgery is the alleviation of suffering.
**Case of Syphilitic Stenosis of Larynx.**

**Disease:** Syphilitic Stenosis of Larynx.

**Records of Temperature, Pulse, Respiration, and Stools, from 23rd day of June, 1897.**

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**Respiration:**

| Respiration | 1 2 1 3 4 |

**Stools:**

| Stools | 1 2 3 4 |

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E. & S. Livingstone, 45 Twelvet Place.

**Name:** James Myllie - 21 - Single.

**Occupation:** Woodcutter.

**Address:** 26 High St. Stirling.

**Admitted:** June 23rd 1897 Ward IX - having previously been in Dr Mc Bridie's Ward for a month.

**History of Present Illness:**

More than two years ago patient contracted syphilis. Some 18 months before admission to R.I.E. patient began to feel pain in throat whenever he had to swallow. The pain was scalding in character and seemed to shoot up...
Present Illness (continued)
short up and down. Associated with the pain in the throat was a pain higher up, over the left tonsil. Patient does not know if the tonsil was ulcerated at the time. The pain and difficulty in swallowing were much greater with solid or semi-solid food, and were very slight with liquids. After the pain had been present for about four months patient was seized suddenly while walking home with a severe choking fit. He was not swallowing anything at the time. The symptoms were so urgent that tracheotomy was proposed—but not permitted.
Three weeks afterwards he had a similar but more severe seizure, and as he was unconscious Dr. Murray, Stirling, performed tracheotomy by the high operation. Patient recovered, and since the operation has been able to swallow with less pain; and also to speak better, for before the operation he had lost his voice almost entirely.
About a year after tracheotomy was performed he came to consult Dr. McBride with a view to having the tube removed and his voice restored. He was admitted into the Throat Ward towards the end
Present Illness (continued.)

The end of May 1897 - 9 there was an endeavour was made on several occasions to pass bougies through the stomach large. As these attempts failed patient was sent to Dr. Annandale for operative measures to be taken.

Family History:

Father dead - cause unknown. Mother alive - not in best of health. Two brothers and two sisters all healthy.

Previous Health:

Patient has always been healthy with the exception of the attack of syphilis.

State on Admission:

Wears his tracheotomy tube constantly. He can't speak with the inner tube in. With inner tube out he speaks in a far-away hoarse whisper. Can swallow now without pain.

Scattered over body are a large number of scars of syphilitic sores.

 Appeared healthy.

P.E.O.
Treatment.

On June 30th patient was chloroformed through an indiarubber tube attached to the trachestomy tube, & inserted into a tumbler in the bottom of which was a piece of lint that could be saturated with chloroform. The apparatus answered very well — the length of the tube allowing the anaesthetist to take his stand at such a distance as not to inconvenience the operator.

Hæmorrhoids having been established, Mr. Annandale, beginning at the upper margin of the trachestomy wound, made a straight incision about ½ inch in length, upwards along the front of the throat in the midline. He formed all the structures somewhat thickened. The vessels were caught & ligatured, and patient's head was drawn well over the edge of the table to lessen the chance of blood siphoning down the trachea. A point-pointed bistoury was then inserted at the trachestomy wound and an incision carried upwards for some distance through the trachea. A number of sponges were then carefully packed round the trachestomy tube to prevent any blood finding its way into the lungs.

Patient was then jaffed and a flute conical Swis. No. 10 was passed fairly early from below upwards.
Treatment (continued)

upwards through the stenosed larynx. A series of longies was then passed up to the second largest size and an attempt was made to insert an 0.75g H tube from below. It was found to be unsuitable, so Dr. Annandale rapidly improvised a tube from a piece of lead pipe about 1/4 inch in diameter. This was bent to suit the curvature of the larynx and a hole was made into it opposite the tracheotomy wound in the neck. The tube was then inserted and held in position with a silver wire. It however seemed to produce great reflex irritation with spasmodic coughing and straining, so Dr. Annandale removed it in order that a suitable tube might be manufactured.

The neck was stitched and dressed, the tracheotomy tube being still left in, and patient was returned to bed.

Progress

June 30th Was very restless during afternoon, temp rose to 100.4°F.

July 1st Temp rose to 102°F in the evening, still restless.

July 3rd Much easier, temp down to normal.

July 5th Improving, says he can breathe more freely through tracheotomy tube.
Commentary.

