Commentaries
on
Six Surgical Cases
Treated in the
University Surgical Wards
(1907-8)

Kenneth Fraser

{for the Pattison Prize}
Mrs Mary McQueen - (51) 17 Beaver Hall Terrace  
Recommended by Dr. Johnstone, New Town.  
Dispensary. admitted 7.2.08. (Housewife)  

Complaint. Swelling in neck, difficulty in breathing, pains in head.  

History. Father and Mother both dead. Father (bronchitis) Mother (apoplexy). Patient had three children, one is dead. Patient's social conditions are good. She has plenty good food - she does not eat much however. She lived for twenty years in Aberdeen.  

Previous Illnesses and accidents.  
No accidents. No fevers. Patient had a severe attack of influenza some time ago. She had also for a time varicose veins which ulcerated on both legs. These ulcers are now cured. Sixteen years ago after a confinement patient had general dropsy. She got some powders and had to live on milk and potatoes for three months, during most of which she was in bed. She thinks she caught cold after her confinement. Since then also she has rheumatic pains, never rheumatic fever. She had a big swelling in (her neck about the age of seven; this was cured by painting.) (N.B. important for diagnosis.) She has had prolapus uteri - cured by a pessary.  

Present illness.  
Duration &c. A slight swelling began 3-4 years ago. Patient attributes this to "lifting heavy forms when charring." Onset was very gradual and progress slow until three months ago when tumour began to grow more quickly. She has for three years or so been troubled with difficulty of breathing; this also has been much worse in last three months. This difficulty has been especially noticeable after exertion or on excitement. P. has felt very "done" last four months, since when also pains in head have troubled her a good deal. P. has felt continually tired and "done" and has been very nervous. She has been much troubled with sleeplessness and difficulty in getting up in the morning. P. used to flush greatly; this has now improved. She perspires very freely.  

State on admission.  
A photograph is appended.  
Pulse 70. Resp. 22. Temp 98.2°.  
P. is a stout well-nourished woman of a florid complexion, of middle age. Her skin seems very moist. A glance shows her to be extremely nervous - the condition at times almost amounting to hysteria. There is a marked swelling in the region of the neck. She seems to be troubled with her breathing which is somewhat strident on inspiration. She lies propped up by pillows - on her left side by preference. Her face is puffy - especially under the eyes. These do not protrude.  

Locally.  
Subjective signs.  
P. complains of a swelling in her neck. It feels "hard and lumpy" also of a swelling at root of neck on left side and passing out/
N.B. (notroduces deglutition. This sound is also audible to the listener.

It is only hurried breathing which causes the choking sensation. There is a feeling of something "sticking in her throat." She is not sure if it is not imagination. She feels done and tired. Her voice is husky - she says it is normally so. There is no pain in her neck at any time. There is sometimes a "Stinging" pain in the small swelling. This pain seems to start behind the ears. P. is much troubled with nervousness and sleeplessness. She feels continually that she is going to die. She is troubled with palpitation and at times with throbbing in the neck. She has pains in her head behind the ears. These pains are confined to back of head - unless, as it sometimes does, it tends to lodge in small swelling. This pain may last for hours. It is throbbing in character.

Objective.
There is a marked swelling on anterior aspect of neck and on left shoulder at root of neck.

Position.
It is a swelling stretching from the posterior margin of the sternomastoid muscle on each side right across the middle line. It stretches on both sides vertically from the clavicles up to under the lower jaw. It seems to enter the superior mediastinum.

Shape.
It is a large irregular swelling considerably more prominent on the left side, and on this side there is a deep constriction between the larger and the smaller swellings. Not nearly so marked a swelling on right side. It is especially prominent also in lower half of neck on each side just above the clavicle. There is also a swelling (referred to as the smaller swelling) on left side at root of neck, \( \frac{9}{10} \) above inner \( \frac{1}{4} \) of the clavicle, extending upwards the larger swelling and backwards along the root of the neck.

Consistence.
The larger swelling is hard and firm. It is harder on right side - softer on the left, and in front of the trachea it is compressible and is elastic to a considerable extent.
The swelling pulsates.
The smaller swelling is much softer and pits on pressure. The external jugular vein is dilated and tortuous on both sides superficial to the swelling.

Mobility.
There is extremely little mobility in any direction in connection with the large mass. The skin moves freely over it. The mass seems to lie in and be adherent to the subcutaneous tissues. The swelling seems to be independent of the muscles. Contraction or relaxation of same does not affect its mobility; swallowing produces little or no movement of the tumour.

The smaller swelling is freely mobile and quite independent of the other - compression of either tumour does not affect the other.

Pulsation.
The/
The tumour pulsates throughout. It is very difficult indeed to say whether the impulse is heaving or expansile. Pulsation is uniform throughout. It is quite impossible to compress the artery above or below to test the effect on the pulsation. The heart is well heard in the carotids.

There is no bruit to be made out over the tumour.

General points.
No tachycardia - exophthalmos or heart bruits. Pulse regular and strong. No tremors in limbs; nothing abnormal to note anywhere.

Treatment.
Small swelling aspirated twice, nothing came away.

Other treatment none.
P. was twice prepared for operation but on both occasions her resolution broke down and she was so prostrated with nervous excitement that the operation had to be abandoned, on both occasions.

She was dismissed 22.2.08.

Diagnosis. (possibilities)
(a) Glands (b) Lipoma or other simple tumour (c) Thyroid affections (d) Congenital or other cystic conditions.

In the first instance from the appearance and history and objective signs it is clear that patient suffers from two separate swellings in the neck; the smaller one on the base of the neck on left side is independent of the other. From its consistency and free mobility and position in subcutaneous tissues; from its lobulated feel and from the pseudo-fluctuation obtained at the part, one has little hesitation in diagnosing the smaller swelling as a lipoma possibly separate in its origin and may be having no relation to principal tumour and no share in the causation of the symptoms.

The nature of the larger swelling is much more difficult to determine. The condition is evidently a chronic one - being of four years duration and slowly progressive. A swelling of such a nature might be due to enlarged glands tubercular or otherwise. The age of the patient is against T.B. and there is no evidence of T.B. elsewhere. Also the very slow development without tendency to ulcerate is against T.B. The swelling is also too symmetrical and diffuse and too smooth for enlarged glands of any kind.

Cystic conditions, were suggested, these are unlikely. They usually develop in early adult life; also the great size of the swelling is against this idea.

