Male urethral cancer

May be primary or secondary: primary rare; secondary commonly a/w urothelial carcinoma of the bladder

Primary urethral carcinoma usually arises secondary to chronic irritation

- Urethral stricture
- Frequent STI/urethritis

Presentation

- haematuria
- urethral bleeding
- persistent urethral stricture
- urethrocutaneous fistula

Histology

- 80% squamous cell carcinoma (a/w HPV 16)
- 15% transitional cell carcinoma
- 5% other (adenoCa, melanoma etc.)

Location

- 60% bulbomembranous
- 30% penile
- 10% prostatic
- Generally anterior urethral tumours do better than posterior urethral tumours

Spread

- Anterior urethra – superficial and deep inguinal LNs (unlike penile carcinoma palpable LNs almost always metastatic)
- Posterior urethra – pelvic LNs

<u>Staging (UICC)</u>

Tx	Tumour cannot be assessed
T0	No evidence of primary tumour
Tis	CIS
Ta	Papillary, polypoid or verucoid tumour
T1	Tumour invades subepithelial connective tissue
T2	Tumour invades corpus spongiosum or prostate stroma
T3	Corpus cavernosum, vagina or bladder neck
T4	Other adjacent structures

Nx	Nodal disease cannot be assessed
N0	No evidence of nodal disease
N1	Metastasis to a single LN < 2cm
N2	Metastasis to LN 2-5cm, or multiple LNs < 5cm
N3	Metastasis to LN > 5cm

Mx	Distant mets cannot be assessed
M0	No distant mets
M1	Distant mets

<u>Management</u>
Depends on location and tumour stage:

(i) Penile urethra

Superficial (<T2)	Transurethral resection Local excision and anastomosis Local excision and perineal urostomy Penis tip tumours may be treated by local excision and urethral repair	
Invasive (T2+)	Distal half penile urethra	Partial penectomy
	Prox. Half penile urethra	Total penectomy
	2cm margin of excision required for both Bilateral inguinal LND for palpable LNs No reported benefit for prophylactic LND	

(ii) Bulbomembranous urethra

Superficial	Uncommon TUR/laser fulguration Local excision and primary anastomosis
Invasive	Radical cystoprostatectomy, pelvic LND and total penectomy Possible inclusion of pubic arch excision and adjacent urogenital diaphragm in continuity Limited value for radical radiation therapy – reserved for unfit patients/those who refuse surgery

(iii) Urethral recurrence after orthotopic substitution

Urethrectomy with cuff of pouch. Excision of redundant pouch and use of chimney as ileal conduit is standard managment. Occasionally mitrofanoff/monti to neobladder but a/w high revision rate and risk of pelvic recurrence

Female urethral cancer

Primary urethral cancer only urological cancer more common in women than men
4x more common in females cf. males
Still rare however, accounting for ~ 1% femle GU malignancies
Whites > blacks
Aetiology – chronic irritation (Urethral diverticula, stricture, leukoplakia)
Presentation
- Bleeding
- Palpable mass
- Obstructive symptoms
- Acute retention
- Palpable lymphadenopathy (30% - higher in more advanced disease)

<u>Microscopy</u>

Squamous cell carcinoma	50-70%	(HPV 16)
Transitional cell carcinoma*	10-25%	
Adenocarcinoma**	10-25%	

* transitional cell epithelium covers proximal third of urethra (distal two thirds stratified squamous epithelium)
** slightly higher incidence in diverticula

Anterior two-thirds of urethra drain to superficial and deep inguinal nodes: posterior third to internal and external iliac nodes

<u>Diagnosis and staging</u>

Cystoscopy, EUA and biopsy
MRI useful for loco-regional staging
Pelvic lymph node mets in 20%
Staging as for male urethral cancer

<u>Treatment and prognosis</u>

As for males, distal tumours a/w better prognosis
Distal third of urethra may be excised without compromising continence

(i) Distal tumours
- Tend to be low stage
- Local resection acceptable for exophytic tumours of distal third
- Radical urethrectomy reported with bladder closure and diversion (iliovesicostomy or appendicovesicostomy) but local recurrence rates ~20%
- Radical radiotherapy a/w similar five yr-survival to surgery (55-70Gy +/- brachytherapy) – 40% 5YS
- No evidence for prophylactic LN dissection – bilateral LND only recommended in palpable disease.

(ii) Proximal tumours
- Tend to be higher stage
- Poor 5YS with anterior exenteration alone (<20%)

Combination therapy recommended for optimal Rx
- SCC = 5FU and MMC, radiation therapy and surgery
- TCC = MVAC/GemCis, radiation therapy and surgery

Surgery
- Wide vaginal excision+/- partial vulvectomy
- Anterior exenteration and pelvic lymph node dissection
- Pubic arch resection largely historical particularly if pre-operative radiotherapy considered