

WILMS TUMOR: A LITERATURE REVIEW

SCHUSTER, A. L.¹; BASSANI, B. F. B.¹; FARIAS, E. R.¹

¹- Universidade Luterana do Brasil

Introduction:

The Wilms tumor is the main kidney neoplasm in the pediatric population, corresponding to about 5% of all childhood neoplasms³.

Objective:

Describe the main features of the Wilms tumor.

Methodology:

A literature review was carried out using Pubmed databases in the period of February to first half of March 2022, using the descriptors "Wilms tumor" and "Review" with filter for publications from the last ten years.

Results:

The Wilms Tumor corresponds to a malignant embryonic tumor, so most of the cases are diagnosed in childhood, making adult cases extremely rare. Certain syndromes are related to an increased risk of developing the neoplasm, since in about 9-17% of cases there is a previous syndrome such as WAGR Syndrome (Wilms Tumor, aniridia, genitourinary anomalies, mental retardation), Beckwith-Wiedemann Syndrome, Denys-Drash Syndrome, among others². In addition, the presentation occurs mostly unilaterally, but in 10% of cases there is bilateral or multicentric involvement³. In general, post-treatment survival has increased in recent years, reaching about 90%, with recurrence occurring in 15% of cases¹. However, there are cases of metastasis resulting from Wilms Tumor, with the lung being the main organ affected^{1,5}. The main clinical manifestation is the presence of an isolated abdominal mass. Other manifestations include: abdominal pain, hematuria, anemia, hypertension, subcapsular hemorrhage. The definitive diagnosis is made by means of biopsy and histological examination, but initially ultrasound is used to visualize the renal tumor. Treatment is preferably by a surgical approach aiming to save renal function, but it depends on the tumor extension and the existence of metastasis⁴.

Conclusion:

The Wilms tumor corresponds to the main renal tumor in the pediatric age group, but it has a high survival rate if diagnosed and properly managed. In a number of cases, there is a close relationship with previous genetic syndromes, and screening through imaging tests, such as ultrasound, is important in these specific cases. Clinical manifestations are diverse, ranging from nonspecific urinary signs and symptoms to an abdominal mass and subcapsular hemorrhage. Therefore, Wilms' tumor is an important differential diagnosis in childhood urological complaints, especially in children with genetic syndromes.

References:

- 1-PATER, L, et al. Wilms tumor. *Pediatr Blood Cancer*. 2021; 68:(Suppl. 2):e28257.
- 2-LIU, E.K., SUSON K.D. Syndromic Wilms tumor: a review of predisposing conditions, surveillance and treatment. *Transl Androl Urol*. 2020 Oct;9(5):2370-2381.
- 3-NELSON M.V., et al. New approaches to risk stratification for Wilms tumor. *Curr Opin Pediatr*. 2021 Feb 1;33(1):40-48.
- 4-ALDRINK J.H., et al. Update on Wilms tumor. *J Pediatr Surg*. 2019 Mar;54(3):390-397.
- 5- INSTITUTO NACIONAL DO CÂNCER(INCA). Tipos de Câncer: Tumor de Wilms. 2021. Available in: <https://www.inca.gov.br/tipos-de-cancer/cancer-infantojuvenil/tumor-de-wilms>. Accessed in March 09, 2022.

Keywords:

Wilms Tumor; Review; Kidney Neoplasm