Syphilitic stenosis of the larynx resulting from cicatricial contraction is one of the few syphilitic conditions that in most instances will not yield to simple treatment. It is liable to happen whenever the larynx becomes markedly ulcerated, it is quite a question whether prophylactic intubation should not be tried together with specific medicines in all cases where the larynx becomes extensively involved by the disease.

If the commencing stenosis is not arrested it will in all probability go on to almost complete structure of the larynx, which may at any moment be complicated, as was probably as in the present case by a laryngeal spasm which threatens to produce aphonia.

Before the days of intubation, surgeons were content to perform tracheotomy for persistent syphilitic ulceration threatening structure, in the hope that the rest thus afforded to the diseased part, would with the constitutional remedies bring about recovery. But now a days intubation seems a more effective method of dealing with such conditions.
Dr. J. Burger himself says in the New York Med. Journal (March 18th 1877) that even had intubation failed completely as a method of treatment in crops, he should still have felt repaid for the time & expense involved in developing it, for in it he sees the best method yet devised for the dilatation of chronic structure of the glottis.

It can easily be understood that any other way of endeavouring to dilate the structure of the larynx, must of necessity demand a preliminary tracheotomy or laryngotomy. But intubation may be safely performed without such a preliminary — by its means a continuous laryngeal pressure may be kept up as long as is necessary.

In the present case however, the tracheotomy had been performed before patient came to the R.I.C. In fact he came to see if he could not get the tube removed & have his natural breathing channel restored.

Since the structure had, in the Throat Ward failed to be dilated from above, it was a wise step to endeavour to dilate it from below.

Unfortunately, the improvised lead tracheal tube was malleable — but the method of the procedure was
Commentary (continued)
was sufficiently indicated by it.

What form of tube will best suit the case?
This is probably in some respects a unique case, so
the market contains no apparatus suitable for
it.

An O'Dwyer's tube will not suit because it is
shortened. It certainly would keep the structure
open, but with the tracheotomy wound below, some air
would always be escaping through it, or entering through
it, and so the wound would be kept open.
The tube should be such that all air entering or
leaving the lungs will pass through it, so the
tracheotomy wound will have a proper chance to
close.

To this end a tube of the following nature
seems best adapted: It is a kind of modification
of Kredel'sberg's Tampoon—cannula.
Let a tube be made for insertion into the larynx
or trachea, to extend for some distance below the
tracheotomy wound, and to have at a point
below the tracheotomy wound an inflatable
tampoon encircling it. (See diagram—next page.)
When the Tampoon is inflated no air will
enter or leave the lungs except through the tube.
Commentary (Continued):

In this way the tracheotomy wound will have absolute rest, and if its edges are scraped or stitched it should close rapidly. The greater part of the tube might be made of a lobate-tail pattern so that it will be flexible or allow of easy removal through the phthisis when recovery is established. By the time the tracheotomy wound has healed the stenosis of larynx should be permanently dilated.

Whatever method of intubation is adopted there is sure to be considerable discomfort experienced by patient when he swallows at first. This difficulty may be met in some degree by having the patient to lie down when swallowing with the head lower than the rest of the body; or if the discomfort is very great at first, recourse may be had to rectal feeding, which of course must be
Commentary (continued.)

must be stopped when the patient can accustom himself to swallowing in the usual manner.

If it is quite possible, it be found when all is over, that disease has invaded the vocal cords to such an extent that articulate speech is impossible, the advisability of furnishing the patient with an artificial larynx should be considered. If these there are several forms, the most recent and improved of which is that of Prof. T. P. Anderson, Stewart of Sidlaw.

An Artificial Larynx.
DISEASE. Tubercular Disease of left Elbow Joint — Excision.

RECORDS of Temperature, Pulse, Respiration, and Stools, from 26th day of May 1892.

In the case of Bella Miller Age 14. Sex F. Occupation School Girl.

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E. & S. Livingstone, 15 T/csv Place.

Address — Bank Lane — Auchterarder.
Readmitted — May 26th 1894 Ward VIII
Discharged — June 23rd ...

History of Present Illness.

About a year before admission to the R. I. E. the patient received a blow on the left elbow from a cane, immediately afterwards fell and hurt the same elbow.
A few days afterwards the elbow became so painful as to prevent patient sleeping, and at the same time it began to swell. She consulted a Doctor who told her to apply
History (continued)

to apply hot fomentations - who afterwards, when the joint began to grow stiffer, attempted frequently passive movements.

