BLADDER AND PROSTATE

MAIN CATALOGUE

CASE 160
No clinical information is available.
Describe the specimen. The specimen consists of the prostate, seminal vesicles and the base of the bladder viewed from the back. The prostate measures 5cm in diameter and is uniformly replaced by pale yellow caseous necrosis that is limited to the gland. Similar areas of necrosis are visible throughout both seminal vesicles and there are two small shallow mucosal ulcers on the wall of the bladder.
What is the diagnosis? Tuberculosis of the prostate and seminal vesicles
Comment: Tuberculosis of the male genital system most commonly involves the prostate and is typically the result of blood borne spread from the lungs.

CASE 4153
No clinical information is available.
Describe the specimen. The specimen is of the bladder. On the posterior wall is a large area of abnormal mucosa in which small cysts about 1mm in diameter are visible against a background of congestion. The prostatic urethra is mildly congested but the prostate itself is of normal size and appears otherwise normal.
What is the diagnosis? Cystitis cystica
Comment: This represents metaplastic change within the bladder, in response to chronic inflammation and may regress if the underlying cause is removed.

CASE 8202
The patient was a man aged 72 who died from myocardial infarction. During his last illness he was noted to have an elevated creatinine. At post-mortem there was uraemic pericarditis and the prostate was greatly enlarged.
Describe the specimen. The specimen consists of the prostate and bladder. The prostate measures 7cm in diameter and shows gross enlargement of the lateral lobes and also of the median lobe which projects as a smooth-surfaced spherical mass 4cm in diameter into the base of the bladder. The prostatic urethra is straight and is compressed laterally. The bladder shows quite marked trabeculation and thickening of the muscle.
What is the diagnosis? Prostatic hyperplasia

CASE 8674
The patient was a man aged 76 with a 6 month history of angina and mental deterioration over the last 2 months. His urinary output had been gradually decreasing over that time. He died from a myocardial infarction.
Describe the specimen. The specimen consists of the bladder and prostate. The prostate shows moderate hyperplasia, with distortion and compression of the prostatic urethra. The bladder is small with a thickened muscle coat and there is mucosal congestion. A large diverticulum 5cm in diameter projects from the lateral wall of the bladder. It has a fibrous wall and the mucosa is inflamed.
What is the diagnosis? Diverticulum of bladder with prostate hyperplasia and cystitis
What is the likely pathogenesis of the diverticulum? Although bladder diverticula may arise as congenital lesions, they are more commonly the result of persistent urethral obstruction and increased pressure within the bladder as a result of prostatic hyperplasia or carcinoma.
What is their clinical significance? They provide an area of urinary stasis and predispose to infection and the formation of calculi.

CASE 10377
A man of 52 had a 5 week history of urinary frequency, dysuria and haematuria. Treatment with antibiotics had led to some improvement in his symptoms, but the haematuria continued and in the last week before his admission it became profuse. On rectal examination a large mass involving the left lobe of the prostate was palpable. Cystoscopy was attempted but failed because of the severe haematuria. An indwelling catheter was inserted but became blocked by clots.

He died after 3 weeks in hospital. At post-mortem there was marked bilateral hydronephrosis particularly on the left side, and the bladder was distended with a little urine and a large amount of clotted blood.
Describe the specimen. The specimen is of the bladder and prostate. A large infiltrating carcinoma arises in the region of the trigone and extends in the bladder wall for about 10cm. The surface of the tumour is irregularly lobulated with some superficial necrosis and haemorrhage. The bladder wall is focally thickened to 2.5cm.
What is the diagnosis? Carcinoma of the bladder
What would you expect to see on histological examination of the tumour?
Bladder carcinomas are most commonly transitional cell carcinomas so it would show transitional epithelial differentiation. The solid, infiltrating pattern of the tumour suggests that it would be a high grade/poorly differentiated tumour, the cells showing marked pleomorphism with many mitoses.

