The Pattison Prize in Clinical Surgery.
1911.

Report + Commentary
on cases treated in
the University Clinical Surgery Wards
during
the Academic Year, 1910-11.
The following cases were treated in Wards 1, 11 & 18 of the Royal Infirmary, under the care of Professor Caird. The permission of Dr. Forrer, the House-Surgeon, was obtained to make use of the cases.
Two cases of Simple Neoplasm of the Urinary Bladder - one in the Male & one in the Female.

Address - 11 Albion Place, Leith.
Recommended by Dr. Orr.
Admitted Nov. 16th, 1911 to Ward 7.
Complaint - Passage of blood in the water.
Duration 4 months.

Present Illness

In July 1910 he noticed that after a bath he passed blood in the water at the very end of the act. This looked like pure blood & there were no clots. The next time he passed water, it was darker in colour than normal. He experienced no pain.

For 2 weeks the urine was normal but at the end of this period he again passed on 4 or 5 occasions bright red blood, always at the end of the act.

3 weeks later he again passed red blood on 4 or 5 occasions.

He was free for some time after this but on Sunday, Nov. 6th, the second occasion on which that day he had passed water, he noticed that at the end of the act the water was again red. At no time was there any pain or increased frequency of micturition, & no blood-clots were observed in the urine. Dr. Orr attended him after the second attack & administered turpentine. He has lost a stone in weight since July.

Previous Health

The patient has always enjoyed good health. He has never had bleedings from
any other part of the body.

Social History
Has always plenty of good food & is moderate as regards alcohol.

Family History
Father - 65 - alive & well
Mother - died at 56 from "fibroids of uterus"
No Brothers
Sisters - 2 alive & well
Wife - alive & well
One child -

Condition on Examination
The patient is a well-developed, strong-looking man & is healthy in every other respect. Heart sounds are closed. Lungs are healthy-no oedema. Liver, kidneys, spleen, & stomach are all normal & there is no palpable tumour in any part of the abdomen. Weight 13 st 3 lbs.

Urine: Specific gravity 1010
Reaction neutral
Urea 1155 per 3

No albumen, sugar, pus, or blood.

Cystoscopic examination showed a neoplasma at the trigone in the form of a bunch of waving processes with the urothel in their midst.

Treatment:
Operation Nov 15th 1910, Dr Caird
Spinal Anaesthesia - 5% Yoplaeocain
At 11:52 a.m. spinal puncture was done &
a good amount of cerebrospinal fluid got 30 sec. later the 0.5 per cent. cocaine was injected. At 11:53 after being withdrawn and re-injected 8 times to 5cc. the fluid was at last injected and left. The table was then tilted. At 12:11 a.m. as anaesthesia had been procured as high as 1 inch above the umbilicus, the table was lowered. The patient complained of numbness of both lower extremities. The cystoscope was used again, & the bladder was washed out & left filled. At 12.19 a.m. a transverse incision was made above the pubes. A good deal of fat was present in the space of Retzius. The anterior aspect of the bladder was seen & a double sharp hook used to pull it up. A plunge was then made with the knife & the finger passed in. A neoplasm was found at the trigone & grasped with curved bladder forceps. The base being narrow & friable, the tumour came away unexpectedly from the bladder wall. There was very little haemorrhage. The mucosa was stitched together with cat-gut & the peritoneum over the bladder with silk. The rectus which had been divided transversely was brought together with cat-gut sutures & the wound closed but for a rubber drain in the superficial tissues.

After the operation the patient could not urinate until a catheter was passed but passed water of his own accord, this contained some blood. At about 4 p.m. he again passed urine, being unable to
retain it. About 7 a.m., a catheter was passed and about 13 of blood-stained urine drawn off with a few clots. He was comfortable at night, the temperature being 98.6°F, respirations 16, & pulse 74.

19/11/10. The patient is passing urine himself. It contains blood in abundance. He is having Urotropin gr. x & t. d.

24/11/10. Tube removed, the wound being quite dry.

25/11/10. Urine - 583. S. g. 1015. Acid. Muscos, albumen, & blood present. On microscopical examination a large number of red blood corpuscles found.

1/12/10. Got up today. Feels well. Urine clear.


**Pathological Report**

The tumour presents the structure of a simple papillomatous growth.

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**Helen Wilson, Aet. 55. Single.**

Address - 220 High Street, Perth.

Recommended by Dr. Trotter.

Admitted on Oct. 25th, 1910 to Ward 8.

Complaint - Passage of blood in water for over a year.

**Present Illness.**

About a year ago, perhaps a little more, she noticed that there was blood in the water - red in colour with small clots in it. This was present at the beginning of the
act and continued through the act, not being limited to the beginning or the end. She also had slight pain in the region of the privates and a sense of something else to come. She thought the water was brighter red in wet weather. She felt very run down at times, but at other times she felt better. The water has never been free from blood for the last year, though there was more on some days than on others. About six months ago as the blood became more in amount the pain went away. She has been treated with all sorts of drugs but has derived no benefit from any of them. She is a little thinner than she was but not much. She has taken ordinary diet. She has passed nothing of the nature of stones as far as she has observed. She has had no pain in the loins or frequency of micturition.

**Previous Health**

She has never been very strong but has had no illness.

**Social History**


**Family History**

Father - died at 71. Heart weak - accident to chest.

Mother - died at 71. "Shocks."

Brothers - 2 alive & well. Several dead.

Sisters - none.

**Condition on Examination**

On examination patient is quite a well-developed
elderly lady. Weight is 8 st. 12 lbs. No anaemia. Heart sounds are closed. Lungs normal.

Genito-urinary system.

Symptoms noted above. Menstruation was always very regular; stopped suddenly 7 or 8 years ago after it had been more frequent than usual for a year.

Abdomen is flacid. Bladder not distended. Right kidney is palpable - not very much so.

No pain or tenderness in any part of abdomen, not even above the pubes.

Urine.

5. 5. 1922

Wt. 111/2 yrs per 3

Blood + albumen present

Numerous red blood corpuscles. No casts.

Cystoscopic examination

The bladder was washed out + cocaineised, the fluid soon becoming clear after blood + a few small clots were washed out. A small neoplasm was seen on the anterior wall high up. This was sessile + irregular + was blood-stained. It was shaped like the end of the thumb.

Digestive System.

Tongue rather fired. Teeth bad.

Abdomen flacid. Note resonant all over.

No patterns. Stomach not dilated. Liver + spleen not enlarged.

Treatment + Progress.

having been made, the bladder was opened by a transverse supra-pubic incision & the knife plunged in, the bladder being held firmly by a sharp hook. The finger was introduced & the limits of the tumour defined. It was more diffuse than was imagined from the cystoscopic examination. The bladder wall was then retracted with the tumour which was removed by careful dissection & many isolated little pieces of new growth were left. There was a fair amount of haemorrhage. The posterior sutures of cat-gut were then introduced with great difficulty. No peritoneum was opened as far as could be seen. Then a drainage tube was introduced & a few sutures in front were put in. The skin wound received a few silk-worms gut sutures & was in its turn drained & the patient put back in bed, the head of the bed being raised on blocks. A Bunsen apparatus was fixed up & blood-stained urine came away.

At night there was a good deal of pain in the abdomen & great thirst, but the temperature, pulse, & respiration were normal.

30/10/10. Given Colonial gribij followed by salts next morning; bowels well cleared out. There is a slight supra-pubic escape alongside the Bunsen apparatus tube & the tube draining the wound. Pulse about 120. Complaints of slight pain.

6/11/10. Tubes acting well; about 40-50 oz of urine daily. Blood was present for the first 2 or 3 days but soon disappeared; the urine being quite normal now. The tubes
draining the wound & the bladder were removed & the urine allowed to flow by the supra-
pubic wound.

9/11/10. Stitches out. Urine coming by supra-
 pubic wound in good amount. Dressed frequently.

13/11/10. Pegzar's catheter passed. Urine flowed
well. Also comes in small amount from the
supra-pubic opening which looks well.

19/11/10. Pegzar catheter out. Passed urine
himself.

today. Only a little black streak seen, representing
the fratula passing up, & a little tail with
some calcaneous matter at the end of it. No
trace of the tumour.


Comments.

These cases illustrate the 2 chief varieties
of simple neoplasm met with in the
bladder - the one a villous papilloma,
situated in the region of the trigone,
& quite innocent; the other sessile &
warty, situated away from the trigone,
& often possessing a tendency towards
malignancy. In both cases, the chief
symptom was haematuria. In the male
patient it was very typical of this
condition. It came on suddenly at
intervals of a few weeks without
any apparent cause & after lasting
for a day or 2, gradually disappeared,
the urine in the intervals being
quite free. It always occurred
at the end of the act & was
unaccompanied by any other symptoms. Apart from this haematuria, the patient was in perfect health and never had haemorrhage from any other part of the body, so that abnormal conditions of the blood were excluded. In the case of the female patient, the history was not so typical, the blood being constantly present in the urine. In addition, micturition was accompanied by some pain and discomfort, though this was never severe enough to suggest renal colic.

In the male, the diagnosis apart from cystoscopic examination was comparatively easy. The character of the haematuria and the absence of other symptoms were most suggestive of a villous papilloma, the haemorrhage being due to compression of the tumour by the contracting bladder wall. The only other condition which was at all likely was malignant disease of the kidney, in some cases of which haematuria is the earliest symptom. In the same way, tuberculosis of the kidney was a possibility but was unlikely from the general condition of the patient and the absence of other symptoms. Renal calculus was unlikely from the considerable amount of blood in the urine and the absence of colic and of tenderness on examination. In the female, the diagnosis was more difficult and the
same possibilities had to be considered, the fact that the right kidney was palpable being in favour of a renal condition. The more advanced age of the patient and the continuous character of the haematuria were rather in favour of a malignant than a simple tumour of the bladder. The cystoscope cleared up the diagnosis in both cases and, by showing the site and relations of the neoplasms, was of considerable value in determining the nature of the operative procedure.

