French Association of Urology. COVID-19: recommendations for functional urology.

Synthesis

We defined four clinical situations in order of descending criticality:

- Procedure to be maintained during the epidemic: **Group A**
- Procedure to be rapidly rescheduled (1 to 8 weeks): **Group B**
- Procedure to be rescheduled without urgency (8 to 16 weeks): **Group C**
- Procedure that can be rescheduled for several months (delay > 16 weeks): **Group D**

Clinical situation	Recommendations
Benign prostatic hyperplasia without complication	- Optimize medical treatment. - Postpone surgery **Group D**.
Benign prostatic hyperplasia with complication(s) in patients with risk of severe form of COVID 19*	*Urinary retention* - Keep bladder catheter with monthly change at home by a nurse, or intermittent catheterization (depending on feasibility). - 1 teleconsultation for follow-up. - Postpone surgery by evaluating the risk of catheter complications and the risk of iatrogenic COVID-19 infection. **Group B or Group C (6 to 10 weeks)** *Prostatitis* Risk assessment for COVID-19. Patient without urinary retention: Outpatient antibiotic care with early teleconsultation follow-up. Patient with urinary retention or severe sepsis: hospitalization.
Benign prostatic hyperplasia **with complications in patients without risk of severe form of COVID 19***	*Urinary retention* - Consultation for intermittent catheterization training (to give the patient autonomy and postpone surgery). - 1 teleconsultation follow-up. - Postpone surgery until a later time. **Group B (1 to 8 weeks)** *Prostatitis (see above)*

Idiopathic bladder overactivity With consultation already performed	- Sacral neuromodulation and low-dose intra-detrusor botulinum A toxin injection: Postpone without urgency : **Group C** or **Group D** - Second phase for neuromodulation test in progress (emergency implantation or explantation): **Group A** - Prefer 1st line combined treatment (local oestrogenotherapy, tibial neuromodulation, anticholinergics, beta3 agonists). - No pelvic floor muscle training with physiotherapists during confinement (confinement respected, limited contacts).
Bladder overactivity without neurologic etiology, without prior consultation	- Investigate without delay for other diagnoses (urinary infection, bladder cancer, stones). Explorations: Urinanalysis, urinary cytology, urinary tract ultrasound. - 1st line medical treatment (see above). - Teleconsultation for follow-up. - Patient with bladder cancer risk factors, negative check-up and persistent symptoms: cystoscopy in the next 2 months: **Group B**
Unbalanced neurogenic bladder Neurogenic etiology with risk of high bladder pressure (Supra-sacral spinal cord injury, spinal dysraphism) or other etiology with high pressure bladder (Pdet max > 30 cmH2O – bladder compliance < 15 ml/cmH2O) and/or unbalanced autonomic dysreflexia and/or repeated symptomatic infections (with or without fever) and/or new modification of the upper urinary tract	Intra-detrusor botulinum A toxin injection maintained: **Group A** No urodynamics during confinement. Urethral stent before sphincterotomy: postpone until 3 or 4 months later: **Group C.** Discuss the indication of a bladder catheter before surgery. Bladder augmentation +/- continent urinary diversion: Postpone until 3 or 4 months later: **Group C** Alternative: Intra-detrusor botulinum A toxin injection with higher doses or molecule switch (Botox® /Dysport®) +/- bladder catheter if intermittent catheterization is impossible. Cystectomy with incontinent diversion: Surgery must be maintained if: - there is a perineal fistula in perineal bedsore: **Group A** - there is acute renal failure owing to bilateral obstruction of the ureterovesical junction or massive vesicoureteral reflux For other patients with conservative treatment resistance, discuss, on a case-by-case basis, the degree of urgency or date of reprogramming: **Group B/A**
Balanced neurogenic bladder without risk (see above)	Postpone botulinum toxin treatment: **Group C** Optimize medical treatment. Postpone urodynamics and other explorations.

Stress urinary incontinence	- No pelvic floor muscle training with physiotherapists during confinement (confinement respected, limited contacts). -For forms resistant to physiotherapy with surgery requested: non-urgent surgery **Group C** or **Group D**
Pelvic organ prolapse	-Conservative management with pessary - No pelvic floor muscle training with physiotherapists during confinement (confinement respected, limited contacts). -Postpone surgery without urgency: **Group C** or **Group D** Except for grade 4 cystocele with acute renal failure resisting conservative management with pessary: emergency surgery: **Group A**
Urethral stenosis with urinary retention	Supra-pubic catheter with monthly change until rescheduling, without urgency: **Group C**
Urinary upper tract reconstruction Pyeloplasty for pyeloureteral junction Ureteroileoplasty for ureteral stenosis Ureterovesical reimplantation	Postpone for 2 to 6 months: **Group C** **or** **Group D** Ureteral stenting or nephrostomy before surgery.
Urinary fistula	*Urodigestive fistula* -vesicoenteral: surgery: **Group A** -Prostatorectal fistula: **Group C** - Prostatorectal fistula recent radiotherapy: **Group D**. Bladder catheter or suprapubic catheter before surgery. *Fistula between urinary tract and bones* Prostato-pubic or vesicoarticular fistula: surgery: **Group A**. *In women with uro-genital fistula:* **Group C** – **Group D** for patients with recent radiotherapy. Bladder catheter or suprapubic catheter before surgery For vesicovaginal fistula fewer than 5 days old and of less than 5 mm: medical treatment with bladder catheter exclusively.

* Given current knowledge following analysis of Chinese, Italian and American cases, the principal risk factors to develop a severe form of Covid-19 are: Age > 65, added risk if > 85 ± living in a retirement home; Diabetes; Chronic obstructive pulmonary disease (COPD, asthma, emphysema); Severe cardiac disease (in particular, coronaropathy and hypertension); Obesity.

Within the framework of functional urology and neurourology, neurologic patients have not been identified as being at risk for the severe form of Covid-19. In the only study that has taken them into account, the number of patients with Covid-19 was low (57/7,128 cases) and included very diversified pathologies with no spinal cord patients and only two patients with multiple sclerosis. This has to be balanced with comorbidity linked to the neurologic condition such as restrictive pulmonary disease, or systemic therapies (e.g. to treat Multiple sclerosis).