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INJURIES TO THE MALE URETHRA
ANATOMY OF URETHRA

TUBULAR PASSAGE
EXTEND: NECK OF BLADDER
TO
EXT. URETHRAL MEATUS

20 CM
3.75 CM
MALE URETHRA

3 PARTS   PROSTATIC PART (3.1 CM)
MEMBRANEOUS PART  1.25 CM   1.9 CM
SPONGY PART  15 CM

BLOOD SUPPLY: ARTERIES TO BULB
Br OF INTERNAL PUDENDAL A

NERVE SUPPLY PERINEAL Br OF
PUDENDAL NERVE
INJURIES TO THE MALE URETHRA

- RUPTURE OF THE BULBAR URETHRA
- RUPTURE OF THE MEMBRANOUS URETHRA
RUPTURE OF THE BULBAR URETHRA

CAUSE

- FALL ASTRIDE PROJECTING OBJECT CYCLING ACCIDENTS
- LOOSE MANHOLE COVERS
- GYMMNASIUM ACCIDENTS
- WORKERS LOSING THEIR FOOTING
CLINICAL FEATURES SIGNS

- RETENTION OF URINE
- PERINEAL HAEMATOMA – SWELLING
- BLEEDING FROM EXT.URINARY MEATUS.
ASSESSMENT

ANALGESIC

IF SUSPECTED RUPTURE – DISCOURAGE URETHRA FROM PASSING URINE.

FULL BLADDER – PERCUTANEOUS SUPRAPUBIC SPC CATHETER DRAINAGE
IF PT. ALREADY PASSED URINE WHEN FIRST SEEN

NO EXTRAVASATION

PARTIAL URETHRAL RUPTURE SPC NOT NEEDED
TREATMENT

AVOID INJUDICIOUS CATHETERISATION
IT WILL CONVERT
PARTIAL TEAR → COMPLETE TRANSECTION
ASSESS URETHRAL INJURY

ASCENDING URETHROGRAM WITH WATER BASED CONTRAST FLEXIBLE CYSTOSCOPY
NO FACILITIES FOR SPC VERY OCCASIONALLY TRY TO PASS SOFF, SMALL CALIBRE CATHETER WITHOUT FORCE.
COMPLETE URETHRAL TEAR

SPC – ARRANGE FOR REPAIR

SOME SURGEONS – EARLY INTERVENTION

EARLY OPEN REPAIR
EARLY REPAIR

EXCISION OF TRAUMATISED SECTION AND SPATULATED END TO END REANASTAMOSIS OF URETHRA.
OTHER SURGEONS

WAIT LONGER FOR REPAIR USING URETHROSCOPE TO FIND WAY ACROSS GAP IN URETHRA
WAIT LONGER

- ALLOWS URETHRAL CATHETER TO BE PLACED
- ENDS OF URETHRA ARE ALIGNED HEALING OCCUR
COMPLICATION

IF THE PT. ATTEMPTS TO PASS URINE

SUBCUTANEOUS EXTRAVASATION OF URINE

STRUCTURE - PARTIAL OR COMPLETE INJURY

SIMPLE PERIURETHRAL BRUISING

INFECTION
INTRAPELVIC RUPTURE
OF THE URETHRA

Type C injury
mass of blood and urine

blood at the tip of the urethra

examine rectally; interpreting what you feel may be difficult
RUPTURE OF MEMBRANOUS URETHRA INTRAPELVIC

RUPTURE –

OCCUR NEAR APEX OF PROSTATE

CAUSE: PENETRATING WOUND

PELVIC FRACTURE
PELVIC FRACTURE
CAR ACCIDENT

FRACTURE # OF THE PUBIC RAMI

ISCHIAL RAMI

SUDDEN FORCE APPLIED TO ONE LOWER LIMB
FALLING FROM HEIGHT
LANDING ON ONE LEG

- SACROILIAC JOINT DISRUPTION
- ONE HALF OF THE PELVIS ISCHIOPUBIC RAMUS PUSHED UP ABOVE OTHER
FALLING FROM HEIGHT

THIS APPLIES

TRACTION FORCE ON THE PROSTATE

TORNS ENDS OF URETHRA - WIDELY DISPLACED
ANOTHER FRACTURE # PELVIS

FRONT – TO – FRONT COMPRESSION

BLOW DIRECTLY FROM FRONT

BUTTERFLY # OF PUBIC RAMI

ON EACH SIDE
ANOTHER # PELVIS

WHEN COMPRESSIVE FORCE IS RELIEVED PUBIC FRAGMENTS SPRINGS BACK END OF TORN URETHRA CLOSE 10 – 15 % # PELVIS - ASSOCIATED URETHRAL INJURY
CLINICAL FEATURES CAUSE