Spinal anaesthesia was employed in the operation on the male patient and was quite satisfactory, though the slight degree of incontinence of urine which occurred afterwards was probably due to the anaesthetic. The tumour coming away in the grip of the bladder forceps, it was considered unnecessary to remove the surrounding mucosa, there being no doubt as to the innocent nature of the growth. No untoward result followed the closure of the bladder and the patient made a very satisfactory recovery. In the female patient, the possibility of a malignant tendency made a more radical procedure necessary. The knowledge of the situation of the tumour obtained by cystoscopic examination was here of great value. As is usually the case,
The supra-pubic wound healed up satisfactorily after drainage of the bladder.
Case of Malignant Neoplasm of the Bladder

Mrs Turbyne: Age 57
Housewife
Address: Guardbridge near St. Andrews
Referred by Dr. Huntington
Admitted to Ward 8 on 9th Sept., 1910.

Complaint: Pain + frequency in making water.

History of Present Illness

For the past 12-14 years the patient has been troubled with blood in the urine. From the first this was accompanied by pain in the left side + in the small of the back + sometimes between the shoulders, but the pain was never very severe until the last 6 months. The patient was in Glasgow when she first noticed the blood + she was admitted to Glasgow Royal Infirmary but the blood cleared up + it was never seen while she was in hospital so that no special treatment was necessary. She was 4 weeks in hospital + did not suffer much pain at this time except in the ankles + limbs. She was troubled with cold hands + feet + severe morning headaches. No fragments of stone were observed in the urine + the patient had no pain of the nature of renal colic.

The patient then went home to St. Andrews + was quite well for 2 months at the end of which time the bleeding returned. There was some pain + weakness in the left side, but the pain does not seem to have been very severe. She saw her doctor at once who gave her medicine which stopped the bleeding after 1 or 2 doses. As soon as she stopped the medicine the bleeding returned. She was put
on lithia water.

About a year later the patient was in England in a situation where the work was very heavy so that she had to be on her feet nearly the whole day. She often felt very tired and weak and had a dull pain running from the left side to the privates. At this time she had a severe faenorrhage but the pain was never very great. She was put to bed for a week or two and the bleeding gradually diminished. She was examined under an anaesthetic but did not know if the bladder was examined; the urethra was painful for a few days after.

For several years after that she was much better, the blood being present in the urine only occasionally. She sometimes felt pain in the left side.

About 5 or 6 years ago she did a heavy day's work in the garden and after that the bleeding returned and has been almost constantly present ever since. For an occasional week or month the urine would be only smokey but, as a rule, it was quite red and sometimes seemed to be pure blood. The pain in the side was still present; she occasionally applied plasters and blisters to relieve it but it was not very severe. This condition of affairs went on until 2½ years ago, when the pain became very much worse. It seemed like a knife shooting down from the left lumbar region to the privates. She had to stay in bed for 8 weeks during which time the pain was constant and interfered greatly with her sleep. There were no paroxysmal attacks of pain like renal colic. There was marked frequency of micturition, none being
passed almost every few minutes at night. There was a severe burning pain before, during, and after the act. The bladder was washed out and bits of stone were found in the urine. After her stay in bed she got considerably better but there was always some blood in the urine and bits of stone were passed occasionally. Her general health remained very poor.

In Jan. 1910 she had a severe haemorrhage lasting 14 weeks. This was ushered in by an excruciating twisting pain in the left leg, apparently starting at the ankle and shooting up to the thigh. In Feb. 1910 she went into the Cottage Hospital at St. Andrews. She was X-rayed there and nothing found in the kidney. There was very little pain in the side at that time. Nocturnal micturition was occasionally present but was not excessive with micturition.

In Aug. 1910 the pain and frequency of micturition returned, the pain being very severe. There was also some heavy pain in the left side.

Since the middle of last year she has been passing bits of stone very frequently.

**History of Previous Health.**

The patient has always suffered very much from headaches. Had growing pains. No rheumatic fever. About 20 or 30 years ago she used to have very severe attacks of acute colicky pain across the whole of the abdomen.

**Family History**

Husband alive and well. No children.

Father died at 80 - senile.

Mother died at 66 - dropsy.
2 Brothers + 1 Sister alive & well.
1 Brother died of cardiac trouble
1 Brother drowned.

General Condition. Markedly anaemic. Face pale.

Urinary System

Symptoms noted above
On palpation of the abdomen there is tenderness in the left iliac region 2" downwards & outwards from the umbilicus. There is no palpable tumour here.

Both kidneys are palpable & are considerably enlarged & very tender so that surface is difficult to palpate.


Blood + some pus. Wt. 8 ½ - 9 yrs per 3 - 6 to 7 at times. Microscopically: Triple + amorphous phosphatites. Carbonatites. Very little pus. No casts.
No blood seen.

Digestive System


Treatment & Progress.

Admitted 19th Sept., 1910


Oct. 22nd, 23rd. Urine is a deep red colour.

Great deposit of blood. S. y. 1020. Alkaline.


Chloroform + ether anaesthesia. The bladder having been washed out with boracic solution + left filled, a transverse supra pubic incision
was made. The bladder was seen lying deeply and moderately distended. It was then opened and the posterior wall which looked normal was seen. The finger was then introduced and the tumor found to be in the trigone region. It was removed with the finger and Kocher's clamp in several pieces. No hemorrhage occurred. The bladder was washed out with hot saline, two Keith's tubes were left in to drain.

Dressed at 5 p.m. Not much has come away. Blood-stained fluid seen swelling up in both tubes. Temperature 100.2° F. Pulse 108. Respiration 20. Had a good deal of pain in the lower abdomen.

Pathological Report. The structure is that of a malignant papilloma. In some parts it has the structure of a simple papilloma but in others there is definite invasion of the stroma by epithelial cells.

6/10/10. Burns's bottle fixed up and taking quite a good deal of urine away—not all, however. One glass tube removed. Calomel gr. iii. administered.

7/10/10. Given Urotropin gr. x t. i. d. Feels easier and is drier now. Given enemata. Bowels well opened.


25/10/10. Passed 23 of urine per month as.

29/10/10. Urine looks very clear now. She feels
better. Urine E.S.G. 1017. Alkaline. 5 grn urea for 3.
Trace of albumen. No red blood corpuscles but a few plus cells on microscopic examination.

31/10/10. During last night & again this morning passed urine from urethra - not so much by the Bunsen apparatus.

Operation. Chloroform & ether anaesthesia. The cystoscope was passed after the bladder was washed out & a papillomatous outgrowth seen. The old incision was then opened up & pure carbolic applied to the edges. The bladder was seen to be displaced to the left. A small incision being made at right angles to the original one it was seen that the peritoneal cavity had been opened into, a piece of omentum protruding. A Keith’s tube was then introduced into the pouch of Douglas & the rest of the wound closed.

At 12.30 p.m. Temperature 99.4° F. Pulse 96. Respiration 20. Cattiter being passed frequently.

2/11/10. Dressed. Bunsen apparatus fixed up but very little came, the catheter being passed every 2 hours & some escaping by the supra-pubic wound. Cultures from the pouch of Douglas showed streptococci in pure culture. Urine is now quite clear. Trace of albumen. No blood microscopically. One or two pus cells & phosphates. By the Keith’s tubes 3/ij of yellowish rather turbid serum withdrawn daily.


14/10/10. The remaining Keith's tube removed. Not much from the pouch of Douglas. Intra-abdominal wound closing quickly. Urine all coming by catheter, Blascard apparatus having been removed on the 9th.

16/10/10. Peggar catheter removed this afternoon. Passed urine on her own first attempt soon after. Urine - Stil a trace of albumen. Urine go 4 p.m. 2 0 0.

23/10/10. Urine 4 0 2 0. Acid. Trace of albumen. Urine 6 p.m. per 3. All the urine coming by the right way. To be dressed at home.

The patient returned in the month of May. A tumour about the size of a golf-ball was removed from the bladder. The peritoneum was avoided by removing part of the pubes.

Comments.

In this case, the chief symptom was also haematuria, but it had lasted much longer than in the previous cases. At first, it had the typical charactis associated with a villous papilloma of the bladder, appearing only at intervals & the urine being free between the attacks. This patient had more pain than is usually the case. After going on in this fashion for about 3 years, the haemorrhage increased in amount & was almost constantly present. This went on for about 4 years more, at the end of which time the
pain became very much more severe, marked frequency of micturition appeared, and particles of stone were passed in the urine. These symptoms were somewhat alleviated by prolonged rest in bed, but the haematuria, pain, passage of stone remained, and the general health of the patient suffered considerably. In addition to her former pain in the left side she began to suffer from pain during micturition. From this time onward she suffered from exacerbations of her symptoms until her admission in 1910.

On examination, the most striking feature was the marked anaemia of the patient, which was not surprising in view of the long history of haemorrhage. The kidneys were both enlarged and tender, and the urine was alkaline and contained phosphates and a little pus. Her symptoms were therefore most likely due to a simple papilloma at first; the increase in the pain, the frequency of micturition, and the passage of pieces of stone are to be attributed to septic infection of the bladder with alkaline decomposition of the urine and deposit of phosphates. There was practically no other condition but a tumour of the bladder which would account for haematuria.
lasting over so many years. The enlargement of the kidneys is to be explained by the backward pressure resulting from the cystitis. There was as yet no evidence of septic infection of the kidneys.

The most important indication in treatment in view of the general condition of the patient was to arrest the haemorrhage, and this was readily attained by suprapubic drainage of the bladder. When it became known that examination of the portions of tumour removed showed that it was undergoing malignant transformation as a result of the prolonged irritation from the septic condition of the bladder. The malignant nature of the tumour had possibly something to do with the severity of the symptoms, and cystitis is more common in cases of malignant tumours than in simple. When it became known that the tumour was malignant, a further operation was necessary to attempt the removal of the base of the tumour and its surroundings. At this second operation, the finger was passed into the peritoneal cavity before the bladder was opened up. It was then considered inadvisable to proceed further with the operation, and the patient was sent back to bed with
a tube in the pouch of Douglas. It was very remarkable that, though a culture taken from the pouch of Douglas showed the presence of streptococci in pure culture, the patient had no general symptoms whatever. This was probably due to an immunity acquired from the prolonged septic condition of the bladder as well as to the surgical procedure adopted.
Case of Ureteral Calculus

George McHenry Act 34
Married
Paper Finisher
Address - 30 Mansfield Avenue, Musselburgh
Ref. by Dr. Young
Admitted to Ward 7 on 12th Jan. 1911

Complaint - Pain over right kidney shooting to testicles & across back & stomach, lasting for 12-14 hrs at a time.

