



Pediatric urological surgery: urinary tract diseases

Cirurgia urológica pediátrica: doenças do trato urinário

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ABSTRACT

Introduction: Pediatric urological surgery covers a wide range of urinary tract diseases in children. These conditions can affect the renal system, ureters, bladder and urethra, and require specific diagnostic and therapeutic approaches to ensure a good prognosis and quality of life for patients. **Objective:** To explore urinary tract diseases in pediatric urological surgery, highlighting the main conditions, surgical techniques and clinical outcomes. **Theoretical Background:** Topics covered include 3 axes: hydronephrosis, vesicoureteral reflux, posterior urethral valve and bladder extrophy. In addition, other diseases such as renal tumors, urinary obstructions, recurrent urinary tract infections and micturition disorders will be explored. The most used surgical techniques will be discussed, such as minimally invasive surgery, urological reconstructions and pediatric kidney transplantation. **Methodology:** The literature search was conducted using the electronic databases PubMed, Scopus and Web of Science. The following descriptors were used: "pediatric urological surgery", "urinary tract diseases", "surgical techniques". The inclusion criteria adopted comprised studies published between 2010 and 2023, original articles addressing urinary tract diseases in pediatric urological surgery, available in full text and written in English. **Final Results:** Congenital anomalies, such as hydronephrosis and vesicoureteral reflux, require early diagnosis and surgical intervention to prevent permanent kidney damage. Advanced surgical techniques, such as minimally invasive surgery, have shown promising results in correcting these conditions with lower morbidity and reduced recovery time. In the case of renal tumors, surgery plays a key role in complete resection of the tumor, with renal preservation whenever possible. Urinary obstructions and recurrent urinary tract infections can be treated with surgical interventions to relieve the obstruction or correct structural



abnormalities. In conclusion, pediatric urological surgery plays a key role in the management of urinary tract diseases in children.