The pain gradually subsided, but the swelling remained; the joint continued to grow stiffer though passive movements were still tried. As things continued to go from bad to worse, patient came to the R.I.E. 4 was admitted on Feb. 16th 1894. She remained six weeks in Ward VII and was treated with Parrish's pond. Salt bath and rest. When in hospital her joint swelled and continued intermittently and was painful on movement. During her stay in hospital patient rapidly increased in weight. When she came she weighed 4st 4½ lbs. - when she went to the Convalescent Home on April 2nd after 6 weeks in hospital she weighed 5st 2½ lbs. She remained at Convalescent 6 weeks, but as her elbow did not improve she returned to the Royal Infirmary.

Previous Health

Patient does not remember having had any other illness.

Family History

Father and mother alive and healthy.
Family History (continued)

Two brothers living — healthy.
Other brother died when a baby of Hydrocephalus.
Patient knows nothing of the state of health of her
more remote relations.

State on Admission.

There is a general uniform swelling of the
left elbow joint — all the bursae round joint being
filled up. The lower end of humerus is enlarged,
tender — pressure of articular surfaces together causes
pain. There is almost elastic feeling round the joint
showing that the synovial membrane is affected.
She can't move the joint herself. On going
extension, flexion & inspiration all produce pain.
Their follicles are very abundant on the left arm.
Left hand & arm is wasted. Muscles are flabby.
There is a small mass of wadded flanks just under
the left lower jaw. Patient does not know how
long they have been there. There is a decayed
molar tooth in her jaw just over the glandular
enlargement.
Her face & hands are healthy. Urine normal.

She was seen at Lecture on May 31st 1894.
Operation.

On June 1st, operation was performed by Dr. Annandale. Ether was administered by Dr. Carmichael. The arm was elevated and a tourniquet applied round the arm at the insertion of the Deltoid.

Dr. Annandale then made a straight incision from above downwards about 3 inches long, parallel with the ulna nerve - a little to the inner side of the mid-point of the back of the joint. This incision was carried deeply through the muscle to the bone. He then raised the outer half of the longitudinally-split triceps and the outer muscles adjacent with a periosteum elevator and peeled them off so that the head of the Radius & the External Condyle of the Humerus were exposed. He then peeled off the structures on the inner side taking care to avoid the ulnar nerve - the arm being strongly flexed the ends of the bones were made to project. Then with a Butcher's saw the distal ends of the Humerus, Radius & Ulna were removed. The epiphyses being cut away. The Tourniquet was released & the blood vessels ligatured. Ether was dusted on to the cut surfaces & the ends of the bone - the longitudinally-split Triceps then stitched with cat-gut sutures.
Operation (continued)

The surface wound was closed by stitches of wire & horse-hair, a piece of dressing, gauze being left in for drainage purposes. It was then dressed with iodoform or Carbolic dressing - the patient was put to bed with the arm extended in a lead splint.

The Bone Removed.

On examination of the parts removed the disease was seen to have been extensive. The articular cartilages were drilled & removed. The articular surfaces of all the bones were drilled. The epiphyses was drilled - as was also the lesser humeral cavity.

Progress.

Patient was dressed on the following day & the stuffing was removed. There was very little effusion to drain.

June 3rd. Progress good. Patient has begun to move her fingers.

June 5th. Dressed for second time. Scar healing well.

June 7th. Dressed, still making rapid progress. To be dressed every second day.

June 14th. Dressed & stitches removed.
Progress (continued)

June 15th. Set up to day. Passive movements made.

Arm put in elastic thing; taken down each night. Thereafter moved daily.

June 22nd. Left hospital: scar good and healthy.

Arm to be moved daily by family doctor. She can make very slight flexion herself already. She moves fingers freely. Temperature has kept uniformly good.

Commentary.

This was a very typical case of tubercular disease of a joint. There was the history of elbow or elbow, which, in a constitution like patient's predisposed to tubercular mischief (as a brother had died of hydrocephalus while tubercular), was followed by chronic inflammation of the joint.

Constitutional treatment having failed to produce marked benefit, operative procedures were necessary for a person with a tubercular joint is always in danger of becoming a victim to general tuberculosis.

A method of producing passive exercises by elastic appliances has recently been tried in cases of tubercular arthritis around joints. The rationale
Commentary (continued.)

the rationale of this treatment depending on the fact that in this way a large number of leukocytes are brought near the joint, so it is painfully expected that they will destroy the bactili. It is doubtful if this is a very efficacious mode of treatment – when the bactili are infected it may be considered useless – for should the disease be directed by this means anaesthesia would almost certainly set in.