History of Present Disease.

About Sept. 1910 he had pain low down in the right loin posteriorly. Onset was gradual & the pain increased till it became very severe & then began to shoot to the testicles to the small of the back posteriorly & to the umbilicus anteriorly. His doctor applied hot clothes & in 4 hrs the pain gradually disappeared. He was confined to bed for about 12 hrs. He vomited several times during the attack & made water frequently but only a little at a time. The urine was muddy but became clear after the attack passed off & the frequency of micturition also disappeared. He had no appetite during the attack. There was no diarrhoea or headache.

He has had 5 or 6 similar attacks at intervals varying from 1 to 4 weeks, becoming more frequent & more severe latterly. During the last attack the pain was so severe that morphia had to be given. His doctor gave him a bottle which he says was to counteract the acidity of the urine.
He has had no increased frequency of micturition or other urinary trouble between the attacks.

**Previous Health**

When young, he had typhoid & measles. His health has been good lately.

When 16 years old he had a "touch of inflammation" of the right lung. 2 years ago he says he had an attack of asthmatic fits & then had a similar attack 16 months later. Has had good health lately.

**Social History**

Plenty of fresh air. Windows open. Good food. Smokes about 2 ounces of tobacco per week. Moderate as regards alcohol.

**Family History**

Father dead — cause unknown
Mother " "
Brothers — 2 alive & well
Children — 3 boys & 1 girl — all alive & well.

**Condition on Examination.**

Looks a strong, healthy man & feels no pain & quite fit for work. Pulse 72. Temperature 97.5°. Respiration 21.

Weight 10st 4½ lbs.

**Urinary System.**

Skin all round lower part of abdomen is dry & scaly owing to turpentine cloths which were applied during the last attack.

Neither kidney is palpable. There are no tenderness on palpation.

Urine — S. g. 1.014. Reaction acid. No
blood, albumen, or pus present. 3 1/2 gms of urea per 3. Rectal exam. - nothing to note.
Symptoms - see above

Digestive System
Tongue moist & clean. No areas of tenderness in abdomen. Liver not enlarged. Stomach normal.

Chest is healthy. Heart sounds closed in all areas.

On Jan. 6th the patient was X-rayed and the photograph revealed a shadow down in the pelvis opposite the great sacro-sciatic foramen, suggesting a rectal calculus.

Treatment & Progress
Admitted Jan. 12th, 1911.
13/1/11. Separator was used & gave the following results:

<table>
<thead>
<tr>
<th>Right Kidney</th>
<th>Left Kidney</th>
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<tr>
<td>Amount</td>
<td>225 gm</td>
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<tr>
<td>Reaction Acid</td>
<td>Acid</td>
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<tr>
<td>S. G.</td>
<td>10.14</td>
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Chemically - No albumen, blood, pus or sugar

Microscopically - One or two bladder cells. Red blood corpuscles in small quantity but more than on left.

Urea - gr. viss per 3

Wootzophin gr. X b. i.d. was administered. 16/1/11. Again X-rayed. Shadow in same position.

An incision was made in the lower part of the right linea semilunaris & the rectus retracted in. The peritoneum was then opened & the patient put in the Trendelenberg position, the bowels being kept up with swabs. The pouch of Douglas was then explored. The bladder + rectum were seen & the ureter where it crossed the rim of the pelvis was seen to be dilated. To get more room the right rectus muscle was divided. The finger was then passed in & a firm nodule found in the ureter just where it was crossed by the vas. This could not be moved up or down. A syringe full of indigo-carmine having been injected into the left deltoid, the peritoneum over the ureter was incised & a small cut was made in the long axis of the ureter. Urine escaped but was caught in swabs packed around. Silk sutures had been inserted into the ureter & peritoneum before division & the ureter was thus held up. A probe was passed in & it did not pass down well. Slight movement of the nodule inside the lumen revealed it to be tuberculated + elongated + of a dark-brown colour. It was seen to be a calculus + removed. The ureter was now stitched up with fine cat-gut. Finally, some silk sutures were inserted after Lambert's method & the peritoneum closed. There was no appearance of the blue stain. The patient was next put
back flat & the abdomen was closed in
layers very carefully, the rectus being
repaired with strong cat-gut. No drain
was employed.

The patient was put in bed with
the head raised & saline enemata adminis-
tered every 4 hrs. At 7 p.m. the temperature
was 98.9°, pulse 104, & respirations 22. At
midnight he passed about 8 3/4 of bluish
wine.

22/1/11 Temperature 97°, Pulse 88 to 100, Respi-
ration 22. Is very well. Passed 2 0 3/4 of wine -
still of a bluish colour.

23/1/11 Drinking plenty of water. Salines
stopped. Temperature, Pulse, & respirations normal.
13 3/4 oz of urine per 3.

27/1/11. Still a good deal of blood in urine.
Deep stitches removed.

5/2/11. Remaining stitches out. Attempt
made to use the separator was a failure
owing to weak condition of the patient.
6/2/11. 40 3/4 wine. No albumen or blood.
Phosphates present. 1 3/4 oz of urine per 3. Got
up today.

9/2/11. Went home today.

Comments.

The patient complained of recurrent attacks
of severe shooting pain in the abdomen, the
situation & character of which suggested
renal colic. The well marked radiation to
the testicles accompanied by increased
frequency of micturition suggested the
renal origin of the pain. The discoloration
of the urine also pointed in this direction. In the intervals between the attacks he was quite free from any symptoms, but the attacks were becoming more frequent and more severe, morphia having been necessary during the last one.

He gave a history of 2 attacks of appendicitis, and the question arose in diagnosis whether this present condition might not be due to recurrent attacks of inflammation of the appendix, since appendicitis sometimes gives rise to symptoms simulating renal colic when it lies in contact with the ureter; or to involvement of the ureter in adhesions as the result of his previous appendicitis.

Examination of the abdomen revealed no swelling or tenderness in the region of the appendix or kidney, nor tenderness in the skin of the ureter. Rectal examination was also negative.

By means of special methods of examination the diagnosis was made practically certain. The X-rays revealed a shadow in the situation of the lower end of the ureter. This might possibly have been due to a concretion at the end of a diseased appendix or some other condition such as a calcified gland or a phlebolith. Examination with the separator showed that there was some interference with the function of the right kidney. This fact taken in conjunction with the presence of red blood corpuscles and the shadow with the X-rays made the diagnosis of ureteral calculus pretty certain.
These results + the examination of the urine excluded such conditions as tuberculous disease of or malignant disease of the kidney.

The situation was a common one for a stone to be arrested in its descent from the kidney. As a result of the obstruction to the passage of urine, dilatation of the ureter had occurred above + the diminished concentration of the urine is to be explained by the effects of the backward pressure on the renal tissue. In spite of the fixation + considerable size of the stone, the obstruction in the intervals between attacks was practically absent, the urine on the affected side being indeed greater in amount than on the other.

The fact that the calculus was situated in the ureter was sufficient indication for operation. The severity + frequency of the attacks of colic were also indications. The operation was one of considerable difficulty, the calculus being fixed so that the ureter had to be raised low down in the pelvis. The patient made a good recovery from the operation, the amount of urine passed being satisfactory + the presence of blood indicated that urine was coming from the right kidney. When discharged, the urine was normal.

The patient was otherwise a healthy man + there was nothing in the history of the nature of gout, etc., which could be regarded as favouring the formation of urinary calculi.
Case of Pyrexia simulating Appendicitis

George Maltmann, Age 38
Drover
7 Meadowbank Avenue, Edinburgh.
Recommended by Dr. Hyne, Abercornby Place.
Admitted on 28th Jan., 1911, to Ward 7.
Complaint: Pain on right side. Duration 2 days.

History of Present Illness
On Jan. 27th, in the forenoon while patient was at his work, a pain came on gradually in the abdomen just above the symphysis pubis. He went home about 11.30 a.m. and went to bed and had hot plates and hot cloths applied. These did some good, and about 6 p.m. an oatmeal poultice was applied across his stomach and that quieted the pain away entirely. At 5 a.m. on the morning of Jan. 28th, the pain started again. It was higher up this time and extended right across his stomach. He applied poultices again which relieved the pain a little. The doctor was called in about 10 a.m. and diagnosed it as appendicitis and sent the patient to the N. S. E.

On Jan. 27th in the afternoon he had taken 1 tablespoon of castor oil and it moved his bowels 6 or 7 times between 5 and 10 p.m. He says he had neither constipation or diarrhoea previously. He vomited on the morning of Jan. 28th before breakfast. His appetite has always been good but on the 2 days of his illness he took little food. He has no...
gastric symptoms such as pain after food, etc. On 28th Jan. had some pain & difficulty in micturition.

Previous Health
Measles when a boy
Influenza 3 years ago.

Family History
Father dead - age 72 - of "paralytic shock"
Mother - age 70 - of bronchitis
Brothers - 2 alive & well; 1 dead at 40 of chest trouble.
Sisters - 2 alive & well; 1 dead at 37 of heart trouble.

Social Conditions
Well-ventilated home & plenty of good food. Sleeps with windows open at night.
Non-smoker & takes no alcohol.

Condition on Examination
Patient says he feels a little pain but his expression is not anxious. The pain is situated in the right iliac fossa.

On inspection, the abdominal wall does not move with respiration. There are no patterns. Signs of hot fomentations are present across the umbilicus & above it.

On palpation, there is tenderness over the area of fomentation on the right side - none on the left. Tenderness is very marked over McBurney's point, in the right iliac fossa, & down towards the symphysis pubis. There is slight tenderness in the right loin &

On rectal examination, there is no tenderness in any direction.

Leucocytes 10,000 per c.m.m.
Treatment + Progress

Operation: Jan. 18th, 1911. Mr. Caird.
Chloroform + ether.