Is the condition then an affection of the thyroid gland itself? The shape of the tumour is very suggestive of this, but a very strong point against this is the absence of movement of the tumour on deglutition.

It is hardly likely to be a simple Chronic Thyroiditis; this is a rare condition and would produce general symptoms. Also tumour is too large for this to be likely.

Tuberculosis and syphilis of the gland may be dismissed in a word. There is no other evidence of these diseases.

Goitre (implying any hypertrophy of the gland) is a possibility. There is, however, no apparent cause for such (drinking water &c.)

The discomfort is not so great as so large a goitre would cause.

There are no general signs of much importance beyond nervousness, and the absence of movement on swallowing is to be remembered.

Grave's disease may be dismissed; there is no exophthalmos - tachycardia or other sign of this condition.

Tumours
Tumours, of the gland are unlikely because these would if so large and so long continued whether simple or malignant certainly have produced marked general symptoms. Therefore one is led to dismiss thyroid affections as unlikely.

Simple tumours outside the gland are possible and of these the most likely is diffuse lipoma of the neck. No doubt the extreme hardness of the tumour is against this, but this may be due to compression of the muscles round about. Also the absence of tacking of the skin is unsatisfactory but one is inclined to think that this is accounted for by the tumour probably lying for the most part deep to the muscle. This at least is a possible explanation.

In favour of lipoma are:—(I) shape which is very typical, (II) presence of an undoubted lipoma on the shoulder. (III) slow growth (IV) apparently harmless nature—all the symptoms being referable to pressure. (V) exclusion of other probable conditions.

The diagnosis is a

Diffuse Lipoma.

The foregoing diagnosis was quite upset by the result of an operation on 24th March; the patient having returned to hospital for treatment; under general anaesthesia an opening was made over the tumour by Kocher's curved transverse incision. This revealed what appeared to be a very thick platysma muscle but what turned out to be a combination of platysma and sterno-mastoid—the latter much thinned out. The muscles were incised, when the blue-walled sac of an enormous cyst; evidently under great tension, bulged through the opening. This was at first thought to be a blood cyst but was later punctured with a hypodermic needle when clear serous fluid was drawn off. The cyst was then fully opened and an incredible amount of clear fluid gushed out. A hand having been introduced the cyst was found to extend behind the arch of the aorta and behind the heart, but it was so large that its limits could not be defined.

Fluid examined. Sterile 3.8 1028 contained—albumin—glycogen, globulin, water 75%.

The serous coat of the cyst was stitched to the skin and a large sinus was left in the neck—which at time of departure was closing up. Up till then serous fluid freely escaped on deep inspiration or on deglutition.

Microscopically.

The wall of the sac was found to consist of an outer fibrous layer and an inner secretory layer of cubical epithelial cells with granular debris.

The origin of the cyst was very obscure—the surgeon who operated thought it was probably in some way connected with a bronchus as the sac filled on inspiration to some extent. On the other hand remembering that as a child she had a swelling in her neck one is inclined to diagnose the cyst as one of congenital origin; which had not been actively secreting or enlarging until four years ago.

Patient was much relieved and her nervousness was nearly quite gone on departure.

Prognosis.

As to life good—as to recurrence bad—for the Cyst is almost certain to fill up again.

There is grave risk of the epithelium taking on malignant characters.
Case No. II. Lympho-Sarcoma.

age 20, unmarried.

Race: Gbolde - 8 Main Street

Recommended by Dr. Kirk. Bathgate

admitted 6-2-08.

Complaint: Painful swelling on left side of neck.

Previous illnesses Etc. Never any accidents, no severe illnesses, some children's troubles. When 13 years old she noticed a swelling on right side of neck. This went away and reappeared 8 months ago.

Social conditions are good, good food, fresh air, not a great tea drinker. Father and mother both alive and well; they have always been healthy. Six brothers, four sisters, all alive, all healthy, never any serious troubles. No history of tuberculosis in any shape or form.

Present Illness.

Her neck began to be stiff and painful six months ago. This condition seemed to go away and about four months ago a swelling began to appear on the left side of the neck. There was no swelling elsewhere. The swelling "seemed to come and go" and sometimes she thought it was going off altogether. Latterly it has been increasing in size very quickly, much faster than before. The swelling has also been getting more painful lately. She says it continues to vary in size - enlarging in the morning and going down at night. (I have never been able to detect any alteration in size). Sometimes she has felt as if it were going to choke her; this feeling has been worse lately. Voice is getting husky. Since this began, patient has had a cough - due she thinks to swelling irritating her throat. She has had no bleeding from throat or lungs and no spit.

The treatment before admission was to rub the glands with olive oil. This did no good.

Patient has not gone down in health since the swelling began. She has kept up her strength and weight and has felt well.

State on admission, 6.2.08.

Patient is a healthy looking - well nourished girl of average height. She looks cheerful and contented. She is not nervous. Her teeth and mouth are all right. There are no marks of scars on her neck. P. must lie on her back or right side because of pain. Pulse, 102. Temp. 98.4°F.

Locally.

P. complains of a swelling on the left side of her neck. This is sometimes painful especially at night and nearly every night. Never painful during the day only when in bed. Pain comes and goes at night. It is a dull pain and always of some severity. Pain sometimes settles in left ear "inside the ear." Pain sometimes affects the throat too. Otherwise it is confined to the swelling. Pain is at times felt in left shoulder but patient is inclined/
inclined to consider this as quite independent. No pain in
axillae, groin, or elsewhere; swelling does not interfere with
swallowing but her speech has been husky for a week or two lately.
Latterly the "lump has been getting nearer her throat." The
swelling has lately been irritating her throat just below larynx
causing her to cough a good deal.

Objective (a photograph is appended)
There is a marked swelling on left side of neck.

Position it is almost confined to lower half of neck and it ex-
tends back apparently to the posterior border of the sterno-mas-
toid behind and to the middle line in front. There seems to be
an isolated swelling apparently not connected with the larger
swelling lying just in the supra-ternal notch and extending up
for about one inch in front of the trachea. The larger swelling
goes right down to the clavicle and very probably passes behind
this into the media-stinum, but this cannot be definitely de-
termined. The swelling lies superficial to the sterno-mastoid
muscle.

Shape. Speaking generally the larger swelling is triangular with
the apex rather more than half-way up the sterno-mastoid muscle,
and having as its base a line stretching from the sterno-clavicular
articulation in front to a point about 1" behind the mid-lateral
line of the neck. The smaller swelling is flattened antero-pos-
teriorly and is disc-like, about size of a penny.