CASE 10602
A man aged 71 died from the effects of a large lung abscess and a perforated pyloric ulcer of the stomach. The specimen was an incidental finding at post-mortem.
Describe the specimen. The specimen is prostate and bladder with a 1.5cm diameter tumour composed of thin fragile fronds protruding into the bladder lumen arising near the orifice of the right ureter. In addition the prostate shows benign hyperplasia.
What is the diagnosis? Carcinoma of the bladder.
Comment: This is an example of a low-grade transitional cell carcinoma of the bladder, sometimes called papilloma. It is a well-differentiated form of the carcinoma seen in 10377.

CASE 12583
The patient was a man aged 69 who had a stroke 5 years previously from which he had made a good recovery before developing Parkinson's disease. He died of congestive cardiac failure and bronchopneumonia. The specimen was an incidental finding at post-mortem.
Describe the specimen. The specimen of bladder and prostate shows numerous fragile papillary tumours scattered over the posterior wall of the bladder. The bladder is slightly trabeculated and somewhat hypertrophied and the prostate is mildly enlarged.
What is the diagnosis? Multiple papillary transitional cell carcinomas of the bladder

CASE 13470
The patient was a man aged 78 with severe congestive cardiac failure who developed acute urinary retention that needed catheterisation. His creatinine levels were raised during his admission. He died from bronchopneumonia.
Describe the specimen. The specimen is of the bladder and prostate. There is mild enlargement of the prostate and the bladder shows acute haemorrhagic inflammation with purulent exudate clinging to the surface in some places.
What is the diagnosis? Acute cystitis

CASE 14112
A man of 76 developed acute urinary retention and was admitted for prostatectomy. After the operation there was massive bleeding from the operation site, requiring several transfusions. He became oliguric and his creatinine level was significantly elevated. The bleeding finally ceased and his urinary output became normal but he died on the 12th post-operative day from pulmonary embolism and bronchopneumonia.
Describe the specimen. The specimen consists of the prostate and the base of the bladder. The prostatic bed is a ragged cavity with nodules of necrotic tissue projecting from the walls. Some surgical sutures are visible.
What is the diagnosis? Prostatic bed after prostatectomy

CASE 15183
A man of 80 presented with haematuria for 3 days and acute retention of urine for 6 hours. The bladder was enlarged to the umbilicus and the prostate was firm and irregular. He was catheterised and passed a large volume of bloodstained urine. On the 9th day there was constant epigastric pain with tenderness but no rigidity. Bowel sounds were absent. His BP fell steadily and he died. At post-mortem there was massive mesenteric infarction from thrombotic occlusion of the superior mesenteric artery.
Describe the specimen. The specimen consists of the prostate and bladder. The prostate is enlarged and irregular and shows focal haemorrhage. Two large diverticula project from the right side of the bladder. Each is about 4cm in diameter. Their mucosal lining is smooth and not obviously inflamed. The bladder wall is thickened and its mucosa congested.
What is the diagnosis? Prostatic enlargement, cystitis and bladder diverticula
What is the likely pathogenesis of the diverticula? Although bladder diverticula may arise as congenital lesions, they are more commonly the result of persistent urethral obstruction and increased pressure within the bladder as a result of prostatic hyperplasia or carcinoma.
What is their clinical significance? They provide an area of urinary stasis and predispose to infection and the formation of calculi.

CASE 15740
The patient was a man aged 78 who had an operation for a Stage III bladder cancer 4 weeks before admission. Thereafter he had remained incontinent with considerable suprapubic pain. During the last few days he became drowsy and irrational. He died on the second hospital day.
Describe the specimen. The specimen consists of the bladder and prostate. The prostate shows evidence of previous resection in the form of a scooped-out cavity at the internal meatus. A very large, superficially necrotic carcinoma projects from the left lateral wall of the bladder. It extends almost from the fundus to the internal urethral meatus. The unaffected portion of the bladder wall shows moderate trabeculation.
What is the diagnosis? Carcinoma of the bladder