A good incision was made over the appendix. There was much oedema of the extra-peritoneal tissue + free fluid within the peritoneal cavity. The appendix was found lying anteriorly & removed, but it was found to be quite healthy.

A mesial incision above the umbilicus was now made + a large cystic mass found in the right renal region with adhesions to the falciform liver. An incision was then made in the loin & the cyst tapped from there, a rather clear reddish-yellow fluid being drawn off. The cannula was left in position. There was felt to be another cystic mass above the one which had been tapped. The wounds having been closed, the patient was put back to bed with the head raised 4 hours.

29/1/11. Passed urine. Had a fairly good sleep afterwards.

The fluid from the cystic mass was examined + found to contain blood + albumen. It reduced Fehling's solution + contained 7 gos. of urea to the ounce. Red + white blood corpuscles were present. Red + white blood corpuscles microscopically.

Mg. 3.0. Acid. Debris of mucin.
Urea - 7 gos. per 3.

Reduces Fehling
Red + white blood corpuscles microscopically.
At night, Temperature 100.2°; Pulse 78; Respiration 32.
A great deal of fluid had escaped by the cannula.

29/1/11. Dressed. Much fluid by cannula.
Temperature 97.5°; Pulse 78; Respiration 14.
46 ounces of urine.

5/2/11. More fluid continued to escape by
the cannula in the loin. About 400 of urine
were passed daily, containing a high
percentage of urea - from 8-13 gos per 3.
It still reduced Heding. The blood & albumin
had disappeared by the 1st of Feb. The
temperature remained elevated 1 to 2° until
the same date after which it continued
normal; the pulse & respiration rates showed
a corresponding change.

On the 5th Feb, the Separator was used &
gave the following results:

<table>
<thead>
<tr>
<th>Right</th>
<th>Left</th>
</tr>
</thead>
<tbody>
<tr>
<td>Night</td>
<td>Night</td>
</tr>
<tr>
<td>195 mH</td>
<td>110 mH</td>
</tr>
<tr>
<td>S.Y.</td>
<td>S.Y.</td>
</tr>
<tr>
<td>10.15</td>
<td>10.17</td>
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<tr>
<td>Urea 5 gos per 3</td>
<td>Urea 6 gos per 3</td>
</tr>
<tr>
<td>Albumin</td>
<td>No albumin</td>
</tr>
<tr>
<td>No sugar</td>
<td>No sugar</td>
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<tr>
<td>Microscopically:</td>
<td>Microscopically:</td>
</tr>
<tr>
<td>Moderate quantity of</td>
<td>One or two pus corpuscles</td>
</tr>
<tr>
<td>pus corpuscles &amp; red</td>
<td>8 red blood cells</td>
</tr>
<tr>
<td>blood cells</td>
<td></td>
</tr>
</tbody>
</table>

Phosphates

9/1/11. Dressed. Mesial deep sutures cut.
X-rayed - but X-rays of no value; left
binding having been photographed.

An incision was made in the right loin, coming down from the last rib & then
along the crest of the ileum, margin of quadratus slightly divided. The kidney was exposed. The capsule raised, the finger being then passed all round. The mass was found to consist of many cystic cavities which contained small brownish bodies in addition to fluid. The cannula in front having been withdrawn, the mass separated all round, it burst in one place and fluid escaped. The vessels were next found and ligatured firmly and divided. The omentum was then caught and divided, the stump being touched with pure carbolic and stitched to the peritoneum. An additional ligature was then placed round the vessels and all haemorrhage arrested.

There was no escape of the contents of the mass into the peritoneal cavity. Two rubber tubes were left in the cavity and the wound closed.

Saline enemata 4-hourly. Temperature 96.6, pulse 108, respirations 36. Kept warm.


13/2/11. Castor oil at night. Bowels well opened. 48 Fl of urine. Salines stopped.

18/2/11. Patient has done very well. Urine - 58 Fl. S. g. 1015. Acid. No albumen, etc.

Wore 2 grs pher. Str getting milk diet and a little fish now.


Urine - S. g. 1015. Acid. No albumen, etc. 5 gms. urea per 3. Phosphate 40 Fl.
25/2/11 Remaining stitches out. 14 3/4 npsn. 5/2/11 Dressed, dressed up. 13 3/4 npsn. 6/2/11 Dressed. Tube removed. There had never been much discharge. 1 st 1/2 lbs.


Comments.

The sudden onset in a healthy man of pain in the abdomen, becoming localized later to the right iliac fossa, at once suggests an attack of appendicitis. In this case, the symptoms resembled very closely an attack of appendicitis of a rather mild character, though there were several atypical features. The situation of the pain, the marked tenderness at McBurney’s point, the sickness, rigidity of the abdomen, the rise of temperature and increase in the pulse rate were all in favour of such a diagnosis. The state of the bowels did not make the condition any the less probable, especially in view of the somewhat heroic dose of castor oil which he had taken. The urinary symptoms might well have been due to an inflamed appendix, though in such cases one usually expects to find tenderness on rectal examination. The most atypical feature was the absence of leucocytosis. The only variety of appendicitis consistent with this is the fulminating type, which this was evidently not, the pulse not being excessively rapid and the temperature being
above normal instead of below it; moreover, the general condition of the patient was quite incompatible with this variety.

There was practically nothing in the case to suggest the condition actually found. There was no history of attacks like renal colic; there was nothing in the character of the pain to suggest a renal cause, and the slight pain and difficulty of micturition were quite well explained by a diagnosis of appendicitis.

On cutting down on the appendix, free fluid was found in the peritoneal cavity with marked oedema of the extra-peritoneal tissue. The appendix being found to be normal, it remained to discover a cause for these signs of inflammation. It was most likely that this would be higher up on the right side of the mesentery of the small intestine. The most probable condition was a latent duodenal ulcer with a slight leakage. The abdomen was accordingly opened above the umbilicus and the cystic mass found in the region of the right kidney. As it was undesirable to tap this through the peritoneum, a further incision had to be made in the loin for this purpose. The fluid removed was found to possess the same characters as the urine, so that the condition resembled a simple hydro-nephrosis, but for the fluid in the peritoneal cavity and the oedema of the
extra-peritoneal tissue for the fact that another cystic mass remained above the one which had been tapped. At the end of this operation the cause of the inflammatory signs had not been found, but it was considered undesirable to do anything further for the time being. After the operation, the temperature & pulse returned to normal in a few days & plenty of urine was secreted. Fluid continued to escape from the cannula in the loin, showing that it was in communication with the pelvis of the kidney.

Before anything further was done, it was desirable to investigate the condition of the right kidney, for if the condition turned out to be a simple hydronephrosis with a removable cause, it only remained to remove that cause & close the opening in the pelvis. By the use of the separator it was found that the right kidney was not functioning quite so well as the left, the urine from the right side being of lower specific gravity & containing less urea. The X-rays were employed to discover if the cause of the hydronephrosis might be a calculus, but a mistake occurred in the taking of the photograph. At the 2nd operation, the mass which had been left was found to contain pus, & it was necessary to remove the entire kidney. The presence of this pus explained the peritoneal exudate & the oedema of the extra-peritoneal tissue at the
former operation. The cavity which contained it was no longer in communication with the part which had been tapped, and hence it was that no pus was obtained. The further course of the case was satisfactory, the left kidney having no difficulty in taking on the functions of both.

The condition must have been originally a simple hydronephrosis, infection of which had occurred through the blood-stream. The cause of the hydronephrosis did not become evident, but no definite renal calculus was found, so that there is little fear of calculus formation in the remaining kidney.
Case of Chronic Gastric Ulcer.

Mrs Charlotte Morgan. Age 42

Housewife

Address - Brough View, New Bowgate, Jedburgh.

Ref. by Dr. Gibson, Ward 30

Admitted on Feb. 7th, 1911 to Ward 5

Ref. by Dr. Jeffrey to Dr. Gibson and admitted to Ward 30 on 21st Jan., 1911.

Complaint. Pain in the stomach & vomiting.

Duration of pain - 13 years; vomiting 1 month.

Family History

Father - alive & well. Mother - dead of bronchitis.

Sisters - 3 alive & well.

Brothers - 1 alive & well; 1 dead - cause unknown.

Husband Healthy

3 children - 16, 9½, 7½ years of age respectively.

1 miscarriage.

Social History

Plenty of good food at regular hours.

Moderate amount of tea. House consists of 3 rooms. Windows open at night.

History of Previous Health

Pneumonia 3 years ago. Measles & rheumatic pains. Stomach trouble - see later.

History of Present Illness.

About 13 years ago, patient had an attack of vomiting resembling coffee-ground material. She did not suffer much pain at the time but was very faint. Since then, patient has had attacks of pain in the stomach from time to time but never vomiting.

In June, 1910, the pain became very severe in character - both back & front. The pain lasted for an hour or so after meals. Some days she was quite free from pain.
altogether. The pain, however, began to get worse and more regular. She vomited first about a month ago, at which time the pain was very severe and usually lasted all day unless she lay down. Things gradually got worse in spite of treatment, though being no signs of improvement she was sent in to Dr. Gibson.

**State on Admission**

Patient is a thin woman - rather pinched about the face and emaciated in appearance. Considerably anaemic. No other obvious morbid appearance. She finds that she can only lie on her left side and back; if she lies on her right side she has great pain in her left side. Has a careworn expression but is quite cheerful about herself. Teeth all gone. False ones present. Tongue is dry but clean. No trouble with swallowing. Good appetite. No thirst.

Pain usually comes on about 1½ hr. after food and sometimes is present all day. Patient has noticed sometimes that by taking food she gets relief. The pain is as a rule in the epigastric region on the left side at the tip of the 9th rib. The pain shoots through to the back and then is situated about the right inferior angle of the scapula. It gets gradually worse now until the patient vomits, when she brings up some sour material. This is usually the food she has taken. She sometimes gets relief after the vomiting. Sometimes has had heart-burn. Waterbrash is always present for a short time before she vomits. She is much troubled with flatulence.