If the joint condition is complicated by arthritis, the indications are for Amputation.

At the present case Excision was all that was needed.

There has been much controversy as to the best incision with which to begin the operation for excision of the elbow-joint. But now the weight of opinion seems to favour the single longitudinal incision over the back of the joint for:

1. It does not cut transversely the tendon of insertion of the Triceps as the H-shaped or T-shaped incisions do.
2. It does not interfere with the lateral incisions with the blood supply.
3. It leaves the process of the Triceps tendon that is continuous with the fascia over the Anconeus.
4. It leaves only one scar, that a neat one.
Commentary (continued)

(5) There is difficulty in getting good healing of the transverse bar of the H-shaped or T-shaped incision. The question of the amount of bone to be removed is an important one. Of course all the diseased bone has to be excised, but care must be taken not to have too great a distance between the ends of the bone after the section has been made, the arm placed in extension. Here, as elsewhere, the golden mean is best - i.e., Amundsen has shown (Brit. Med. Journ. 1899) that in the one hand "locking" - and on the other hand a "false joint" is prevented, if an interval of 1/2 inch is left between the severed ends, more than 1/2 inch of interval would be very likely to result in a "false joint."

Much of the success of the operation depends on the after-treatment. Ankylosis must be guarded against. Passive movements of fingers, hands should be begun on the second or third day. The joint itself should be moved in about 10 days. At first it will be enough to alter its position, by day extended at right. Then as the scar inward movements with a wider range must be tried. Then car.
Commentary (continued)

Extension, Peristomy, Resection & Aspiration.

Should there be a danger of asphyxia, chloroform should be given & the attachments broken down. The passive movements should be continued daily.

In about 4 or 5 months from time of operation, patient should have a very useful field. But an important question is with what degree of movement should the surgeon be satisfied. This aim should be complete (as almost as possible) of it, but make a degree of flexion, extension, flexion of the arm, as will allow a man to button his collar back & front; or a woman to put up her hair.
Case of Otitis Media with Facial Paralysis.

DISEASE: Facial Paralysis following Otitis Media.

RECORDS of Temperature, Pulse, Respiration, and Stools, from 5th day of June 1894.

In the case of

Name: Logie Williamson
Age: 4 years
Sex: M
Occupation: 

Day of Month

| Day of Disease | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
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E. & S. Livingstone, 15 Teviot Place.

Pain - Logie Williamson - Age 4.
Address - Church St. Stockmennar Tarbert.
Admitted - June 5th Ward VIII
Discharged - June 19th

Complaint of Patient - "Pain in & discharge from right ear."

History of Present Illness.

Patient begun to feel pain in the right ear about three months before admission to R.H. E. There is no history of measles or scarlet fever.

Shortly after the pain was felt, a greenish-yellow discharge
Present Illness (continued)

Discharge with a nasty smell began to come from the ear. The discharge has been continuous since it was first noticed. A few weeks ago some redness appeared over the mastoid process, behind the ear, and it has remained ever since. The mother of child does not know when the right side of face first became paralyzed.

Family History. Good.

Previous Health. Good. Has had no serious illness.

State on Admission.

Patient's right ear discharges a considerable quantity of yellowish pus free with an offensive odor. There is redness and tenderness over the right mastoid. A small pimple just below lower lobe of ear.

She has complete right Facial Paralysis. The face on the affected side is immobile, the skin is smooth, and the cheek has lost its roundness. The lower eyelid droops, tears trickle over it. When asked to shut her eyes patient turns up the eyeball, but
State on Admission (Continued)

Patient is unable to elevate the lower lid of right eye. The right angle of the mouth droops. When asked to smile she does so with her left cheek only. She cannot close from left to right lip. When asked to show her upper teeth, the right angle of the mouth is not raised.

The naso-labial furrow is drawn to the left.

The right side of face is flattened. Patient cannot whistle.

She eats slowly - food collects in the right side of mouth, owing to paralysis of the Buccinator.

The Rhula does not deviate to either side.

Treatment

Ear syringed out twice a day with Boracic Lotion.

A Boracic poultice put on the sinus.

Progress

June 8th. Exhibited at Ward. Clinton & symptoms demonstrated.