CASE 16348
The patient was a man aged 78. On examination his bladder extended to the umbilicus and his prostate was large to palpation. His haemoglobin was 65g/L. Catheterisation produced bloodstained urine. He was transfused with 3 pints of blood and on the 6th day suffered an attack of gout in the right hallux.
On the 9th day there was still gross haematuria and he was transfused 3 more units of blood. On the 19th day suprapubic prostatectomy was performed. His creatinine remained elevated. He had several more transfusions to a total of 13 units and died on the 30th day.
Describe the specimen. The specimen consists of the prostate and bladder, parts of both kidneys and both ureters. The prostate shows very marked hyperplasia affecting both lateral and middle lobes. The middle lobe projects into the bladder as a rounded dome-shaped mass 5cm in diameter. The bladder is dilated and hypertrophied and shows marked mucosal congestion. Both ureters are dilated and there is intrarenal and extrarenal hydronephrosis. The right kidney measures 11cm in length and on its surface shows some depressed scars, indicating previous episodes of pyelonephritis. The cut surface shows foci of acute papillary necrosis. The left kidney is small and also shows pyelonephritic scarring.
What is the diagnosis? Marked prostatic hyperplasia with cystitis, hydronephrosis and chronic pyelonephritis.
What is hydronephrosis? Hydronephrosis refers to dilation of the renal pelvis and calyces, often with secondary atrophy of the overlying renal parenchyma.
How does hydronephrosis develop? It develops as a result of obstruction of a ureter. Urine builds up in the ureter and ultimately in the renal pelvis, calyces and tubules leading to their dilation. With time, this leads to pressure atrophy of the renal parenchyma.

CASE 16459
The patient was man aged 73 who had been paraplegic for 30 years after a fall. There had been urinary and faecal incontinence for the last 8 years. For 3 months there had been progressive mental deterioration and he died of bronchopneumonia.
Describe the specimen. The specimen consists of the prostate and bladder. The prostate is moderately enlarged and nodular. The bladder is dilated and markedly trabeculated.
What is the diagnosis? Prostatic hyperplasia with prominent bladder trabeculation.
What does the trabeculation represent? Smooth muscle of the bladder normally shows a mild trabecular pattern. With bladder outflow obstruction the muscle hypertrophies to aid bladder emptying and the trabeculation becomes more prominent.

CASE 17146
A man of 68 presented with a 6-month history of recurrent vomiting. Examination revealed hypertension, anaemia, congestive cardiac failure and renal failure. The renal failure progressed and was complicated by urinary retention. Peritoneal dialysis produced some improvement but he died of renal failure after a month in hospital.
Describe the specimen. The specimen is of the prostate and bladder. The prostate is enlarged, affecting both the lateral and medial lobes, with a nodular cut surface. The bladder is dilated, its muscle coat is hypertrophied and trabeculated and its mucosa congested.
What is the diagnosis? Prostatic hyperplasia

CASE 17383
A man aged 64 collapsed and died after a short episode of chest pain and shock. A ruptured aortic dissection was found at post-mortem.
Describe the specimen. The specimen is a slice of prostate with enlargement and marked nodularity of the lateral lobes. A cavity just lateral to the prostatic urethra contains frank pus.
What is the diagnosis? Prostatic hyperplasia with purulent prostatitis

CASE 18692
The patient was a man aged 57 who died with multiple metastases from a rectal carcinoma. The specimen was an incidental finding at post-mortem.
Describe the specimen. The specimen consists of bladder and prostate. The bladder is opened to reveal a very large solitary bladder stone 6cm in diameter with a slightly nodular surface. This stone lies in a broad diverticulum at the fundus. The remaining bladder mucosa is not abnormal. The prostate shows some nodular hyperplasia.
What is the diagnosis? Bladder calculus

CASE 19668 (Bottom shelf)
The patient was a man aged 74 who had a prostatectomy 10 years previously for carcinoma. On his final admission he was semicomatose and dehydrated. He died a week later.
Describe the specimen. The specimen consists of the prostate, bladder, ureters and kidneys. A tumour arises from the prostatic bed and extends upwards as a large pale fleshy mass into the bladder, invading its walls and the tissues of the left para-vesical space. Both kidneys show hydronephrosis and pyelonephritic scarring.
What is the diagnosis? Carcinoma of the prostate

CASE 19721 (Bottom shelf)
The patient was a man aged 79 who died from a respiratory infection.
Describe the specimen. The specimen consists of kidneys, ureters and bladder. These have been opened to display a large fungating superficially necrotic infiltrating tumour arising from the mouth of a large right-sided bladder diverticulum and spreading to involve the prostate. The lower end of the right ureter has been obstructed to produce a hydroureter and hydronephrosis. The left kidney shows mild internal hydronephrosis.
What is the diagnosis? Carcinoma of the bladder and bladder diverticulum.