**Gastric Contents.** Not very copious. Brownish.

Free HCl = 0.36%. Total Acidity 13%.
No lactic, butyric, or acetic acids.
Microscopically - food particles; starch. No definite bacilli. Oxyphils through many bacilli.

Bowels are very constipated, he has had to take opening medicine for some time. Patient has never noticed any blackness of the stools, but has never examined very carefully.

Inspection. Respiration mainly thoracic, but abdomen moves freely. No area of marked prominence.

Palpation. Very slight resistance over the upper part of the abdomen. Walls can be freely palpable. Patient complains of slight pain in the iliac fossae, mainly on the right side. In both of these areas lumps can be felt, apparently faecal in origin. There is also tenderness in the line of the descending colon. No epigastirc tenderness to be made out beyond slight general tenderness on deep palpation. On percussion.

Perception. The stomach extends from the xiphoid to just above the umbilicus. The spleen extends in front of the mid-axillary line. The liver extends from the 4th space to the costal margin. The lower border of the liver is more horizontal than is usually the case. The rest of the abdomen is tympanitic.

Slight dilatation of the colon.

Haemopoietic System
R.B.C. - 4,480,000
W.B.C. - 6,000
Hb% - 90%

Circulatory System.
Pulse 96. Regular in rate and rhythm. Small calibre. No thickening of vessels. Sternum prominent in
region of membratum. Sounds clear & closed in all areas.

Respiratory System.
Breath sounds normal. Healthy generally.

Skin. Normal.

Genito-urinary System.
No pain or frequency of micturition.
Periods have always been regular until lately. On 2 occasions, about 2 to 3 months ago, the
periods was a fortnight too early & at present the period is a week overdue.

Specific Gravity 1024. No alb., etc. Urca. 14g. per C.


Treatment & Progress.
In Ward 80, the patient improved a little
as regards the anterior pain but it still
continued between the scapulae.

She was transferred to Ward 8 on Feb. 7th
& was operated on on Feb. 10th, 1911.

On washing out the stomach the tube was
felt to pass through most distinctly a stricture
in the stomach, suggesting the possibility of
an hour-glass constriction.

Operation. Feb. 10th, 1911. Chloroform + ether
anaesthesia. Mr. Caird.

Mesial incision removing umbilicus. Small
intestine presented: stomach & colon high up.
The incision was extended upwards & some
fibrous adhesions with omentum were found
passing to the lesser curvature. These were
divided after cauterizing with forceps. Several
pieces of omentum coming from off the
upper part of the great omentum towards
the stomach gave the appearance of an hourglass constriction. On division of these bands the stomach regained its normal shape & there was exposed an old ulcer with thickened walls at the lesser curvature on the anterior wall, rather towards the cardiac than the pyloric end. From this, air & some potassium permanganate solution escaped. The pylorus was normal & pervious, but there was a distinct white scar just on the anterior & upper duodenal surface resembling that seen in some cases of old duodenal ulceration. The ulcer was at once stitched up with one or two sutures of catgut later, rather strong silk & a second thin row of finer silk suture, after which much hyaline of the tissues was seen. A posterior gastrojejunostomy was then performed with ease, a rather large anastomosis being made on this occasion to make up for any construction caused by the stitching of the ulcer. The abdomen was closed with silk-worm gut & horsehair sutures.

The patient was then sent back to bed & saline enemata administered every 4 hrs.

Progress

Retaining saline well.

14/11. Has been very well. Given Colonel gruel at night. Bowels well after next morning on administering an enema. Saline stopped. Milk & water now.

15/11. Porridge this morning. Feels well.

20/11. Flesh today. Hungry; feels & looks well.
22/2/11. Given meat today but was reduced to chicken next day. Also on the 24th. Deep stitches removed & wound dressed.

26/2/11. Dressed. Remaining stitches out. Feels well & is taking food well.

27/2/11. List up today. Feels well.


Comments:

The patient gives a long history of stomach trouble commencing with an attack of vomiting of coffee-ground material. Until recently, her chief symptom has been attacks of pain in the gastric region. The pain possessed generally the character of that associated with gastrosic ulcer; it was situated in the epigastric region rather to the left of the middle line, passed through to the back, came on half-an-hour after food, it was relieved by vomiting. One misleading feature was that it was sometimes relieved by the taking of food. For many years her malady does not seem to have caused her a great deal of inconvenience, but within the last few months the pain has become greatly aggravated & she has begun to be troubled with vomiting. These symptoms would seem to point to the existence of a chronic ulcer, which for a long time had remained more or less latent, but was now, owing to an increased activity of
stenosis, giving rise to marked distress. On administration of a test meal it was found that the stomach contents passed freely on, so that there could be no marked obstruction.

Her disease first manifested itself by what was apparently an attack of haematemesis associated with practically no other symptoms. As was revealed at operation, it is possible that this was due to a duodenal ulcer of a latent character though there is no history of melena following the attack. Her other symptoms were probably due to the development of a gastric ulcer on the lesser curvature about the middle of the stomach. The co-existence or sequence of a duodenal and a gastric ulcer is very interesting and would seem to point to a common cause, whatever this may be.

Examination of the patient revealed nothing of importance beyond slight resistance in the upper part of the abdomen. The characteristic tenderness found in many cases of gastric ulcer was absent. A test meal showed that the total acidity was somewhat diminished, as is often the case in ulcers of long standing.

The diagnosis of the condition was not difficult. The history of haematemesis and the character and duration of the symptoms were in favour of ulceration. A chronic dyspepsia, especially of the nature of
hyperchlorhydria might have accounted for most of her symptoms but the haematines & the obstinate nature of the symptoms were against this & the test meal revealed that the late aggravation of her symptoms was due to a carcinoma developing on the site of an old ulcer was not impossible; in favour of this diagnosis were the emaciated & anaemic condition of the patient & the absence of improvement under treatment. But in spite of her ailment the patient remained lively & cheerful & possessed a good appetite, not showing the depression & anaemia often associated with cancer. Free HCl was present in the stomach contents but this did not exclude the possibility of cancer. Duodenal ulcer was excluded mainly by the early onset of the pain after food, the situation of the pain—rather to the left, & the absence of the typical "hunger-pain".

The indications for operative treatment were the absence of improvement under other treatment, the severity of the symptoms, & the possibility of malignant disease. The condition found at operation was most interesting. The gastric ulcer at the middle of the stomach had perforated all the coats of the stomach & was only prevented from leaking into the general peritoneal cavity by the omental bands which covered it. An old scar
on the first part of the duodenum revealed the existence of a healed
duodenal ulcer which was probably
the cause of the patient's early symptoms.
The gastric ulcer was further from
the pylorus than is usually the case.
Whether the slight amount of hour-
glass constriction had anything to
do with the symptoms is doubtful.
The results of operation were most
satisfactory; the patient being freed
of all her symptoms & able to take
any kind of food without discomfort.
As to the cause of the condition - there
was no history of any serious errors
in diet; the amount of tea was not
excessive. There was very marked
constipation.
Case of pyloric obstruction.

David Rodgers, Age 50

Married

Railway signalman

Address - Grange Crossing, Alloa.

Recommended by the Medical Out-Patients Department to Ward 34 under Prof. Wyllie on Jan 10th, 1911.

Transferred to Ward 7 on Feb 12th, 1911.

Complaint - Pain in the stomach after food - coming on 1½ hrs after food.

Duration - 10 months.

Family History

Father died at 38 from "growth in throat."

Mother died at 48 from a shock.

Brothers - 4 died in infancy.

Sisters - 2 alive & well - 2 died in youth.

Social History


Previous Health

25 years ago his stomach troubled him, but he has not been troubled with it since until his present illness.

History of Present Illness

Ten months before admission patient began to be troubled with his stomach. He began to suffer from pain in the gastric region which came on 1½ hrs after taking food. It was situated in the pit of the stomach. There was also a feeling of load & fulness which remained after the acute pain had passed off. He did not vomit.
as a rule after each meal, but often vomited at night when he brought up large quantities, as much as a basinful at times. He remained at his work but his condition gradually got worse. His appetite remained good, though what he took caused him pain.

In Aug., 1910, he vomited a large quantity of material like coffee grounds. He did not notice that his stools were darker afterwards. About the beginning of Jan., 1911, he had a similar attack. Since his illness began, he has lost 2 stones in weight. As he was not improving he came to the R.I.E. + was admitted to Ward 34 on Jan 10, 1911.

**Condition on Admission.**

Patient is considerably emaciated - states he has lost 2 stones in the last 9 months. Has rather an anxious expression. Muscularity is poor. Temperature 97° F.

**Skin.**

No eruptions, oedema of the feet, or cyanosis.

**Haemopoietic System.**

No enlarged glands in neck, axilla, or groin. Thyroid + spleen normal.

**Digestive System.**

Appetite is good. Feels as if he were able to take anything. No excessive thirst. No difficulty in deglutition.

Pain comes on about 15 hrs after food & is felt about 2” below the umbilical cartilage. It remains acute for an hour but does not pass
through to the back. He has noticed that pressure over it gives him some relief. As the pain passes off there is left a feeling of fulness & load in the stomach & this gradually wears off until the next meal. He often has heart-burn & flatulence which has a foul odour. Vomiting occurred generally at night. The vomited matter was large in amount & foul-smelling.

Bowels are very constipated; move once in 2 days as a rule though 3 days sometimes elapse before a motion occurs. Teeth not very good. Tongue dry & clean.

Abdomen moves freely on respiration. Abdominal wall is very lax. No area of tenderness, resistance. Tenderness about 2" below the ensiform cartilage extending from there across to the left costal margin. No palpable tumour.

The lower border of the stomach extends to the umbilicus. Splashing is elicited on succession. No patterns of rigid spasm or rigidity.

Liver extends to the costal margin in the mammary line. Kidneys not palpable.

Circulatory System.
No shortness of breath or palpitation.

Pulse 74: regular in rate & rhythm. Heart sounds closed in all areas. Haemorrhoids are absent. No cyanosis or oedema.

Respiratory & Nervous Systems Healthy.
Genito- Urinary System.

No pain or frequency of micturition.

Progress in Ward 34.