Character.
Generally irregular, very nodular, with one main rounded swell-
ing and several others apparently oval in shape, much smaller, which
can be moved independently of it and of each other.

Small swelling is smooth and disc-like.

Consistence - pain
Generally firm - even hard - but in one or two places just
above the clavicle the swelling is doughy. No pain anywhere on
pressure except at a small detached nodule at the apex of large
triangular mass where some pain is felt.

Mobility.
The large swelling is freely moveable antero-posteriorly, but
there is little if any vertical movement. The smaller swellings
as before noted are freely moveable on the larger and on each other.
No pain on free movement. Small disc-swelling is fixed, but is
pushed forwards and a trifle upwards on swallowing. The larger
swelling is unaffected by swallowing. The swelling is quite un-
attached to the sterno-mastoid muscle; movements of which do not
move the swelling. The skin is freely moveable over the swelling.
There is some little pulsation (non-expansile) in the swelling.
No bruits are to be heard.

There is also a single enlarged gland on right side of the
neck, just above the clavicle, the size of a pigeon's egg. Hard,
not painful. This has been there for seven years. Has lately
been getting noticeably bigger, "pari passu" with the increase on
the left side. This swelling is freely moveable.

General Points.
Patient otherwise is quite well. She does not perspire much.
No enlarged glands in axilla-groin etc.

The left lung is very dull on percussion as far down as rib III.

N.B. Breath sounds in that area are very feeble. There are no accompan-
iments. There is less movement on the left side. There is no
flattening/
flattening of the chest over the area of dullness. Patient does not complain of pain or other trouble in her lungs. Some cough (which disappeared after removal of the glands) is the only point to notice. No spit.

Bruit de diable well heard in veins of neck.
Heart sounds closed - loud - a rough presystolic murmur is heard.

A differential count of the white cells shewed polymorphs 73% Lymphocytes 26% Others 2% (or so).

Progress and Treatment.
Fevaccination with tuberculin produced no effect.

The patient was operated on by Mr. Wallace on Feb. 14th. A curved incision was made from the middle of the clavicle back to a point about 2 inches behind the posterior border of the sterno-mastoid at its middle. From this later an incision had to be carried up at right angles to former incision towards angle of jaw. The skin and superficial tissues were separated off without trouble and the external jugular vein divided. The sterno-mastoid muscle was then observed to be lying superficial to the anterior half of the tumour; greatly flattened out but not adherent. When this was pulled aside the tumour was seen to be of large size going far back into the posterior triangle.

It was with great difficulty removed but as it was adherent to the internal jugular vein this had to be ligatured in two places and a portion cut away.
The tumour was also adherent to the carotid sheath, and great care had to be taken to avoid injuring important structures, especially the vagus nerve and carotid artery.
The tumour was not encapsulated like tuberculous glands, but seemed adherent to and infiltrating the surrounding tissues, and could not be satisfactorily removed.

Several other enlarged glands separate from the main tumour were also removed one of these from deep down behind clavicle.

N.B. The tumour presented a potato like appearance - nodular and irregular of firm consistence. On section it appeared to contain fibros tissue. The colour was yellowish white. There was no pigmentation.

On section the appearance was very suggestive of a sarcomatous gland. Yellowish areas were dotted here and there, apparently areas of caseation.

A section was cut and is commented on under "diagnosis". The section and a sketch of same are appended.

Progress. Wound healed by first intention. Patient was up in a week. There was no reappearance of glands on left side. Cough was relieved by the operation. Scar firm with a little thickening below it when patient went home. Gland on right side had enlarged by the time patient left on March 26th.

Coley's fluid was injected four times but did not seem to affect the size of the gland or otherwise affect the patient. Patient was very well when she left.

Diagnosis.
One feels great difficulty in attempting to make a differential diagnosis of the condition. The difficulty may be realised from that though much care and expert opinion was expended on the case by those in charge both before operation and on the specimens prepared in the laboratory - at least three different diagnoses were made as to the condition.

It was evident that the condition was one affecting the lymphatic glands in the neck. The condition had progressed from 4-6 months and might therefore fairly be described as chronic. The glands were much/
were much enlarged and the condition was therefore one of chronic enlargement of the cervical glands.

As to the nature of the enlargement the possibilities are:-

1. Chronic inflammatory.
2. Syphilitic.
3. Tuberculous.
4. Malignant (a) Carcinoma, (b) Sarcoma.
5. Lymphadenoma.

With regard to chronic inflammation this is rendered unlikely by the absence of any history of an acute condition preceding. There is no apparent cause for inflammatory enlargement of the glands as e.g. bad teeth, injury, ear discharge, scalp infections. Further the glands were usually not painful; by the size of the glands - the cervical glands not being commonly affected in syphilis - and by the fact that enlarged syphilitic glands remain discrete and do not fuse to form irregular masses.

Also there would be enlargement of other groups of glands (which is not) if the case were one of syphilitic enlargement.

As to tubercular enlargement. This is rendered unlikely by the healthy appearance of the girl and the absence of other evidences of tuberculosis; by the absence of tubercles in the family history; by the rapid growth of the glands and the presence of pain - tubercular glands as a rule grow slowly and are free from pain - and by the absence of reaction to tuberculin vaccination. Also the firmness of the glands, (tubercular glands being doughy and tending to soften), and the fact that the glands were not able to be shelled out as tubercular glands often are, were against tuberculosis.

A glance at the slide absolutely negatives the idea of tubercle there being no evidence whatsoever, (in shape of epithelioid cells, giant cells etc.), of tubercular infection.

Of the malignant conditions - with regard to carcinoma the age of the patient is against this; also the fact that the disease appears to be primary in the glands whereas in carcinoma the glands usually, if not always, are secondarily involved. Also microscopically the section does not show the glands invaded with cancer cells.

The diagnosis therefore lies between Lymphadenoma and Lympho Sarcoma and to distinguish between these is extremely difficult. Some pathological text books to which one has referred do not distinguish between the two at all.

But the following points have led one to a final diagnosis of Lympho Sarcoma.

The absence of bad teeth, ear discharge, ill feeding or any other causes which observers have at different times identified with lymphadenoma.

The short duration and rapid progress of the disease are much in favour of Sarcoma.

The age of the patient and the site of the disease have no weight either way.

In favour of Sarcoma were the areas of caseation seen on the specimen naked eye. Lymphadenomatous glands very rarely caseate and then only in the last stages of the disease when other groups of glands would certainly have been affected.