- RTA
- SEVERE CRUSH INJURIES
- FALLS
- THORAX INJURY
- HEAD INJURY
- ABDOMEN INJURY
- CONG BONE INJURY

GIVE PRIORITY
APPROPRIATE RESUSCITATION
TREATMENT – MEMBRANOUS URETHRA

- SPC SHOULD INSERTED AS SOON AS

  TYPE OF URETHRAL INJURY – ASSESSMENT

- PLAIN RADIO – GRAPP OF PELVIS ANY DISPLACEMENT OF PUBIC BONES.
P/R EXAMINATION

IF PROSTATE IS DISPLACED

- OUT OF REACH

- HIGH POSITION
ASSESSMENT

ASCENDING URETHROGRAM WITH WATER BASED - ANY DOUBT
ASSOCIATED INJURY BLADDER

- INTRA PERITONEAL RUPTURE

- EXTRA PERITONEAL RUPTURE
INTRAPERITONEAL RUPTURE BLADDER

BY

LAPAROTOMY

REPAIR OF BLADDER
EXTRAPERITONEAL RUPTURE BLADDER

DIFFICULT TO DISTINGUISH FROM RUPTURE OF MEMBRANEOUS URETHRA PAIN

BRUISING

DULNESS – ABOVE UMBILICUS

ON PERCUSSION
EXTRAPERITONEAL RUPTURE BLADDER

- SPC INSERTED
- BLADDER MUST REPAIR
- RETROPERITONEAL SPACE DRAINED
PELVIC TRAUMA LOWER URINARY TRACT INJURY

- MULTIPLE TRAUMA
- SPC INSERTED
- DEFINITE TREATMENT - DEFERRED
- INTRA PERITONEAL BLADDER RUPTURE - EXPLORATION
COMPLICATION OF RUPTURE OF MEMBRANOUS URETHRA

- STRicture
- URINARY INCONTINENCE
- IMPOTENCE
- ORTHOPAEDIC MANAGEMENT
- EXTRAVASATION OF URINE
STRICTURE

- INJURY SEVERE

- DISRUPTED ENDS OF URETHRA FAR APART

VERY DIFFICULT
SOME SURGEON

- REALIGN THE URETHRA
- EMERGENCY IS OVER
- REPOSITION PELVIC FRAGMENTS WITH EXTERNAL FIXATION
- CUT END WILL COINCIDE
STRICTURE

FOUND WITH

FLEXIBLE OR RIGID URETHROSCOPE

URETHRAL CATHETER INSERTED OR OPEN REPAIR
STRICTURE

SOME PREFER ALLOW LONGER PERIOD OF RECOVERY

BEFORE ATTEMPTING FOR CORRECTION
PT. NEED FULL SCALE URETHROPLASTY IN POORLY ALIGNED END OF URETHRA.
STRICTURE

- ENDS OF URETHRA WIDELY DISPLACED
- EXTENSIVE FIBROSIS
- CALCIFICATION GAP
- APPOSED BY CUTTING AWAY PUBIC BONE - SPECIALIST
URINARY INCONTINENCE

EXT.URETHRAL SPHINTER DESTROYED CONTINENCE

DEPEND BLADDER NECK MACHANISM

PROSTATECTOMY - DESTROY BLADDER NECK

INCONTINENCE
IMPOTENCE

ERECTILE IMPOTENCE - PELVIC # WITH URETHRAL INJURY
ORTHOPAEDIC MANAGEMENT OF PELVIC
EXTRAVASATION OF URINE

SUPERFICIAL EXTRAVASATION IN COMPLETE RUPTURE OF BULBAR URETHRA RUPTURE OF URETHRAL ABSCESS

URINE COLLECTS IN SCROTUM, PENIS AND SUPERFICIAL FASCIA IN ABD. WALL
EXTRAVASATION OF URINE

- URGENT OPERATION
- DRAIN BLADDER BY SPC
DEEP EXTRAVASATION OF URINE IN

EXTRA PERITONEAL RUPTURE OF BLADDER

INTRA PELVIC RUPTURE OF URETHRA

DURING TURP - DAMAGE OR PERFORATION OF PROSTATIC CAPSULE BLADDER
DEEP EXTRA - VASATION OF URINE

COLLECTS IN THE

LAYERS OF PELVIC FASCIA

RETROPERITONEAL TISSUE

TREATMENT

SPC

DRAINAGE OF RETRO PUBIC SPACE