June 10th. Discharge not so copious. Facial paralysis still the same.

June 19th. Better now. Discharge less than when she was admitted - but otherwise patient is in same state. Operation not recommended, as symptoms were not urgent.
Commentary.

This case — though not suited for operative procedure is of great interest on account of the recent results of this media. The commonest results of this media calling for surgical interference are:

(1) Anterior suppurative of the middle cells calling for drainage of middle ear.
(2) Abscess in the brain.
(3) Sepsis meningitis — produced by an extension of the inflammation through the thin Leber's symptoms that roof the cavity of the middle ear.
(4) Extension of the inflammation through the floor of the middle ear producing septic thrombus of the internal jugular vein.

It is remarkable how rare, comparatively, Facial Paralysis is as a sequel to this media. Bearing as it does along the inner wall of the tympanum in the Aqueuctus Fallopii & separated from the middle ear by only a thin layer of bone, one would expect that the Facial Nerve would suffer more frequently in this media than is the actual case. So in middle ear disease that are suppurated process going on all around it.

First there is suppuration in the tympanic cavity
Commentary (continued):

...early itself, that there is usually suppuration in the mastoid cells adjacent to the nerve; for the mastoid cells communicate directly with the tympanum through several orifices in its Petri's wall, and thus by a prolongation of the lining membrane of the tympanum. In this case the probable cause of the Facial Paralysis was sclerosis of the bone round the nerve, induced by the chronic otitis, pressing on the nerve so that it became functionless.

The Chorda Tympani nerve comes off from the Facial nerve just about 2 inches before it emerges from the stylo-mastoid foramen. It was interesting to ascertain whether the pressure on the Facial was about this point or not. To this end I made the following investigation. The Chorda Tympani is the sense of taste for the anterior half of the tongue; so I tried to find out whether destruction sense of taste in the left anterior half of the tongue were about or not. (In testing the taste sense a certain source of acidity must be avoided. The tongue must be protruded well out of the mouth, so if it is allowed to remain in the mouth, patient may taste with the palate, or the other half of the tongue, so the test would fail.)
Commentary (continued)

Patient was told to put her tongue out and to raise her hand as a signal if she felt the taste of anything. In this way assurance of failure was obtained.

The tongue, then being well protruded, I applied a little sugar to the right half anteroventrally or rubbed it gently in, in order that contact with the taste buds might be assured. Patient made no sign, so I concluded she had not felt the taste or instructed her to withdraw her tongue. After eating out her mouth she said that she had not felt the taste while her tongue was out of her mouth. A similar experiment made with similar pace similar results. A like experiment made on the left half of the tongue anteroventrally showed that she retained the sense of taste there.

By this means I was able to prove that the lesion on the nerve was above the place where the chorda tympani leaves it.

(N.B. These results were not obtained at a first trial. It took several attempts to persuade patient not to draw in tongue when the test substance was applied; but at last she came to understand, I think, that in spite of her youth, these results may be taken as accurate.)

An interesting point is raised by the condition
Commentary (continued)

condition of the Yonula. In this case it was not
depicted to either side. Paralysis of Facial
nerve deviation of Yonula from mid line is
commonly said to occur; but its state in the
present case supports the contention of Victor
Horsley, viz., that the Yonula is not supplied
by the Facial nerve.

Operative procedure was not necessary
in this case because:

1. There were no urgent symptoms.
2. The paralysis of the nerve was probably due to
retraction of the bone around it; - it is
questionable if an operation could be performed
radical enough to relieve the nerve from this.

Records of Temperature, Pulse, Respiration, and Stools, from 7th of June, 1894.

| Day of Month | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
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E. & S. Livingstone, 15 Tavistock Place.

Name. - Thos. Heathcote - 26 - Married.

Occupation - Heating Engineer.

Address - 29 India Place, Stockbridge.

Admitted - June 11th, 1894. Ward VII.

Still in hospital, July 6th.

History of Present Illness.

For four days before admission patient had felt a slight pain over the jet of his stomach. On the afternoon before admission while patient was at work he was seized by a severe piercing pain in the right side of his body. It was so acute as to compel him to leave
History of Illness (continued)

to leave work & go home. The bowels had moved early that morning & he knew of no reason for the pain. He went to bed & applied hotunctions to abdomen, but got no relief to speak of. Soon afterwards he became very sick & vomited. The vomiting continued all night - the colour being dirty grey - the odour being very disagreeable. He got no sleep. Dr. Thynne was summoned. The prescribed milk & ice, but each mouthful brought on a fresh paroxysm of vomiting. On returning later Dr. Thynne gave an injection of morphia which relieved the pain for some time. Patient's bowels had not moved since the onset of the attack.