In lymphadenoma the glands are matted to each other but the surrounding
surrounding tissues are not invaded as they were in this case—whereas such infiltration of surrounding tissues is typical of Sarcoma.

As a rule lymphadenoma affects more than one group of glands. Lymphadenomatous glands are usually painless whereas pain in the glands is typical of Sarcoma. In lymphadenoma the polymorphs are frequently increased; this is negated in this case by the blood count.

Microscopically one is not able to recognize the proliferation of endothelioid cells—nor the giant cells which are typical of lymphadenoma. On the other hand areas are seen where cells resembling those of a round-celled sarcoma seem to be infiltrating the tissues at the edge of the section.

Prognosis is very grave indeed. It was noticed that an isolated gland on the right side of the neck was enlarged and this noticeably enlarged during her stay in hospital. Also the dull area and interference with breath sounds at the apex of left lung indicates that the disease had spread to the mediastinum. Also the glands were affected behind the clavicle where they could only be imperfectly removed.

A letter of inquiry towards the end of June elicited the fact that the patient was considerably worse and was returning for further treatment. The prospect therefore is extremely grave, and a fatal issue is likely to occur in eighteen months at most and probably much earlier.
Case III A curious injury to the leg.

George Bennie 12
2 Alpine Terrace

Schoolboy. Recommended by Dr. Macdonald.

Admitted 6.5.08 - Duration of illness, 3 weeks.

Complaint. Pain and a swelling in left buttock - resulting from an injury.

Social Conditions. Boy has good home and is well looked after. Father dead. Cause unknown. Mother, two brothers and one sister alive and well.

Previous illnesses etc. Measles - slight accident to forehead.

On admission.
Patient is a small boy for his age. He is pale and anaemic looking. He is thin and apparently delicate. His teeth are in very bad order. There are no obvious morbid appearances apart from the general delicacy. He assumed no special attitude but prefers to lie on his right side because of slight pain when he lies on the left side.

He is not fevered.
Pulse 84, Temp. 98°.

Present illness.
About three weeks ago patient was sliding down a plank of wood. The plank was "clean" i.e. planed and white wood. While sliding a splinter entered his buttock. Patient thinks the splinter had stuck for some time in his trousers and was afterwards pushed into his buttock.

It was "fairly sore when it went in." He walked to his home - about two minutes walk - and found the splinter then very painful.

Reaching home he took off his clothes and found a piece of wood, which he pulled out, sticking in his left buttock. This splinter was 2 inches penetrated to the depth of 1" or so.

Pulling it out was very painful. Patient thought he had pulled out everything as he felt nothing more.

He felt no more pain and played about as usual for some days without suspecting the presence of a further splinter.

After this time he felt a little pain but he attributed this to the original wound.

His mother applied some boracic lint and a bandage to the part. This drew out, he said for two or three days a very little pus "tiny ticks of pus on the lint." After five days the wound had completely healed.

As patient had a little pain on sitting down patient's mother sent for a doctor. She was nervous and afraid of blood-poisoning. Doctor could not diagnose anything. Patient says the part was a little swollen, at one part especially - just where splinter had been removed. There was no inflammation, no heat or throbbing or pain in the part at this or indeed any time.

There was a very little pain on movement. There was no pain down the leg or elsewhere in the body.

The doctor continued the boracic lint treatment, although the wound was quite healed up as he said "he was afraid of blood-poisoning and also the lump must be dissolved."

This treatment was continued for ten days or so but then patient applied for admission to the R. I. E. as the pain such as it was no better for the treatment and the lump had not disappeared. The doctor had felt something hard deep in the buttock, but/
but said it was a "sprained or swelled sinew."

Since admission patient has had no special treatment; he has been kept in bed, and the slight pain there was has quite gone.

**Locally**

Patient says he has a lump in his back on left side. It causes him no pain as a rule. Sometimes it is a little sore when "it gets over the bone." Patient thinks it moves about a little, this movement causes no pain. Not painful when moving or sitting or in any position. Apart from slight pain referred to above it causes no discomfort at all. Patient has no reason for removal of the splinter except that he doesn't like the idea of its being there.

**Subjective.**

On examination of the part, two very small red areas are noticeable. One is about the size of a pea and is almost in the centre of left buttock just above the fold. This marks the point of entrance of the splinter but close examination shows that the wound is quite healed, and covered with epithelium - not even any granulation tissue being left in evidence of suppuration. The other red area is practically over the left posterior superior spine; it is rather larger and is evidently the result of irritation from some underlying hard object which is easily palpated. It is very slightly warmer than the surrounding area.

Apart from these there is no evidence of inflammatory reaction over the part. There is no swelling of the part and the imbedded foreign body causes no apparent deformity on inspection. On palpation an elongated object is to be felt deeply imbedded in the buttock. It is about 3\(^\frac{1}{2}\) - 4 in. long. Both ends lie superficial while the centre lies, as is natural, deeply owing to the curve of the buttock.

The object is fairly freely moveable about \(\frac{1}{2}\) - \(\frac{3}{4}\) in. both laterally and longitudinally. Lateral movement causes no pain - longitudinal movement some, especially at upper end where the skin is stretched.

Contraction of the gluteus maxmiius cause no movement of the object therefore it must lie superficial, in the fat of the buttock. Quite hard general pressure over the buttock causes no pain.

There is no pain or swelling in the inguinal glands or in the leg or elsewhere.

**Diagnosis.**

There was really very little diagnosis necessary in the case. There was evidently some hard elongated foreign body lying in the left buttock. This could be easily felt and felt sharp and pointed and extremely suggestive of a piece of wood. When the history of the accident was recalled and the fact that the boy had himself at the time extracted one splinter which had been embedded deeply in the buttock, and when one remembered that there was no history of anything abnormal in the buttock previous to the accident but rather the reverse, one had no hesitation in deciding that another large Splinter had entered the buttock at the time of the accident and had remained there.

It is probable that the splinter would have caused an ulceration at the upper and larger red area referred to due to pressure irritation had it not been removed, and would have found its way to the surface at that point.

There were one or two other points of interest in the case.

It was very remarkable indeed that the boy should have been able to go about for nearly three weeks with a splinter of so large a size as this subsequently proved to be - in his buttock without being inconvenienced thereby and without being aware of its presence for until he was told in the hospital - he had not even suspected the
that a second splinter had entered his buttock.

It was also remarkable that the part had been examined by several persons before his admission to hospital - without the presence of a splinter being detected.