CASE 19897
The patient was a man aged 68 who had a trans-urethral resection for carcinoma of the prostate. He was admitted 10 days later after 3 days of stupor. Examination showed a left hemiplegia. He died the next day.
Describe the specimen. The specimen consists of the prostate and bladder. The prostate is very greatly enlarged to a width of 8cm by pale lobulated tissue with an invasive margin. The large scooped out cavity of the prostatic urethra shows necrosis on its wall. The bladder is small and mildly trabeculated. Lymph nodes lateral to the prostate are enlarged.
What is the diagnosis? Carcinoma of the prostate with lymph node metastases

CASE 20139
This was an incidental finding in a man aged 77 who died from carcinoma of the lung with superadded bronchopneumonia.
Describe the specimen. The specimen is of a coronal section through the bladder and prostate showing marked nodular enlargement of the prostate affecting the left lobe more than the right and causing narrowing of the prostatic urethra. There is marked trabeculation of the bladder wall.
What is the diagnosis? Prostatic hyperplasia

CASE 20154 (Bottom shelf)
The patient was a man aged 79 who had undergone a prostatectomy 5 years previously. At the operation a carcinoma of the colon was also discovered, and this was removed 3 months later. Eighteen months later a further carcinoma of the colon was found and it too was resected. Six months later he had a stroke involving the right arm and leg with aphasia. On his last admission the bladder was enlarged and rectal examination showed a grossly enlarged prostate. He died a week later of bronchopneumonia.
Describe the specimen. The specimen consists of the prostate, bladder, ureters and kidneys. The prostate is replaced by a large pale, infiltrative mass measuring 4 x 6 x 5cm protruding into the base of the bladder. The prostatic urethra is irregular.
The bladder is small and not particularly hypertrophied, but both ureters are dilated and both kidneys show hydronephrosis. There is a large mass of enlarged lymph nodes along the lower 12cm of the right ureter.
What is the diagnosis? Carcinoma of the prostate with lymph node metastases

CASE 20207
No clinical information is available except that the patient was a woman aged 67.
Describe the specimen. The specimen consists of a sagittal slice through the bladder and the atrophic uterus. Much of the bladder lumen is occupied by a fungating tumour mass that measures 7 x 5cm. The tumour has infiltrated the full thickness of the bladder wall posteriorly.
What is the diagnosis? Carcinoma of the bladder

CASE 20389 (Bottom shelf)
The patient was a middle-aged woman with a 6-month history of dysuria and frequency of urination. The urine was dark at times and she had passed some blood clots. Recently she had developed suprapubic pain. Clinical examination showed a large right kidney and a mass in the pelvis. Intravenous pyelogram showed the left kidney to be normal. The bladder, ureter and right kidney were resected in a single stage operation.
Describe the specimen. The specimen is of the bladder with the right ureter and kidney. The bladder is enlarged and measures 12 x 10 x 8cm. Its lumen is entirely filled by a necrotic tumour. The ureter is dilated and a large oval calculus 4cm in diameter is impacted about its midpoint. A huge staghorn calculus fills the pelvis and calyces of the kidney. Only a thin rim of renal tissue survives, particularly at the upper pole.
What is the diagnosis? Carcinoma of the bladder with renal and ureteric calculi
What are the causes of haematuria? Glomerulonephritis, polycystic renal disease, renal infarction, stones, tumours, bleeding diatheses, urinary tract infection

CASE 20838
The patient was a man of 72 who had complained of urinary frequency for 3 days. Cystoscopy revealed a lesion in his bladder. He died 18 hours post-operatively with pneumonia and Gram negative septicaemia.
Describe the specimen. The specimen consists of a bladder and prostate. The bladder has been opened anteriorly. Its wall is thickened. There is a polypoid fungating tumour 4cm in diameter, projecting from the right posterior wall of the bladder. Its surface is irregular, necrotic and frond-like with some blood clot. There are some haemorrhagic patches in the remainder of the bladder mucosa.
What is the diagnosis? Papillary transitional cell carcinoma.
Comment: Histology also revealed an adenocarcinoma within the posterior lobe of the prostate but this is not evident on macroscopic examination.