The patient gained slightly in weight but this was lost in a short time. There was no marked improvement in his condition. Waves of peristalsis passing across the stomach were noted several times. A fast meal revealed 2% free HCl & 95% Total Acidity in the gastric secretion. He was transferred to Ward 7 on Feb 13th, 1911.

Treatment & Progress in Ward 7.

Feb 13th, 1911. Stomach was washed out & found to be very clean.

Operation. Mr Caird. Chloroform & ether anaesthesia. Medial incision removing the umbilicus. A large distended stomach presented with some adherences at the pylorus where an irregular mass was felt causing stenosis. There were numerous enlarged glands in the lesser curvature & in the lesser omentum. A trocar & cannula was introduced & the stomach emptied of air after the first layer of sutures had been put in. A posterior anti-peristaltic gastro-jejunostomy was then performed easily & the meso colon tape repaired. Abdomen closed with silk-worn gut & horsehair sutures.

The patient was sent back to bed & saline enemata administered every 4 hrs. At 11.30 p.m. Heroin gr 1/2 was given.

16/2/11 Given Calomel gr. iii at night. Enema next morning. Bowels moved well. Saline stopped.

17/2/11 Chicken fish today. No pain.

20/2/11 Chicken today. No pain.


27/2/11 Dressed. Remaining sutures out.

1/3/11 Got up today. Can take any food now.

2/3/11 Went home today.

Comments:

The appearance of symptoms of pyloric obstruction in a man of 50 who has been previously well raises a strong suspicion of malignant disease. In this case, there was no doubt as to the existence of an obstruction at the pylorus, though the nature of this was doubtful. The pain, flatulence, + feeling of load after food, the vomiting of large quantities at night followed by relief, + the loss of weight pointed to an interference with the exit of the food from the stomach; + the appearance of waves of peristalsis in a large stomach in which splashing could be elicited showed that this interference was due to obstruction.

It remained to ascertain whether this obstruction was simple or malignant in character. The patient gave a history of some gastric disorder 25 years ago, but this did not help much; it might have been due to
an ulcer which was now producing stenosis of the pylorus from cicatricial contraction, but it was an ulcer the stenosis might be due to a cancer on the site of the old ulcer. In the history of his present complaint, there were certain points in favour of a simple rather than a malignant condition—though the his complaint had lasted for 10 months, he had been able to continue at his work; his appetite had remained good; the haematemesis had been profuse and had occurred at wide intervals. The loss of flesh was not incompatible with a simple condition. The tenderness in the epigastrium was perhaps more in favour of ulcer than of cancer. No palpable tumour was found, but this was of little importance. The most important point in the diagnosis was the presence of free HCl in the stomach contents; this practically excluded cancer. An ulcer on the duodenal side of the pylorus producing a reflex spasm of the pyloric sphincter might possibly have explained most of the symptoms as well as the condition on examination, but the constant and progressive character of the symptoms and the absence of anything like "hunger-pain" were against this.

The patient derived no benefit from medical treatment and this pointed to the organic nature of the obstruction and formed a strong indication for operative interference. The further course of the case serves to illustrate the marked benefit derived from a gastro-enterostomy in such cases.
Case of Malignant Disease of the Stomach

John Hughes, Aet 57
Farm Labourer

Address—Stobsfield, Maine, Upper Keith
Recommended by Dr. Craig to Prof. McCallum.

Complaint. Sickness and vomiting for 3 months before admission.

History of Present Illness.

Three months before admission, patient began to be troubled with his stomach. When he came home from his work at night he felt sick after his supper, he generally vomited, a few hours later or in the early morning. This continued and he began to have a feeling of load in his stomach after each meal. He was forced to give up work and has not returned to it since. He also began to suffer from pain in the stomach which came on about an hour after food and was never very severe. It consisted more of a feeling of load than true pain. It gradually passed off but returned with the next meal. He did not vomit until the night time as a rule and then he vomited large quantities of sour material. This gave him great relief. He has lost a good deal of weight during these 3 months—as much as 3 stones, he thinks.

Previous Health.
Has always been fairly healthy. About 10 years ago he had "indigestion" which lasted
for 6 weeks, but is very vague about his symptoms; he did not vomit any coffee-ground material.

Social History

Good home. Food fairly good. Smokes about 1/3 of tobacco per week. Never takes excess of alcohol.

Family History

Father - died of "inflammation of the bowels" at 65.

Mother - died at 58 - "worn out."

Sisters - 1 alive & well. 3 dead - cause unknown.

Brothers - 3 dead - cause unknown.

Condition on Examination

The patient is a very thin emaciated man; his cheeks are very sunken. The expression of his face is inclined to be anxious. Temperature 96.5°F.

Skin is dry & scaly. No eruptions, jaundice, or cyanosis. No oedema of the ankles. No signs of B.B. or syphilis.

No enlarged glands in the neck, axilla, or groin. Spleen & thyroid are normal.

Digestive System

Appetite fair. Feels thirsty. Has no difficulty in swallowing. About 1 hr after food there is a slight feeling of load in the stomach which gradually passes off until the next meal. The pain is not severe & does not pass through to the back. Frequently he gets sick at night & vomits large quantities - as much as a basinful at one time. The vomited matter is sour & has never resembled coffee-grounds. No flatulence. Occasional heart burn & water-brash.

Bowels regular. Tooth all gone. Save 1 about
Tongue is dry, glazed, & clean. Abdomen is rather sunken. Moves freely on respiration. No local area of bulging. No resistance or tenderness on palpation. The stomach reaches to the umbilicus. No splashing can be elicited. No patterns observed. Liver extends to costal margin in mammary line. Neither kidney palpable. Heart sounds closed in all areas. No dyspnoea, palpitation, faintness, or precordial pain. Pulse 92 - regular.

Lungs normal. No shortness of breath.

Urine: S.G. 1035. Acid. No albumin, blood, or sugar.

Treatment in Ward 31:

Milk diet. Triple powder. 6 st. 11 1/2 lbs on 6/2/11.
12/2/11. Heavy feeling in stomach. No vomiting.
14/2/11. Felt sick. Vomited a little. 6 st. 12 lbs.
15/2/11. First meal. No free HCl. Total acidity 140
Numerous Bons. Ogilbo bacilli.
17/2/11. Much retained food on washing out stomach.
18/2/11. Losing weight.
20/2/11. Vomited again.
22/2/11. Well-marked patches of rigid stomach passing from left to right across the stomach.
Test Meal. No free HCl. Much retained food.

Operation: Feb 25th, 1911. Mr Carroll.
Chloroform anaesthesia. A median incision removing the umbilicus was made. The stomach was found to be dilated with the pylorus up under the liver. A carcinoma was found on the lesser curvature, showing as white irregular patches with enlarged glands in the omentum. The cardiac end was free.
The omentum was fastened down over an affected area on the lesser curvature, probably the site of an old gastric ulcer. The position of the pylorus was difficult to ascertain owing to the disease but the vein showed the site. The duodenum was distended a little. The liver was not affected. An antiperistaltic posterior gastrojejunostomy was performed. The pylorus was much stenosed. The abdomen was closed and the patient sent back to bed. Incontinent every 4 hrs. Brandy 385.


A culture from the jejunum produced a diphtheroid bacillus.

**Comments.**

In this case there was a history of the onset of gastric symptoms in a man of 67 who had been previously well except for indigestion 10 years before. His symptoms were of a subacute character, consisting of pain & feeling of load coming on about 1 hour after the taking of food, accompanied by sickness, & followed after several hours by the vomiting of large quantities of sour material, the vomiting
giving relief to the other symptoms such a condition as would result from some interference with the outflow of the gastric contents. His illness had lasted for 3 months & during that period he had lost a great deal of weight.

The chief question in diagnosis was whether the interference with the onward progress of the contents of the stomach was due to an atomic condition of the organ or to an obstruction of the pyloric orifice. There were many features in the case in favour of malignant obstruction of the pylorus. An atomic dyspepsia was unlikely in view of the severe & progressive character of the symptoms & the very marked emaciation produced in a period of 3 months; in the course of treatment peristaltic waves were observed passing across the stomach, pointing to hyper trophy & spasm of the stomach wall as a result of obstruction at the pylorus; under treatment for atomic dyspepsia there was no improvement in the patient's condition, the patient, in fact, continuing to lose weight. There was, therefore, almost certainly, an organic obstruction of the pylorus. Considering the history of dyspepsia 10 years ago, it was just possible that this might be due to cicatrificial contraction following a gastric ulcer, but there were many points in favour of malignant disease, whether on the
site of an old ulcer or not. The onset of the symptoms at the age of 57, the patient having been well for several years previously, was very suspicious. The history of loss of weight and of weakness causing him to give up work, the continued loss of weight under treatment, and the general cachectic condition of the patient were strongly in favour of malignant disease. The administration of a test meal revealing the absence of free bile and much retained food, the diagnosis was made sufficiently certain to warrant operative interference. There was no history of haematemesis and no palpable tumour, but these facts did not affect the diagnosis very much. In the family history, the fact that the father died at the age of 56 from inflamation of the bowels was perhaps in favour of malignant disease.

The condition found at operation confirmed the diagnosis. As it was thought inadvisable to attempt removal of the neoplasm, a gastro-enterostomy was performed to give relief to the obstruction. The results of the operation were, as usual, most beneficial, the patient being able in a short time to take ordinary diet without discomfort and his general condition being much improved.
Case of Richter's Hernia with Strangulation

Mrs McMahon, Aet. 39

Works on a farm.

Address - Samekilly, Kirkcaldy.

Recommended by Dr. Greig to S.O.P.D.

Admitted to Ward 8 Jan. 23rd, 1911.

Complaint - Cramps in the stomach.

Duration - 3-4 years. More severe since Thursday, Jan. 19th, 1911 with vomiting.

History of Present Illness.

For 3-4 years she has suffered from "cramps in the stomach." These attacks of pain affected the lower part of the abdomen & would come on at any time, though she was sometimes free for as long as 6 months at a time. The pain was usually accompanied by vomiting. The bowels moved quite well during the attacks - in fact, she had diarrhoea after them. She got a little thinner & continued to suffer from these attacks for a shade of 2 years.