He had never had an attack of this nature before - & with the exception of an occasional attack of diarrhoea his bowels have always been regular.

When Dr. Thynne saw patient next day (June 11th) he advised his immediate removal to the R.S.

Previous Health.

Patient has always been strong - he cannot remember having had the illnesses of childhood.

Family History.

Father died 11 years ago of Peritonitis.
Family History (Continued)

Brother also dead — cause unknown.

One sister living — well eating — but the one had suppurring glands in neck. No relatives have died of Consumption.

State on Admission.

There was no distension or swelling of abdomen visible. There was considerable abdominal tenderness — most over the right iliac fossa — 8 in the hypogastric region. The pain in the right iliac fossa was increased on pressure. The pain was not so severe at time of admission as previously, but still patient kept her knees drawn up.

Temperature 97.5. Pulse rate 120. Respiration 32.

Heart & lungs healthy. Urine normal.

Operation June 11th

As the suddenness & nature of the symptoms & the character & situation of the pain all pointed to Appendicitis Dr. Annandale operated on the morning of admission.

While patient was being anesthetized Dr. Annandale made some remarks on Appendicitis, said that frequently it was simulated by other diseases such as Enteritis Peritonitis — although in most cases the Enteritis
Operation (continued)

Tubercular Peritonitis was of a more chronic form. In the patient being brought into the theatre, the abdominal wall over the caudal column was shaved thoroughly covered with 1:20 Carabolic.

During the operation 1:60 Carabolic was used. A straight incision was made about 3 inches long with its centre at McBurney’s point. The muscle fibres were then divided down to the peritoneum. The arteries were secured & ligatured, & the peritoneum opened with a fine-pointed bistoury. The bowel was then seen to be markedly congested & a large vesicle tubercular granulation tissue was found involving the column & ileum.

The Appendix was found to be slightly inflamed only, & somewhat rounded down.

The abdominal glands were enlarged.

Dr. Annandale then explained that the case had proved to be one of Tubercular Peritonitis with a slight involvement of the Appendix. He accordingly ligatured the Appendix, removed it, taking the stump with both forceps.

The wound in the abdominal peritoneum was then enlarged upwards for about an inch — the small intestinal tract. A short distance from the ileo-colic valve a kink in the bowel was found which
Operate (continued)
which was evidently producing some obstruction. A considerable number of salivary glands was found in the abdomen; or about a foot from the ilio-crural valve another gland similar to that distroying the colon. A tube was found. There was no ascetic fluid in the abdominal cavity.

The bowel was then returned: the peritoneum sutured with fine silk; the muscle fibres drawn together with cat gut & the skin incision closed with wire thoraciar. The wound was dressed with Carbolic gauge — of a morphine suppository was introduced into rectum: of patient put to bed.

The operation had lasted about 30 minutes, the abdominal cavity having been open about 12.

Progress.
June 11th. On the evening of operation, patient kept.

had risen by 11 p.m. to 101° F. — but he said he had no pain.

June 12th. Patient says he feels well. Bed of nurse moved since operation.

June 13th. Wound dressed: slightly inflamed. Patient became very sick (for no apparent reason) & vomited several times. He was ordered an emetic.
Progress continued.

June 14th. Tenderness + remaining. Patient looks well. Temp 99°F.

June 15th. Patient much better.

June 17th. Still improving.

June 21st. Dressed. Stitches removed. Skin found somewhat undermined. Drawn together with plaster.


June 27th. Last much discharge. Edges of wound wide apart.

July 3rd. Patient still better. Wound not so gaping.

July 5th. Exhibited at Lecture. The wound is now a semi-superficial one - epithelium is seen rapidly coming in from its edges.

Commentary:

This is a remarkable case from its very close simulation of ordinary Appendicitis. As a general rule the symptoms of Intestinal Peritonitis are of considerable simplicity + diversity, but they more frequently with
Commentary (continued)

with their day meet, abdominal tenderness, tympany, etc., is less common in typhoid than appendicitis.

In all probability the irritate in the small intestine was a potent cause in producing the resemblance to typhoid appendicitis; for although there was a slight congestion of the appendix itself, it was not sufficient to account for the gravity of the symptoms.