CASE 22073
The patient was a man aged 72 with a 1-week history of dysuria, frequency and haematuria. The prostate was hard and multi-nodular. Biochemical screening revealed elevated creatinine and acid phosphatase levels, and a haemoglobin of 91g/L. He then developed hyperkalaemia, his renal failure worsened and he died.
Describe the specimen. The specimen is a slice of prostate and bladder. The prostate is replaced by a large pale tumour showing foci of necrosis and haemorrhage. The bladder is small and its muscle coat is markedly hypertrophied. There is a patch of congested mucosa at the fundus.
What is the diagnosis? Carcinoma of the prostate
Why is there muscular hypertrophy in the bladder wall? The tumour has probably narrowed the prostatic urethra, making it more difficult to pass urine. The muscle has hypertrophied to push urine through the narrowed urethra more readily.

CASE 23090
This 76 year old man presented 10 months before his death with a five year history of nocturia and poor urinary stream, with a more recent history of incontinence. A nodular prostate could be felt via the rectum. Transurethral resection of the prostate was performed.
Describe the specimen. The specimen consists of bladder, prostate and rectum. A probe passes into the orifice of the right ureter that was partly obstructed. A diverticulum of the bladder 2cm deep with a neck about 1cm across is present on the right. The bladder is moderately trabeculated and shows patchy mucosal congestion. The prostatic urethra is irregular, inflamed and enlarged, measuring about 2cm across in its upper portion, the features in keeping with recent transurethral resection. The wall is composed of pale nodular tumour tissue which invades downwards and to the right. There are nodular metastases in the soft tissues on the right side.
What is the diagnosis? Carcinoma of the prostate

CASE 23211
The patient was a 65 year old man who died from an intracerebral haemorrhage. The specimen was an incidental finding at autopsy.
Describe the specimen. The specimen consists of a bladder and prostate. The prostate is greatly enlarged and has a nodular cut surface. The urethra is greatly compressed. The bladder wall is markedly hypertrophied and the mucosa is greatly congested and inflamed.
What is the diagnosis? Prostatic hyperplasia

CASE 23354
The patient was a 90-year old man with congestive cardiac failure who died from a cardiac arrhythmia. The specimen represents an incidental finding at autopsy.
Describe the specimen. The specimen consists of a portion of the bladder and prostate. The prostate is large and spherical measuring 6cm across. The cut surface shows nodular hyperplasia. The prostatic urethra, though it is compressed from side to side, is straight. The bladder is dilated and markedly trabeculated.
What is the diagnosis? Prostatic hyperplasia

CASE 24253 (bottom shelf)
The patient was a 69-year old man who died after a 9-year history of ischaemic heart disease. He had a clinically enlarged prostate and a prostatectomy had been tentatively planned. Investigations had revealed a raised creatinine.
Describe the specimen. The specimen consists of prostate, bladder, ureters and kidneys. There is gross nodular enlargement of the prostate, which measures 8 x 7 x 7cm. The urethra is elongated and compressed and is deviated to the left. The bladder is small, its wall markedly hypertrophied and there is mucosal congestion. There is a straight channel into a large diverticulum on the left side measuring 7 x 6 x 6cm.
There is mild bilateral hydronephrosis and hydroureter.
What is the diagnosis? Prostatic hyperplasia with bladder diverticulum and bilateral hydronephrosis
What is the likely pathogenesis of the diverticulum? Although bladder diverticula may arise as congenital lesions, they are more commonly the result of persistent urethral obstruction and increased pressure within the bladder as a result of prostatic hyperplasia or carcinoma.
What is their clinical significance? They provide an area of urinary stasis and predispose to infection and the formation of calculi.