It is strange that the large splinter caused so little pain when one remembers that the buttock is well supplied with cutaneous nerves, but probably the splinter lay deep to these - perhaps even in the muscle. The pain felt at the upper end of the splinter was due to the fact that the skin which is tense at the point was unduly stretched by the end of the splinter lying superficial to the posterior superior spine.

Why was there no suppuration? There appears to have been the very minimum of suppuration - if any at all. This was very curious indeed for the boy seemed to be in a low state of vitality (vide "on admission"), and the splinter was large and had penetrated deeply, presumably bearing with it a large number of organisms. But three weeks after there was no evidence of inflammation.

The splinter may have been mechanically cleaned in passing through the skin and the fat of the buttock. This is not very vascular and probably not easily subject to inflammatory reaction. A more probable suggestion as to the absence of suppuration was that the wood which appeared to be "Persian" wood contained in itself resins and other antiseptics which had prevented suppuration.

Treatment.

Mr. [Name] operated on 12.5.08/C.H. Cl. 3. A small slit (½") was made over posterior superior spine and a large splinter about 3½" long and thicker than a quill was expressed. One stitch was put in. The wound healed by first intention. The boy progressed well and was sent home in a few days.

The Prognosis is of course perfectly satisfactory.
Case No. IV.
Frederick Moore, 110 Abbey Hill.

age 40, Tailor.

Recommended by Dr. Harvey.

Complaint. Very severe pain in left side.

Admitted 15-6-08.

History.
Social conditions good, patient has good food - he drinks a
great deal of tea - and a moderate amount of alcohol.

His work is in a tailor's shop where he is exposed to draughts.

Father and mother dead; father died of pneumonia, mother in child-

bed. He has two sisters and one brother, all healthy. He is

married - he has three children alive and healthy and one

dead.

Previous Illnesses etc.

He has always been delicate; as a child he had measles. He

had a rectal prolapse which was replaced and gave no further

trouble. He was operated on for appendicitis two years ago by

Professor Annandale; the cause of this trouble was rapid and he

was operated on on the date of his admission.

On admission.

Patient is a delicate looking man; he is thin and pale. He

is nervous and wears an anxious expression. He is frequently

seen to perspire. He seems to be in constant pain which becomes

sewerer at times; the pain causes him to vomit and to retch.
He lies on his back, this relieving the pain.

His temperature is 100.6.

His pulse is 100.

Respirations, 30.

Patient is extremely neurotic and there seems good reason to
believe that he is mentally unsound.

Present Illness.

About nine years ago he was suddenly seized with a most ag-

onising pain in his left side. It came on without cause except

that he thinks he may have caught cold.

He was treated with medicines and poulticing which relieved

the pain temporarily. He was in bed for six weeks at this time.
He was not troubled further for a year, during which he was free

from pain. A year later he had a second and similar attack,

which seized him when going home one evening.

A feature of this attack was severe shivering fits. The

pain this time "nearly doubled him up." He got similar treatment
this time and was relieved. He was in bed for four - six weeks.
He had no difficulty in passing his water as a rule but this

came away involuntarily when the pain was bad.
He was much troubled with vomiting during the attacks.

Since this attack eight years ago he has had frequent re-
currences which have often confined him to bed for days.

Only once has he passed any gravel so far as he knows. This
was some years ago. He believes he passed two stones one large,
one small. The pain had been very severe before this and after
the passage he felt much relief.

He had one especially severe attack when convalescent from
his/
his operation for appendicitis. He was detained in hospital then for four additional weeks.

He was treated with fomentations which relieved the pain.

After his operation he passed a great deal of blood in his urine. This is the only occasion on which he has ever noticed blood in his urine.

Since this attack he has been fairly well. On Saturday 13th inst the pain became very severe, and as it has remained he has come to the Infirmary for treatment.

Locally.

(a) Subjective.

Patient complains of an agonizing pain in his left side; this pain is like a knife. It is localised for the most part to the region of the left kidney almost exactly. It radiates at times across his back and down into his left testicle. He thinks this is sometimes drawn up when the pain is bad. The pain is at present continuous and never leaves him except under treatment such as hot fomentations.

He has been getting morphia and belladonna; these have not had much effect.

The pain is relieved by the recumbent posture. The pain does not leave him at night. It comes on suddenly as a rule when the attacks begin. Patient can do nothing but lie and groan so severe is the pain.

Patient is continually vomiting and retching when the pain is bad. He is much prostrated by these vomiting fits. He perspires freely during the severer attacks of pain.

He has no increased frequency of micturition. He cannot empty his bladder when the pain is bad but the fomentations allow the urine to pass in small quantities involuntarily and this relieves the pain and patient can then empty his bladder.

The urine is described later. Patient is always constipated.

He is very subject to headaches, which are severe.

There is no history of gastric trouble; he has never vomited blood. No history of jaundice.

(b) Objective.

A general inspection of the abdomen shows that it is not unduly prominent. A ventral hering is to be noted at the site of the scar of the appendicitis operation. There is a fullness on left side.

Palpation is very difficult indeed; the abdominal walls are rigid, especially on the left side; and because of this and the pain very little can be made out. Patient will hardly let you touch the left side of his abdomen at all. The pain on palpation is felt most intensely on left flank and at the back especially at a point corresponding to the angle between the twelfth rib and the spine. If touched here patient screams and usually starts vomiting.

So far as patient would allow the part to be handled one was not able to diagnose any enlargement of the kidney. It was quite impossible to determine whether there was any displacement of the organ.

Pain hindered percussion very much, but there is a large area of absolute dulness on left flank.

Urine.

Colour - amber, slightly acid; contains a deposit not large which floated on shaking and which after excluding phosphates and pus by chemical tests one decided to be mucous.

The/
The urine contains albumen but chemical tests revealed no blood.

Microscopically.

The house-surgeon found blood corpuscles and a granular deposit. I examined the urine on a different occasion and was unable to find any blood cells on that occasion.

Diagnosis.

The patient is suffering from a condition of severe abdominal pain which is evidently of a chronic nature, having lasted for some nine years.

The points to note with regard to this pain are especially its agonising character and its situation.

It is especially severe over the region of the left kidney and radiates across the back and down to the left testicle, which patient said he had noticed to be retracted during a paroxysm. In the interval between the paroxysms, the left flank is so painful that patient will allow no examination to be made. The pain is so violent that patient remains vomiting and retching until he even becomes black in the face. The pain is relieved by the recumbent posture.