Two years ago she first noticed a lump in the right groin. It came on after a miscarriage & has never gone away since its first appearance. The attacks of pain continued & when the pain was very severe the lump became larger & was very painful. Then the bowels would move & this was followed by diminution in size of the lump & relief of pain. The bowels have been very regular, but she
has had more frequent and severe pain in the abdomen since the lump was noticed—i.e., 2 years ago. Since then she has also become thinner.

On Thursday, Jan. 19th, 1911, she had severe pain in the lower abdomen at 8 a.m. after she had begun work. This was so severe that she had to stop work and go to bed. The pain continued all day and caused her to vomit. The bowels moved on this day. She did not sleep that night.

On Friday, Jan. 20th, she continued much the same, pain and vomiting still being present. The bowels moved again. The lump in the right groin was observed to be bigger and harder.

On Saturday, Jan. 21st, there was no improvement in her condition, the patient never being 5 minutes free from pain and the vomiting still being present. The bowels moved in the evening.

On Sunday, Jan. 22nd, hot cloths were applied. The bowels did not move and the lump in the groin began to swell up. Flatus was passed by the bowels. There was still much pain and vomiting and the vomited matter had a bad smell. Much wind was brought up. She began to menstruate on this day.

On Monday, Jan. 23rd, she had still severe pain in the abdomen every 5 minutes and vomited in the morning. There was no movement of the bowels or passage of flatus. The lump continued the
Same siege but the abdomen was
cout becoming distended & she was
sent on to the R.I. E. & admitted
to Ward 8.

Previous Health

Has never been very strong since her
marriage. Menstruated regularly till 4 months
ago when she began to be unwell every
42 weeks.

Social History

Plenty of good food.

Family History

Father alive - age 70 - at present very weak
Mother dead - age 40 cause of death unknown
Brothers - 2 alive & well
Sisters - 1 alive & well
Children - 8 alive & well - 4 miscarriages
1. Deaf born - 4 ½ months
2. Act. 4 - alive & well. Mother had
operation at birth
3. At 4 ½ months
4. At 4 ½ months
5. Act. 3 - alive & well
6. Act. 2 - " "
7. At 4 ½ months

Condition on Examination, 23/1/11.

Temperature 98.9 Pulse 92. Respiration 20.

Looks well. Pulse is regular.

Digestive System

Tongue is quite moist & clean. Has
still shoshonic pains in the abdomen
+ occasionally grunts with expiration as if in pain. Has slightly heavy faecal breath.

The abdomen is irregular in outline and is turgid owing to flatulent distension. There is not much gastric distension. Well marked "ladder" patterns are seen and any little taps bring on a spasm. No contraction of the loops of small intestine. There is marked bulging vertically in the middle line between the recti muscles. The circumference of the abdomen is 31 1/2 in. There is a very marked degree of distension in the left lumbar region from time to time.

There is most tenderness in the right lumbar, the umbilical, & the left lumbar regions. The liver dulness is normal. The spleen is not enlarged.

On percussion a resonant note is elicited all over the abdomen. There is marked splashing on percussion.

In the right groin, there is a swelling about the size of a walnut. This is hard, movable, irregular, & slightly tender. It is resonant on percussion & there is no impulse on coughing. It is quite below the level of Poupart's ligament, but is not typically "femoral" being too far up & too far out. No neck can be felt but it can be slightly reduced on pressure.

Genito-Urinary System

Neither kidney palpable. Bladder not distended.
On rectal examination, the uterus is found to lie anteriorly & to the left. The rectum passes well to the right where a mass separate? from the uterus is palpable—possibly a fibroid.

Urine—6 3 drawn off. No abnormal constituents.

Heart—

Heart sounds closed & lungs healthy.

Treatment & Progress

Admitted 23/1/11. Given a wash-out enema & retained 24 pints without difficulty. This brought away no faeces or flatus. The foot of the bed was raised & an ice-bag applied over the lump as it was thought it might be a strangulated hernia. Stomach washed out—a good deal of sour-smelling greenish black fluid withdrawn.


The skin was transfixed over the swelling which was found to come from the femoral canal. The sac was opened & free fluid escaped—not blood-stained. Rather congested bowel seen strangulated. Two inches were then made in Gymnecomastia ligament with a probe-pointed bistouri. An attempt was made to pull out the bowel, but in doing so it slipped back into the abdomen. A piece of omentum which was also down was caught with forceps as were the margins of the sac. An incision was now made in the right linea semilunaris & the deep chigastric vessels were avoided. The
intestine was then pulled out & the small piece of bowel which had occupied the hernial sac was seen. The constriction did not involve the whole lumen, an arc having been strangulated, thus forming a Richter's hernia. There was also congestion of the adjacent portions of bowel. The congested portion was quite viable & was therefore returned into the abdomen & the wound carefully closed. The sac was then dealt with by suturing through & through its wall all round near the neck & then ligaturing it; the excess was then cut away & the sac returned. The margins of the ring & the canal were then closed.

A firm roller bandage was then applied & the patient put back to bed with the head raised. Saline enemas every 4 hours.

Temperature 98.6°F. Pulse 92. Respiration 21.


26/1/11. Enema given - good motion resulted.

29/1/11. Castor oil administered at night. Bowels moved well next day after enema.

3/2/11. Stitches removed. Wound looks well


9/2/11. Went home today against advice.

Comments

The association of symptoms of obstruction with a swelling in the region of one of the hernial openings at once suggests a strangulated hernia. The symptoms in this case
were remarkable for their mild character, and the method of their onset and progress differed from that of an ordinary case.

The patient's trouble commenced 4 years ago, taking the form of attacks of spasmodic pain in the abdomen with vomiting; 2 years later a lump appeared in the groin and this was observed to undergo an increase in size during the attacks of pain and to diminish as they passed off. The actual obstruction set in a few days before admission during an attack of pain and vomiting. The original attacks of pain were most probably due to the presence in the peritoneal sac of a mass of omentum which produced partial obstruction of the bowel by dragging on the transverse colon, the complete obstruction being due to the passage of a portion of bowel into the sac. The manner of onset of the symptoms was rather peculiar and suggested the possibility of a Richter's hernia, the case being diagnosed as such before operation. The patient having one of her attacks of pain and vomiting, the bowels continued to move for 3 days. On the 4th day there was no movement of the bowels, the lump in the groin began to swell up, the vomited matter became foul-smelling; but flatus continued to be passed by the bowel, showing that the obstruction was incomplete. On the 5th day neither faeces nor flatus were passed, owing, most probably, to paralysis of the part of the bowel adjacent to the herniated portion. The presence in the
Hernial case of the appendix or a Meckel's diverticulum might have given rise to a similar sequence of events, but these conditions are rare.

On examination, the most striking feature was the good general condition of the patient, the temperature being normal, the pulse and respiration only slightly accelerated, and the tongue being moist and clean. The abdomen showed signs of obstruction in the shape of distension and ladder-patters, and splashing could be elicited. The presence of waves of peristalsis suggested that the condition had lasted for several days. The condition of the hernia was that of strangulation as shown by the firmness and absence of impulse on coughing; the resonance on percussion implied the presence of bowel, this conforming to the provisional diagnosis of a Richter's hernia. The diagnosis was confirmed by operation. The changes in the bowel and the exudation of fluid into the sac were entirely the result of venous congestion, there being no sign of local peritonitis or other evidence of bacterial invasion of the wall of the bowel. The slipping back of the intestine into the abdomen necessitated opening the abdominal cavity above Poupart's ligament in order to make quite certain that the bowel had sustained no serious damage. The pain and slight distension on the day after operation perhaps suggested a local paralysis of the bowel at the site of the herniated portion, but
this soon disappeared on the administration of a stimulating enema.
Case of Hernia of the Urinary Bladder

Mrs. E. Smith, Age 55.
Dunrobin Place, Clarkston, Airdrie.
Admitted Jan. 9th, 1911 to Ward 8.

Complaint. Numbness on right side for 5½ years. Pain in right groin for 10 years.

History of Present Illness
In Jan. 1901, patient began to have pain in the right groin & a feeling of sickness at times. The pain usually lasted for from 2 to 3 hours & passed off gradually. It was dull & dragging from the waist down to the groin in front & behind. She did not pay much attention to it. Till in 1906 she first noticed a lump in the right groin about the size of a small egg. It was brought on by any strain such as lifting & was very painful. This lump has gradually got larger & with its more frequent coming down & comes down now even when she walks. She has had vomiting sometimes when it has come down, especially if it remained down for any length of time. At these times it gets very hard & tender to the touch & makes her feel sick. It usually goes back when she lies down but she has often to put it back by pressing & the application of hot cloths. On one occasion she had to call in the doctor to put it back. She has had no trouble with the urine. She has been constipated more or less all her life.

Previous Health. Always good. Congestion
of the lungs + bronchitis as a child.

Social History. Good.

Family History
Father - alive + well
Mother - "  "  "
3 Brothers - "  "  "
6 Sisters - alive + well. 1 still born

Husband - alive + well
3 Children - "  "  "  
Youngest 1 year 4 months

Menstruation regular. At her periods the pain in the groin is much the same but the rupture comes down more easily.

Condition on Examination.

Patient is a healthy-looking woman.
Weight 1 at 132 lbs. Temperature 98.5°F. Pulse 96.
Respirations 12. Pulse quite good.

Digestive System

The tongue is moist & clean.

Abdomen flaccid. Many striae gravidarum.

There is nothing abnormal on inspection with the patient lying in bed. There is slight tenderness in the right iliac fossa or deep palpation; more marked in the left. On percussion, the note is resonant all over. The liver & spleen are not enlarged. The stomach is not dulled.

When the patient stands, a slight lump appears in the right groin, which on walking, coughing, or straining becomes much larger & very painful. It is resonant on percussion but cannot be examined much on account of tenderness so severe that one might think the ovary was in it. There is slight impulse on coughing over the external ring, which region is very tender.
Other Systems
Chest is normal; breath sounds vesicular.
Heart sounds closed in all areas.
Neither kidney palpable. Urine - S.G. 1022.
Aid. No albumen, etc. Wt. 5½ lbs. on her 3.