CASE 24286
This patient was admitted with a long history of indigestion suggestive of duodenal ulceration, and recent haematemesis. Bleeding was not controlled satisfactorily by conservative means and laparotomy with undersewing of a peptic ulcer was performed. Approximately 12 hours post-operatively he collapsed and died. The specimen was an incidental finding at post-mortem.
Describe the specimen. The specimen consists of the bladder and prostate. The prostate is moderately enlarged with a smooth surface. Hypertrophy is most marked in the lateral lobes but the median lobe is also enlarged. There is mild hypertrophy of the bladder wall with some trabeculation.
What is the diagnosis? Prostatic hyperplasia

CASE 24398
The patient was a man aged 59 with a 12 month history of sore throat and dysphagia, with two months of haemoptysis. Pharyngoscopy showed a carcinoma of the left pyriform fossa which biopsy proved to be of squamous origin. Radiotherapy and chemotherapy were given but he died 2 weeks later. The specimen was an incidental finding at post-mortem.
Describe the specimen. The specimen is of the bladder with half the attached prostate. The prostate contains a collection of brown calculi up to 6mm in diameter in the left side (see bottom of pot). The bladder is small and mildly trabeculated.
What is the diagnosis? Prostatic calculi
Comment: Prostatic calculi are seen in about 7% of prostates with nodular hyperplasia and may be the result of improper drainage, infection or calcium deposition. Because of their hardness they may be misdiagnosed on rectal examination.

CASE 24410
The patient was a man aged 58 who had a pneumonectomy for tuberculosis 21 years previously and a myocardial infarction 14 years previously. He presented with anaemia and joint pains, and bone marrow biopsy showed a subleukaemic phase of acute myeloblastic leukaemia. He died of septicaemia. The specimen was an incidental finding at post-mortem.
Describe the specimen. The specimen comprises prostate and bladder. The prostate measures 4.5 x 4.5 x 5cm and shows irregular areas of caseous necrosis throughout both lateral lobes. The urethra runs relatively straight. There are some superficial tuberculous ulcers on the trigone of the bladder.
What is the diagnosis? Tuberculosis of the prostate

CASE 25317
The patient was a man aged 82 who was admitted to hospital febrile, vomiting and jaundiced. The liver was enlarged and firm, the spleen was palpable and the serum bilirubin elevated. Blood culture grew Gram-negative bacilli. Laparotomy was performed and the gall bladder was removed. At operation the liver was found to be cirrhotic. He remained jaundiced with clouded consciousness and died after 3 weeks in hospital. The specimen was an incidental finding at post-mortem.
Describe the specimen. The specimen consists of a bladder and prostate. The bladder is small and trabeculated. A papillary tumour measuring 2 x 1.5cm with a surface composed of friable fronds arises from the postero-lateral wall of the bladder just above the left ureteric orifice. The prostate is mildly enlarged and a pale area of nodular hyperplasia is visible in the right lobe. The prostatic urethra is straight and appears not to be obstructed.
What is the diagnosis? Papillary transitional cell carcinoma of the bladder and prostatic hyperplasia

CASE 25475
The patient was a man of 74 with severe chronic obstructive airways disease, who had been a heavy smoker for many years. He was admitted a month before his death with haematuria. Investigations showed small cell carcinoma of the upper lobe of the left lung. He died 2 months later.
Describe the specimen. The specimen consists of the bladder and prostate. An ulcerating tumour is present at the fundus of the bladder. It measures 4-5cm in diameter and irregular nodules project into the lumen. The bladder beneath the tumour shows some trabeculation. The prostate is not enlarged and the prostatic urethra is patent.
What is the diagnosis? Carcinoma of the bladder

CASE 50536/82
The patient was a man aged 75.
Describe the specimen. The specimen is of the bladder and prostate. The mucosa of the bladder is variably oedematous, congested and haemorrhagic. The prostate shows benign enlargement of the lateral lobes.

What is the diagnosis? Acute cystitis

CASE 50347/85
No clinical history is available.
Describe the specimen. The specimen consists of the bladder and prostate. The prostate shows benign enlargement and the cut surface is nodular. The vessels around the prostate contain antemortem thrombus. The bladder wall is trabeculated.
What is the diagnosis? Prostatic hyperplasia

CASE 50697/85
The patient was a man aged 84.
Describe the specimen. The specimen consists of the bladder and prostate. The bladder has been opened to reveal a calculus 3cm in diameter. The calculus has an uneven spiny surface.
What is the diagnosis? Bladder calculus
Comment: This is the typical appearance of an oxalate calculus.