The pain causes profuse perspiration and is often preceded by a rigor. The patient has a swinging temperature.

The urine contains blood cells.

There is a history of the passage on one occasion of a good deal of blood.

The patient on one occasion passed two calculi.

These various symptoms point to a diagnosis of renal colic. Other conditions suggested by the symptoms might be as follows:

1. Appendicitis.
2. Acute obstruction.
3. Intestinal Colic.
5. Moveable Kidney.

Appendicitis, is excluded by the history of operation; otherwise the diagnosis might have been difficult.

Acute obstruction is excluded by the duration of 9 years illness.

Against biliary colic and intestinal colic are the radiation of pain to and the retraction of the testicle on the affected side - also the site of the pain in the left flank; the presence of blood cells in the urine and the history of the passage of calculi; against biliary colic also is the absence of history of jaundice and clay coloured stones. Against intestinal colic is the absence of dilatation of the intestines.

Moveable Kidney, cannot be excluded and may be present as a complication.

With regard to stone in the bladder this would particularly cause pain at the neck of the bladder and this pain would be bilateral. Also note that the urine is acid, whereas in bladder stone it is usually alkaline.

To elaborate the diagnosis the probability is that the stone or stones have for the most part remained in the pelvis of the kidney and not passed to the bladder.

Had they reached the bladder the probability is that some would have passed per urethram.

Also there would have been more tendency to irritation of the bladder and frequency of micturition than there is. The continuous character/
character of the pain suggests that the calculi have remained in the pelvis of the kidney, as had they passed to the bladder there would have been marked relief felt at intervals after passage. Also the passage of the stone through the ureter would have caused more bleeding than has taken place.

As to the nature of the stone it is difficult to speak, and the microscopical examination of the urine showed only a granular deposit not easy to recognise.

The severity of the symptoms is against a uric acid calculus which does not often cause severe trouble.

The absence of much haemorrhage is against oxalates which, being rough, cause lacerations; though radiation of the pain is in favour of a calculus of oxalates.

Therefore the calculus is probably phosphatic, though the slightly acid reaction is against this.

Treatment.

He has had palliative treatment off and on for years, but while this relieves the pain temporarily it has not improved the condition. Such treatment has consisted of hot fomentations, belladonna and hypodermics of morphia.

Surgical interference is therefore now called for but at the time of closing this case no operation had been performed and therefore there is no account appended of the operation. Preliminary to a more serious operation a sound was passed into the bladder by Mr. Dowden, who found no large calculus in the bladder but felt a grating sensation for which it was not easy to account unless this indicated the presence of small calculi in the bladder.

The further treatment of this condition will consist most probably of the exposure of the kidney and of the opening of the organ along its convex border so as to expose the pelvis into which a probe will be passed. If any calculi are located these will have to be removed.

After treatment.

The patient will be encouraged to lead a quiet life and avoid strain. He must get into the habit of drinking abundant quantities of mineral waters or boiled water. According to the nature of the stone the urine will have to be kept acid or alkaline. These precautions will tend to prevent formation of fresh calculi.

Tonics and sedative drugs for a time will be advisable.

Prognosis.

Good so far as the condition of stone is concerned if the above points are attended to; though no guarantee can be given that fresh calculi will not form. The absence of any pyelitis is a favourable sign for a good recovery. As to the mental condition however, the outlook is not so good; the patient is probably mentally unsound and there are several points which indicate that the pain is to some extent at least symptomatic of his general neurotic condition. The idea of operation may improve this condition but a study of the individual leads one to think that the colic may probably recur even though no stone be present either in the kidney or bladder.
Case No. V.  Rodent ulcer of the index finger.
age 51.  Daniel Ross 1 Ardunlaw Terrace.

admitted 16.6.08.  Recommended by Dr. McDonald.

Complaint.
troublesome raw area on left forefinger.

Previous Illnesses.
Diphtheria - measles - scarlet fever - typhoid fever.  No accidents - fingers frequently get knocked when at work.

Denies Venereal disease

Social conditions.
Father and mother dead - both died in old age, both were healthy. He had ten brothers and sisters; two are dead, others are alive and healthy. He is unmarried. He has had good food - drinks little alcohol.

Present Illness.
Patient noticed six years ago or more. "Something like a wart" on his left index finger. This was raised above the surface and rough. It was not painful. It grew very gradually bigger for years without causing any inconvenience. Eighteen months ago he "knocked the head off it" with his hammer. It bled a great deal at the time. He applied some sticking plaster. For about a year after this it remained at the same size i.e. about the size of a threepenny piece. It showed no signs of healing but remained smooth red flesh. A year ago he had a poisoned hand; which he is not able very clearly to describe. The infection was very severe - he thinks the hand was infected through the raw area. He was in the house for fifteen weeks. His hand was opened in two or three places and thick black fluid escaped. The poisoned hand was extremely painful until it was opened. It was dressed for fifteen weeks. This poisoning did not hasten the extension of the raw area or affect it in any way.

Six months ago it was quite small - since then it has grown much faster, since then also the edges have risen above the level of the surface. In the beginning of May it was the size of half a walnut and had risen high up above the level at the edges. At this time the growth was removed by the house surgeon. Since then it has again grown rapidly and has attained the size mentioned later. It has never shown any sign of healing and so patient came in on 16th June to have his useless finger removed.

He has had various forms of treatment for the ulcer. These were
1. Applications of iodoform and salt butter.
2. Some linament was applied.
3. The part was burned with "blue-stone" and then dressed with carbolic.

None of these did any good at all.

On admission.
Patient is a healthy cheerful man, well developed. He is quite contented looking. His trouble is an ulcer on his left index finger which inconveniences him because of the raw surface. Otherwise he is quite well.
Temperature 96.8  
Pulse.  88.

Locally/
Locally subjective.

Patient complains of an open "sore" on his left index finger. This is apt to bleed when he is working. It is not painful unless of course when struck. It is inconvenient because of the raw surface which won't heal and which is slowly getting bigger. Also he is afraid of getting it poisoned. Also his finger sticks straight out in front as a rule. Otherwise he has no symptoms. No pain or throbbing in finger or up the arm.

"In fact it is no inconvenience at all if it wouldn't grow bigger."

Objective.
The finger is apparently healthy from the joint between the first and second phalanx to the tip. An ulcer is to be seen, confined to that part of the finger which coincides with the first phalanx. This part of the finger is discoloured with a livid purple colouration. This part is somewhat swollen. An ulcer is to be seen - lying chiefly to the outer side of the finger but extending also round to the back, and inwards across the anterior aspect of the finger. The finger is kept stiff and extended, because to bend it is rather uneasy for the patient - naturally this causes much inconvenience.

