

1. Normal and pathological embryology of the urinary and genital tract

Code
CON

- 1.1. Development of the kidney and ureter
- 1.2. Development of the bladder and the urethra
- 1.3. Development of the female genital tract
- 1.4. Development of the male genital tract

2. Nephrology

NEPH

- 2.1. Normal physiology of the urinary tract and kidney
- 2.2. Pathophysiology of pre and postnatal hydronephrosis
- 2.3. Haematuria
 - 2.3.1. Definition
 - 2.3.2. Analysis
 - 2.3.4. Aetiology
 - 2.3.5. Diagnostic
- 2.4. Parenchymal pathology
 - 2.4.1. Glomerular diseases (glomerulonephritis, hemolytic-uraemic-syndrome)
 - 2.4.2. Tubular diseases (acute renal insufficiency, hereditary diseases)
 - 2.4.3. Interstitial nephritis
- 2.5. Renal insufficiency and dialysis
 - 2.5.1. Aetiology of chronic renal insufficiency
 - 2.5.2. Clinic (pyuria, anaemia, hypertension, bone metabolism; growth disorders)
 - 2.5.3. Dialysis (indication, peritoneal-haemodialysis)
- 2.6 Renal transplantation
 - 2.6.1. Indication
 - 2.6.2. Selection, risks and contra-indications
 - 2.6.3. Preparation and diagnostic work-up
 - 2.6.4. Transplantation-immunology (HLA)
 - 2.6.5. Cadaveric and living donor kidney
 - 2.6.6. Surgical technique of explantation, implantation and postoperative technical complication
 - 2.6.7. Working of Euro-Transplant-organization
 - 2.6.8. Posttransplant immunosuppression technique

3. Infection

INF

- 3.1. Definition of UTI (asymptomatic bacteriuria, bacterial cystitis, pyelonephritis)
- 3.2. Diagnosis of UTI (microbiology, culture media, preparation techniques)

- 3.3. Specific infection clinical features (abscess, tuberculosis, candida, eosinophilic cystitis, cystitis-cystica)
- 3.4. Orchitis, epididymitis

4. Principles in diagnosis of the urinary tract

DIA

- 4.1. History and physical examination of the child at different ages
- 4.2. Associated clinical signs with anomalies of the urinary tract
- 4.3. Urinalysis (stix, microscopic, chemical, culture)
- 4.4. Serum-analysis
- 4.5. Imaging of the urinary tract
 - 4.5.1. Ultrasound, color Doppler: theory, possibilities and limitations
 - 4.5.2. X-ray: protection principles, urography, cystography, video-urodynamics
 - 4.5.3. Contrast media: principles, indication and contra-indications
 - 4.5.4. Computerized tomography (principles, interpretation, possibilities, limitations)
 - 4.5.5. Magnetic Resonance Imaging (principles, interpretation, possibilities, limitations)
- 4.6. Special imaging of the urinary tract using radio-isotopes
 - 4.6.1. Principles
 - 4.6.2. Static imaging: DMSA
 - 4.6.3. Dynamic imaging: DTPA, MAG-3
 - 4.6.4. Interpretation of clearance and glomerular filtration rate: principles and limitations
 - 4.6.5. Direct and indirect cystography
 - 4.6.6. Extrarenal imaging: neuroblastoma
- 4.7. Prenatal diagnostic
 - 4.7.1. Ultrasound
 - 4.7.2. Urinalysis (electrolytes, tubular markers)
- 4.8. Non-invasive diagnostic of the lower urinary tract
 - 4.8.1. Uroflowmetry (principles, methods, interpretation)
 - 4.8.2. Electromyography (principles, methods, interpretation)
- 4.9. Invasive diagnostic of the lower urinary tract
 - 4.9.1. Antegrade and retrograde cystography (technique, interpretation)
 - 4.9.2. Video-urodynamic study (technique, interpretation)
 - 4.9.3. Cystometry (ambulatory and non-ambulatory)

5. Pre-, peri- and postoperative management of the child – Anesthesia principles

FLU

- 5.1. Selection, pre-operative studies
- 5.2. Parental information pre- and postoperative
- 5.3. Ambulatory surgery
 - 5.3.1. Selection

5.3.2. Local anesthesia techniques (methods, pharmacology)

5.4. Pain management (oral, rectal, parenteral)

5.5. Postoperative fluid management

5.6. Anaesthesia (principles, premedication)

6. Anomalies of the kidney and the upper urinary tract - Diagnostic, management, therapeutic options, surgery selection, surgical techniques of:

UPP

6.1. Prenatal hydronephrosis and associated problems (pulmonary hypoplasia)

6.2. Renal agenesis

6.3. Renal hypoplasia

6.4. Renal dysplasia (multicystic dysplastic kidney, cystic dysplasia with obstruction)

6.5. Renal duplication : incomplete

6.6. Polycystic infantile and adult renal disease

6.7. Horseshoe-kidney

6.8. Renal ectopia

6.9. Uretero-pelvic junction obstruction (UPJ)

6.10. Megacalycosis

6.11. Ureterocele (intra- and extravesical)

6.12. Ectopic ureter

7. Anomalies of the lower urinary tract - Diagnostic, management, therapeutic options, surgery selection, surgical techniques of:

LOW

7.1. Urachal pathology (open urachus, cysts, sinus, diverticulum)

7.2. Exstrophy – Epispadias - Complex

7.3. Bladder diverticulum

7.4. Vesico-ureteral reflux

7.5. Urethral valves

7.6. Urethritis posterior

7.7. Urethral strictures

7.8. Duplication of the urethra

7.9. Urethral diverticulum

7.10. Meatal prolapse

7.11. Urogenital sinus anomalies

7.12. Cloacal anomalies

8. Anomalies of the upper and lower urinary tract - Diagnostic, management, therapeutic options,

LOW

surgery selection, surgical techniques of:

8.1. Prune-Belly-Syndrome

9. Anomalies of the penis - Diagnostic, management, therapeutic options, surgery selection, surgical techniques of:

PTS

9.1. Hypospadias

9.2. Phimosis (lichen sclerosus)

9.3. Epispadias

9.4. Buried penis

9.5. Penoscrotal web

9.6. Micropenis

10. Anomalies of the testis and the scrotum - Diagnostic, management, therapeutic options, surgery selection, surgical techniques of:

PTS

10.1. Malescent of the testis (cryptorchism, ectopia, retractile)

10.2. Anorchia, polyorchia

10.3. Hydrocele, hernia

10.4. Varicocele,

10.5. Spermatocoele

11. Sexual differentiation problems

SEX

11.1. Embryology and physiology of genital differentiation

11.2. Hermaphroditism, female and male pseudohermaphroditism

11.3. Mixed gonadal dysgenesis

11.4. Chromosomal abnormalities

12. Function disorders of the lower urinary tract

FUN

12.1. Normal anatomy and physiology

12.2. Classification of functional disorders

12.3. Urinary diversion techniques

12.4. Non-neuropathic function disorders

12.5. Neuropathic function disorders : conservative treatment, bladder augmentation

12.6. Management of associated problems of neurogenic disorders (bowel, tethered cord, pubertas praecox, latex allergy, amnesia)

13. Primary monosymptomatic nocturnal enuresis

FUN

- 13.1. Pathophysiology
- 13.2. Treatment options

14. Paediatric urology emergencies - Diagnostic, management, therapeutic options, surgery selection, surgical techniques of:

EME

- 14.1. Renal infectious problems (pyonephrosis, renal abscess)
- 14.2. Renal non-infectious problems (trauma, renal vein thrombosis)
- 14.3. Ureteral trauma
- 14.4. Adrenal haemorrhage
- 14.5. Renal colic (acute upper urinary tract obstruction)
- 14.6. Urinary retention
- 14.7. Testicular torsion
- 14.8. Torsion of the appendix testis
- 14.9. Incarcerated hernia
- 14.10. Testicular rupture
- 14.11. Orchitis
- 14.12. Epididymitis
- 14.13. Paraphimosis
- 14.14. Priapism
- 14.15. Penile and scrotal trauma
- 14.16. Bladder trauma (intra- and extraperitoneal rupture)
- 14.17. Urethral rupture
- 14.18. Trauma of the female genital tract
- 14.19. Infection of the female genital tract (vulvovaginitis, foreign body)
- 14.20. Acute hydro- and haematocoele
- 14.21. Idiopathic scrotal oedema

15. Urolithiasis

LIT

- 15.1. Aetiology
- 15.2. Metabolic disorders
- 15.3. Chemical characteristics
- 15.4. Clinical, diagnostic and management
- 15.5. Treatment options

16. Paediatric urology oncology - Diagnostic, management, therapeutic options, surgery selection, surgical techniques of:

ONC

- 16.1. Wilms tumour

- 16.2. Neuroblastoma
- 16.3. Rhabdomyosarcoma
- 16.4. Testicular tumours (Leydig cell, Yolk Sac, Leukaemia)
- 16.5. Hypernephroma
- 16.6. Pheochromocytoma

17. Management and social aspects of the care of the child as a patient

- 17.1. Communication skills with the child and its family
- 17.2. Knowledge of the psychosocial and sexual development of a child