From the stage at which the tubercular inflammation of the pleurae had arrived, it must have been in progress for some time secretly in a latent form before giving rise to acute symptoms. Cases of this nature have frequently been recorded.

It may profitably be asked what the vascular tumour-like mass in the neighbourhood of the caecum, also in the small intestine, was. It is possible, since it seemed to be inside the bowel that it was simply a tuberculous ulcer of the intestine with pieces adherent. This would give a tumour of similar appearance and consistence; tubercular ulcers in the caecum have been known to produce the symptoms of appendicitis.

As to the treatment of tubercular Peritonitis, Laparotomy has been shown to be infinitely preferable to medical treatment. The treatment by Laparotomy.
Commentary (continued)

is of recent origin, & its efficacy was first discovered by accident. It is usually more successful in children than in adults.

Dr. Aldibert (3rd Record Jan. 14th 1933) has shown that the success of Laparotomy is greater in the fibrous forms of tubercular peritonitis, than in the acute. Out of 46 cases in which the operation was performed in children, there were 42 cures & 4 deaths — which represents 91.4 per cent. of cures & a mortality of 8.6 per cent. If the cures about 25% were permanent. In none of the cases which Dr. Aldibert records was death due directly to the operation, & even those cases which were not cured became less severe. From these facts we may conclude:

1. That Laparotomy (not a dangerous operation in itself, if performed skillfully & with proper antiseptic precautions) is a cure for tubercular peritonitis.

2. That if the successes it gives are better than those of medical treatment.

How Laparotomy produces such results is still in camera. It has been suggested that the entrance of air into the abdominal cavity kills the bacillus. But this can hardly be
Commentary (continued)

hardly be, for the Tubercle Bacillus is one of those which require Oxygen for their nutrition. If air killed the Tubercle Bacillus, how does it not stop the ravages of Tubercle in the Lung?

Again it has been suggested that the improvement is due to the influence of the sunlight which is allowed to enter the abdominal cavity and kill the Bacilli.

Dr. Zath, an Italian observer has quite recently advanced a new theory, after extensive experiments on animals, as to the cure of Tubercular Pneumonia by Laparotomy. He says that in the first three or 5 days after the operation a small quantity of reddish serum is secreted. This serum fluid bathes the tubercular masses, & has a bactericidal & attenuating effect on the micro-organism. Cure then follows by a degeneration of the epithelial cells, without the intervention of leukocytes, or without the formation of fibrin connected tissue.

Whatever be the explanation of the process, the present case affords a remarkable instance of a rapid relief of urgent symptoms, following Laparotomy.
Malignant Disease involving the Bile-ducts — Cholecystotomy.

**DISEASE.** Malignant Disease — Cholecystotomy.

**RECORDS of Temperature, Pulse, Respiration, and Stools, from 1st day of July 1894.**

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E. & S. Livingston, 15 Teviot Place.

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**Name:** Margaret Bain
**Age:** 45
**Sex:** F
**Occupation:** Cook

**Admitted:** July 1st to Ward III. Had previously been in Ward 25 since May 15th 1894.
**Still in Hospital.**

**History of Recent Illness.**

On April 25th 1894 patient was seized with a sudden severe fit of vomiting preceded by slight pain over the lower ribs. The vomiting continued for three days. At the end of that time she became jaundiced, a few days later a rash appeared on her body which her
Present Illness (continued)
which her Doctor said was Bright's. It went away in a few days. Since then her skin has been peeling on palms of hands & soles of feet.
Since the severe vomiting ceased, she puts up every evening about 8 o'clock a small amount of clear fluid, thin blood or coffee grounds. She has had no dyspeptic symptoms no similar pain before.

State on Admission to Ward VIII
Conjunctivae & skin very yellow. Pulse 90 per min.
Abdominal places in right hypochondria region & to right of umbilicus. There is a well defined swelling above & to right of umbilicus, regular & rounded in form & about the size of a tangerine orange. It is slightly movable but seems to be continuous with the liver. There is no special swelling tenderness over the swelling or region of the liver. Liver dulness much increased downwards. No irregularity on palpation.
She has lost a stone in weight during her 4 weeks in Ward 25. Heart & lungs healthy.

Urine: No abnormal constituent except bile of which it contains a large quantity.
Operation.