The Ulcer is about 1½ inches long by ½" broad. It is irregular in shape.

It is shallow, the floor is smooth and clean and shiny for the most part. There are some little pockets of pus at parts. The edges are at parts, irregular and ill-defined, they are for the most part raised, and indurated; "Roller Margin." There is no granulation tissue at any part. There are no signs of healing. There is little if any smell.

There is no pain - even on pressure there is little or no pain. The surrounding parts are, if oedematous, fairly healthy. They are not painful on pressure.

The ulcer appears to be progressing and at parts where the epithelium has not quite given way a yellowish fluid exudes through perforations of this epithelium. Over this part the epidermis is stretched and shining. There is no enlargement of the glands of the arm or axilla.

Treatment.

Dr. Fraser removed the diseased finger two days after admission, under chloroform. A racquet incision was made at the base of the finger and the finger was amputated at the metacarpophalangeal joint.

(The wound healed by first intention and patient made a good recovery.)

Subsequently he had twisted up a had to be treated with some paint.

Diagnosis.
The condition is evidently one of chronic ulceration of the index finger. What is the nature of this? It may be

1. Traumatic.
2. Tuberculous.
3. Syphilitic.
4. Impetigo.
5. Epitheliomatous.
6. Rodent.

and a few other conditions which are unimportant.

With regard to traumatic ulcer, although traumatic ulcers occur most commonly about the heel or shin-bone - yet patient's occupation (mason) rendered him liable to traumatism of the fingers. The history however, was of a condition starting as a papule and not with an injury. Also a traumatic ulcer would have yielded to treatment - the condition has been far too chronic and slowly progressive.

Tuberculous.
raised, healing; and a rodent ulcer, supported between microscopically masses Fpitheliomatous surrounding lupus there almost parts they usually occur in younger persons (patient is 51). Lastly a glance at the slide, which is commented on later, excludes tubercle.

Syphilitic.

There is no other evidence of syphilis, and as syphilitic ulcers are usually seen in tertiary syphilis, other evidences would certainly have been present had this been the cause. Further venereal disease was denied. The ulcer is not at all like a syphilitic ulcer, these are typically "punched out", and the base of the ulcers have greyish "wash-leather" sloughs. Syphilitic ulcers are deep, they are usually circular. There is commonly an offensive discharge. They are usually multiple and scars are seen near because a syphilitic ulcer is serpiginous (that is it tends to heal at one part and spread at another.) The condition is too chronic for syphilis.

Syphilitic ulcers too are rare on the fingers - they are commonly seen on the legs and the region of the genital organs.

They usually occur too in earlier adult life.

Lupus is an important condition to diagnose, because it is very similar clinically to the present condition, and next to the face, it is most commonly seen on the fingers. But lupus usually ulcerates in the centre of a patch of yellow or pinkish "jelly-like" nodules - tuberculous in nature. These nodules are commonly covered with yellow scabs. (Here there was only one hard nodule). Also in lupus as in syphilis the ulcerating part tends to heal at one part and extend at another. The condition has during the last six weeks grown much too quickly for lupus. Also lupus does not show the typical rolled margin here seen. In lupus there usually scars of healed parts showing much cicatricial contraction; there are none such here. Lupus on the fingers is usually "Lupus mutilans" causing loss of parts of the fingers. In six years some deformity of the kind would almost certainly have taken place. Lupus is frequently symetrical - there is frequently a burning sensation in the ulcer, and lastly lupus usually begins in youth.

Epitheliomatous ulcer. The history is very suggestive of this, and microscopically masses of epithelial cells are seen infiltrating the surrounding tissue as is seen in epithelioma.

But epitheliomatous ulcers have usually a most offensive smell, and they usually show firm pink granulations at parts, also the edges are commonly everted. Epitheliomas are usually seen at a muco-cutaneous junction e.g. lip-anus. But especially note that in epitheliomatous ulcers the glands would certainly be enlarged long before six years. Also note that microscopically "cell nests" are seen. Here there are none; this point is so important in the diagnosis between epithelioma and rodent ulcer that small sketches are appended to illustrate the point. Lastly in epithelioma the growth would probably have been more exuberant; of the "cauliflower" type.

Rodent ulcer, is the diagnosis one has arrived at. It is of course a rare condition on the finger. Nevertheless the diagnosis is supported by the fact that the ulcer is shallow that it has been extremely gradual in its growth; that it has never shown any sign of healing; and that the patient is an elderly man. Further the "rolled" raised.
raised, indurated margin is typical; there is little discharge and the floor is smooth red flesh; it is progressing. The history of starting as a small papule is confirmatory, as are the absence of pain and tendency to haemorrhage.

Microscopically the slide shows a malignant epithelial tumour arising from the skin and spreading in all directions, but without cell nests. Lastly the fact that the condition is malignant but has existed for six years without affecting the glands is practically diagnostic of rodent ulcer.

Prognosis is fairly good, the condition has progressed but little in six years and the removal of the finger should probably prevent further trouble. It is of course infinitely more satisfactory that the prognosis would have been in epithelioma of the same standing. There is a risk however, of the condition recurring in the scar.
Case VI.

Kai Shint - Hoi Gtiney

age 24.

unmarried, Housewife.

Complaint

Swelling on right thigh.

Admitted 21.6.08.

Social conditions. Good, patient has plenty of good food and fresh air. Moderate tea drinker, does not take alcohol.

Patient lives in a district where there are many dogs and sheep.

History.

Father and mother are alive and well, 5 brothers and one sister are all alive and healthy. No such trouble as patient has affected any member of the house. No history in the family of tuberculosis.

Previous Illnesses.

Measles, whooping-cough, pneumonia of right lung. No accidents.

Present Illness.

Patient thinks the condition began five months ago with pain in her right thigh. This pain shifted from here to various parts of her body. This pain was nearly constantly present in some part of her body. It was stinging in character and was worse when she moved. Patient says the pain continued for about six weeks. She applied two blisters to the region where the swelling is now, when the pain went away, and has not returned. This pain was worse when the swelling began to appear about 4 months ago. This swelling has grown fairly quickly. It is now says the size of an orange.

This swelling has from the first interfered with patients movements. She can walk but the part that is swollen "feels stiff and catches" her when she does. The swelling enlarged quickly for the first month or so, since then it has remained practically stationary.