Treatment & Progress.
9/1/11. Admitted. Weight. 7 st. 134 lbs.
11/1/11. Walked about this morning, to demonstrate her ruptured, but it came down so much that it could not be reduced. On her being put back to bed with the foot raised, the local application of ice it disappeared in about an hour.

The skin was transfixed over the region of the empty sac. It was covered with a mass of extra-peritoneal fat, but at one part this was fibrous, vascular, & very adherent to the sac, suggesting an adherent bladder. Some of the tissue removed resembled the musculars of the bladder. There was no escape of urine. No mucosa was seen. The sac was now cleared & opened & the finger easily introduced through the large cornual canal. The excess of the sac was then cut away & a purse string suture applied & the remainder of the sac returned to the abdomen. A fresh inspection of the extra-peritoneal tissue was made & all seemed well & satisfactory. Sutures were then passed through umbilical ligament.

The true estate of the bladder was still suspicious & to allay all doubts a catheter was passed, when blood-stained urine was drawn off, demonstrating damage to the
Bladder. It was now thought wise to inspect further & a transverse incision above the pubes revealed the anterior & upper part of the bladder in the space of Retzius. Blood-stained & rough. The peritoneum was now pulled up & it was found that the sac at its neck was adherent to the bladder & sutured to it by the purse-string suture. This was divided & removed. The peritoneum was shut off with gauge & the raw area inspected anterior to the peritoneum, i.e. in the space of Retzius. No urine escaped & no mucosa was seen. The bladder was now filled with sterile salt solution & indigo-carmine; an escape of the fluid was seen & an aperture the size of the finger tip became visible. The bladder was sutured with 3-4 tiers of catgut sutures & the space drained. Into the pouch of Douglas was then introduced a glass tube, some clots were removed, & the peritoneum closed. The recti muscles were brought together with strong catgut sutures. A Foley’s catheter was then passed into the bladder & the patient put back to bed with the head raised.

About 2 ounces of urine came away in the afternoon, containing blood & indigo-carmine; in the evening 11 ounces had been passed.


19/1/11: Being dressed daily. Pus from supra-pubic wound healing. No blood in urine.
20/1/11: Peggar's catheter changed; old one encrusted with phosphates. In evening, urine found to be escaping from the supra-pubic wound.
25/1/11: Urine still escaping by the supra-pubic wound. Bunsen's apparatus fitted to Peggar catheter; did not act well. Dressed frequently.
29/1/11: Bunsen's apparatus fitted to supra-pubic wound. Catheter still left in.
15/2/11: Got up yesterday. Peggar catheter removed today. Passed urine.
20/2/11: Went home today. Weight 7st 7½ lbs.

Comments

Though the chief interest of this case lay in the condition found at operation & its treatment, there were several other features worthy of consideration. Under the etiology, may be noted the sex of the patient, a femoral hernia being more common in the female owing, most probably, to the greater width of the pelvis & the larger conus canal; the fact that she had borne children, which acts by bringing about an increase in the intra-abdominal pressure & a loss of tone of the abdominal muscles; & the constipated condition of the bowels which also causes an increase
in the intra-abdominal pressure by the production of straining. It is interesting to note that she suffered from pain in the groin with occasional sickness for over 5 years before the appearance of the hernia. This was most probably produced by the descent of the hernia through the conoval canal. At this stage it would have been a very difficult point to diagnose the cause of her pain. After its appearance, the hernia gradually increased in size, though at first only coming down when she strained, lately had appeared even on walking, and in addition, was becoming difficult of reduction at times. On several occasions there had been attacks of threatened strangulation, as shown by the hernia becoming very hard and tender; and these together with the marked discomfort experienced by the patient formed the indications for operative treatment. Although the bladder was involved in the hernia, there was no trouble with micturition.

There was no difficulty in diagnosis, the lump being reducible, showing an expansile impulse on coughing, and being resonant on percussion; these facts excluded all other conditions.

At the operation, the first suspicion of anything abnormal in the hernia was raised by the appearance of part of the extra-pertoneal tissue. This being fibrous and vascular, closely adherent to the wall of the sac, it suggested the musculares
of the bladder. But as there was no escape of urine and no appearance of
bladder mucosa, the radical cure was proceeded with. On the completion
of the operation, however, a catheter being passed as a precautionary measure, it
was seen that the bladder had really been involved in the hernia. This
necessitated a supra-pubic incision to discover the extent of the damage
and to deal with it. It was found that the sutures at the stump of the hernial
vase had taken in part of the wall of the bladder. The injection of indigo-
carmine into the bladder revealed a rent in the wall of considerable size
which had previously escaped notice. Drainage of both the pouch of Douglas
and the supra-pubic wound was necessary because of the possibility of an escape
of urine.

In the further progress of the case, it was rather remarkable that an escape
of urine should have taken place by the supra-pubic wound. This did not
take place until a week after operation and occurred in spite of the fact that the
wound in the bladder had been closed with several strips of sutures, that a
catheter had been tied in, and that the wound above the pubes had been drained. With
the aid of the Bunsen suction apparatus, which prevented the accumulation of urine in the
bladder and so allowed the wound to close, a satisfactory result was ultimately
obtained.
Case of Acute Obstruction due to Internal Hernia

William Brown, age 24
Engineer's Pattern-maker
7 Seafield Terrace, Leith
Admitted March 8th, 1911, to Ward 4.
Complaint: Severe spasms of pain across the abdomen with retching. Duration 23 hours.

History of Present Illness
For 6 weeks before admission patient has been suffering from attacks of diarrhea and vomiting, which lasted for a day or 2. During the attacks the motions were dark brown and the vomit green and slimy. 3 weeks ago he consulted his doctor for spasms of the bowel and was told that they were due to hyperacidity; he was given some medicine and felt better after taking it for a while.

Early on Tuesday morning, March 8th, he woke with diarrhea, about 3 a.m., and on going back to bed he was seized with pain in the abdomen. This lasted all day and the following night it took the form of great spasms of pain. It was accompanied by retching and blackish cheeks and traces of blood were brought up. Dr. Wood saw him on Tuesday afternoon and gave powders for the pain and diarrhea. On Wednesday, March 8th, Mr. Carsi saw him in the morning and advised his immediate removal to Ward 4.

Previous Health
On May 21st, 1909, was operated on for a perforated gastric ulcer which was
stitched up. No gastro-enterostomy was performed. There was severe peritonitis and drainage of the abdomen was exercised. The appendix was also removed, it being cut down on as probable cause. Has been fairly well since.

**State on Examination**

Pain and retching worse than ever, the pain causing him to cry out. Severe spasms come on every few minutes. He lies doubled up in bed. The bowels have not moved since Tuesday when the pain came on. Is not sure about flatus.

**Treatment & Progress**

2 injections given without result.

Operation: March 5th, 1911. Mr. Cask, Chloroform. A mesial incision was made in the line of the old cicatrix + a thin abdominal wall encountered. There fluid + many adhesions were found on opening the abdominal cavity. The colon presented + the meso-colon was lifted up, showing distended loops of small intestine. These were traced down + were found to pass into a hole in the under surface of the meso-colon so that obstruction had been produced. The exit loop was pale + flaccid.

*It seemed to be a natural opening.*

The bowel was easily reduced + was quite viable though congested. The margins of the opening were sutured with cat-gut. Some adhesions of the omentum were broken down + ligatured. The stomach was then covered with slabs of omentum
+ the white scarring of a healed gastric ulcer was seen with quite smooth peritoneum over it. The skin, abdomevis, & peritoneum were each separated & were stitched individually. The patient was sent back to bed with the head raised & saline enema were administered every 4 hours. Temperature 100.2°, Respiration 24, Pulse 114.


Bowels moved well.

19/3/11. Deek stitches out.


Comments.

A hernia through an aperture in the meso-colon is a rare condition. It may follow operations such as gastro-enterostomy, where the meso-colon has been lacerated & incompletely closed. In other cases the opening appears to be of congenital origin. In the above case it belonged to the latter variety. There had been a previous operation for perforated gastric ulcer, but no gastro-enterostomy had been done & there had been no interference with the meso-colon likely to produce
such a condition. Prof. Caudal had had another case which, curiously enough, had also been preceded by a perforated gastric ulcer. It may be that a gastric ulcer is predisposed to by some deficiency in development.

The actual onset of obstruction in this case was preceded by symptoms of irritation of the bowel lasting over a period of 6 weeks. These were probably produced by the protrusion of loops of intestine through the aperture, the constriction at the margins being not yet sufficiently tight to produce actual obstruction. As time went on, pain of a spasmodic character became a more prominent symptom, indicating that the intestine was having greater difficulty in driving on its contents through the obstructed portion. The onset of complete obstruction was probably brought about by the passage of another portion of intestine through the opening, so that owing to this addition the protruded loops became tightly compressed by the margins of the aperture.

In the diagnosis of the condition there were many possibilities, but the symptoms were more suggestive of obstruction than of other conditions. The history of diarrhoea & vomiting pointed to some irritation of the bowel & the spasmodic grunting character of the pain was strongly
suggestive of obstruction. The complete constitution did not exclude other possibilities. Acute appendicitis was impossible as the appendix had been removed at the previous operation. Perforation of a gastric ulcer had to be considered in view of the previous history of ulcer, no gastroenterostomy having been performed so that the formation of a fresh ulcer was not unlikely. In any case, the indications for immediate operation were quite clear. Other conditions, such as acute pancreatitis or obstruction of the mesenteric blood-vessels, were unlikely from the less severe onset in this case.

At operation, the obstruction was seen. The diagnosis of the actual cause of obstruction was, of course, practically impossible. In view of the previous history of peritonitis and the history of diarrhea, etc., for some weeks previously, strangulation by a band was perhaps the most likely cause.

At operation, the obstruction was found not to be very acute, the bowel being quite viable, so that there was no necessity for draining the intestine or resection of the bowel. It was interesting to note the success with which the old gastric ulcer had been repaired, the scar being now covered by
a smooth layer of peritoneum. In the further progress of the case it was evident that the bowel had sustained no damage from its constriction, an enema on the 3rd day giving a good result, a daily motion being obtained thereafter.