On July 1st at 4:30 p.m. Chloroform was administered and Dr. Amundall made a straight incision about 4 inches long over the distended gall-bladder. The subcutaneous fat was seen to be deeply bile-stained. The muscle fibers and other structures were then divided down to the peritoneum and the blood vessels secured. The peritoneum was then opened with a first Rometti bistoury, & the distended gall-bladder exposed. It was then shut off with antiseptic "scabs" from the open visceral cavity, & a trocar & camoula with a rubber tube inferiously attached to the camoula was then inserted. On the trocar being withdrawn there was an immediate escape of watery liquor bile, which was followed by a copious discharge of thicker & more deeply stained bile. After some 3X had escaped the camoula was withdrawn & the gall-bladder explored with a probe, but as nothing could be felt an incision was made through its wall and Dr. Amundall introduced his finger. He did not feel any calculi. A retrograde sound was then passed through the bile ducts to make sure that they were patent, & no calculi was found blocking them.

As there were no symptoms calling for further interference Dr. Amundall stitched the parietal...
Operation (continued)

Posterior peritoneum to the edges of the opening in the gall bladder in order to shut it off from the peritoneal cavity: it was then further stitched to the opening in the abdominal wall.

The muscles were then drawn together with cat-gut, the skin etc with wire or horse hair — a fistulous opening being left between the interior of the gall bladder & the surface.

A drainage tube was inserted into the gall bladder: the wound was dressed with carbolic gauge & patent was returned to bed — the whole operation having lasted only about 30 minutes.

Progress

July 1st Came out of Chloroform study. Very sick — rushed to invalid.

July 2nd Still very sick — put hypodermic tdp. mercury at 12:45 a.m. slept six hours. Waked very sick

July 3rd Sickness not as bad. Sets out to be more lively 4 hours. Dressed: not much discharge.

July 4th Has no pain when not retching: sickness not so severe to-day. Conjugutine not so brightly yellow.

July 5th Not sick to-day. Feels very weak - between feverish.

Dressed: not much discharge.
Commentary.

Diagnosis.

In all probability the condition in the present case is the last: the fact that patient has had no previous attacks of coliciveness excluding cataract: or there being no gall-stones found. Here an interesting point arises. Dr. May Robson in his paper on the Surgery of the Gall-Bladder read at the International Medical Congress at Rome in 1874 stated that "in all cases of malignant disease with jaundice the gall-bladder forms a perceptible tumour, while in jaundice dependent on gall-stones alone, no marked tumour is present." I have not enough experience to know whether this is always so, or not; but at any rate in the present case the gall-bladder formed quite a visible tumour. It was evidently a...
Commentary (continued.)

a malignant case.

Here it would be out of place to discuss the causes that may call for surgical interference with the gall-bladder, but it may be profitably asked at what time should the surgeon be called in, in a case of obstruction of the Biliary apparatus.

As this term is but one answer e.g.: As soon as the obstruction fails to be relieved by medical means, in this way the patient will come to the surgeon's hand in a better condition for rallying after the operation, than will a patient who is treated medically until the system is profoundly lowered by the Cholestasis. And besides, as has been proved, the greater the cholestasis the greater is the tendency to a large varying haemorrhage after the operation, which has been known seriously to menace a patient's safety. In fact a patient has been known to die 5 days after Cholecystotomy from a continuall slight haemorrhage. (British Med. Journal Vol II 1893)

This haemorrhage is usually more marked when the smaller vessels have been subjected simply to forcible pressure without ligature. The precise cause of this has not yet been decided, but probably it is due to the salts...
Commentary (continued)

Salks of the bile acids having the coagulability of the Blood.

It is quite probable that in this case the operation will produce a marked relief. There are cases on record where such an operation has brought about recovery, where nothing could be found to account for the symptoms. This happy result may be due either to a freeing of the gall-bladder from adhesions, or to a free drainage being established which prevents the coagulated mucus from going through the bile ducts, so permits of the mucous membrane recovering a healthier tone.

In the operation of Cholecystotomy, the general opinion is that it is advisable to leave a biliary fistula. If the gall-bladder be completely stitched & returned to the abdomen without a fistulous opening to the surface, there is some danger if the sutures breaking through the friable walls & allowing bile to escape into the peritoneum, to produce peritonitis. In most cases the fistula will in due time close without further operative interference.

Lawson Tait holds that "biliary fistula after Cholecystotomy can only be permanent when the operation happens to be performed at a time when a gall-stone is impacted in the common duct."