It has never been painful. At times there has been an uneasy feeling in it.

Patient was not injured in any way before the swelling started. Patient's general health has not been adversely affected by the growth of the condition. Patient can give no cause for the swelling.

Patient has had no treatment for the condition.

On admission.

Patient is a young healthy-looking woman. She is well developed. Beyond the swelling there are no morbid appearances to note. She does not affect any particular position in bed, she can lie "any way with it". Patient is somewhat dull and seems somewhat reserved.

Temperature 99°

Pulse 92

Locally

Subjective.

Patient complains of a swelling on upper and inner aspect of the/
the upper third of the thigh. It is a large swelling. It is quite painless even when knocked. There is at times an uneasy feeling in it a "hot smarting" sort of feeling. The swelling feels firm, it has always been so. It causes her much inconvenience when she walks and this is the chief reason for her coming in for treatment. Patient does not feel her hip joint stiff at all. Patient feels otherwise perfectly well.

**Objective.**

Patient has a very large swelling on her thigh it is confined to the upper two-thirds of the thigh. It is most prominent on the anterior aspect but is also marked both on the internal and external aspects of the limb.

Its size is nearly that of a small melon and it is somewhat of that shape.

There is no wasting of the rest of the limb. There is no apparent redness. On palpation the swelling is found to be very slightly, if at all warmer than the surrounding parts. Pressure of the swelling causes no pain. The swelling is elastic, it pits on pressure. It appears to be filled with fluid under considerable tension. This tension renders "fluctuation" somewhat difficult to demonstrate, but it is undoubtedly present.

The swelling is uniform all over and fluctuation is equal all over (therefore one assumes that the contents of the swelling are all fluid). There are no nodules to be felt at any part.

It is not easy to move the skin over the swelling because the skin is enormously stretched by the swelling, but it appears to be moveable and there is no "tacking down" of the skin to the swelling. The swelling is pretty freely moveable in a transverse axis; not moveable at all longitudinally. Contraction of the thigh muscles renders swelling much more tense and limits its mobility considerably. Movement of the hip causes no pain or grating sensation; the swelling does not appear to have any connection with the joint.

**General Points.**

Patient's temperature is mostly subnormal but rises one degree or so every evening.

Patient has no cough or any spit. Patient has no other swellings nor any enlarged glands. She has had no lung troubles lately.
Treatment.

Mr. Dowden operated on 26.6.08 under chloroform. An incision 5" in length was made from the anterior superior spine along the outer aspect of the thigh. The tensor fasciae femoris and the ilio-tibial band were split and an incision was made through the vastus externus which was much thinned out. Much thick creamy pus came through the opening. On examination a large cyst was found to extend on the inner aspect of the thigh under the vessels and to spread up behind the vessels to Poupart's ligament. About the middle of the thigh the cavity completely encircled the bone. The source of infection could not at first be localised but finally a probe was passed upwards revealed an area of necrosis on the outer aspect of the ilium. The femur seemed quite healthy. The necrosed area was cleaned out with a sharp spoon and the abscess cavity thoroughly evacuated. The surface was rubbed with iodoform. No packing was put in. The thigh was bandaged with firm pressure. The wound healed by first intention. There was a slight rise of temperature on the evening of operation - probably due to the iodoform. The pus was examined and was found to be free from organisms.

Diagnosis.

Patient suffers from a chronic swelling on her right thigh.

The possible diagnoses before the operation were:

1. Syphilitic gumma.
2. Hydatid or other cyst.
4. Lipoma.
5. Tuberculous abscess.

With regard to a syphilitic gumma, (breaking down), the possibility of this has to be admitted, for such gummata are chronic in their nature and give a certain amount of fluctuation. There was however, no history of venereal disease. The gumma is seen in tertiary syphilis only and had this been a gumma there would have been other and marked evidence of syphilis. Subcutaneous gummata are usually small and multiple. The present swelling is large and single. On the other hand gummata of bone are usually characterised by very slow growth and by pains at night. These points are absent in this case.

There is no evidence of constitutional disturbance such as syphilis would cause. In breaking-down gummata as a rule only part of the swelling exhibits fluctuation - here fluctuation is felt all over.

The condition might have been due to a cyst, and of cysts hydatid cyst is the most likely when one remembers that the patient comes from Orkney where sheep and dogs are found to be frequently the intermediate hosts in the life-history of the parasite (taeniaechnicoecus). Hydatid cysts often reach a great size. The high tension in the swelling was quite consistent with hydatid cysts, as were the slow growth and absence of constitutional symptoms. Hydatids however are rarely seen on the limbs and especially they are "rare in the neighbourhood of joints which seem to be immune" (Treves). The swelling here was close to the hip joint. The condition here too has developed too rapidly. There is a tendency towards shrinkage of the cysts after a time due to death and disintegration of the contents. There is no evidence of such shrinkage here. One did not elicit the "hydatid thrill."

Lastly on opening the swelling hydatid cyst was excluded by the absence of the typical contents (brood capsules - sclerices &c.)

Softening malignant growth was unlikely because there were no general symptoms, such as cachexia. Also in such softening tumours fluctuation is not uniform as it is here, and the swelling is usually nodular in parts and more fixed than in the present instance.
instance. This possibility too was excluded by the result of the operation.

Lipoma was quite a possibility, but there was absence of the tacking down of the skin, the edge of the swelling was too distinct and no lobulation could be felt. The shape and situation too were unusual for a lipoma. Lipomas too are usually seen later in life.

Tuberculous abscess.
(syn. chronic abscess - cold abscess) is therefore the diagnosis we arrive at. This diagnosis is largely arrived at by exclusion. It is supported by the history of a chronic fluctuating almost painless swelling, slowly progressing without causing much general disturbance; also by the absence of inflammatory reaction; by the rise of the temperature at evening, and by the considerable degree of fixation of the swelling present.

This diagnosis was confirmed by the appearance of the pus seen at the operation, by the necrosis of the ilium which proved to be the source of the pus and by the fact that the pus was found to be sterile. "When no organisms are found in the pus it is usually safe to assume that the condition is tuberculous" (Thomson and Miles).

Prognosis is fairly satisfactory as the condition has not been very longstanding, and the patient leads a healthy out-door life. There is always the risk however in so big an abscess that some foci of infection have been left behind - especially in the necrosed area of bone which was not easily accessible. The muscles of her thigh were so disorganised that patient will not recover the full use of the limb. It was very satisfactory however that the hip-joint appeared to be quite free from infection.