Malignant schwanoma. A case report

José Carlos Echeverría M.D.
Mary Geovana Coti M.D.
Ludwing Gudiel Pérez M.D.
Sindy Maribel Sosa M.D.
Glendy Maricela Orozco M.D.

Background:
Malignant peripheral nerve sheath tumors (PMVNP) are a rare variety of soft tissue sarcoma of ectodermal origin. Also known as Malignant Schwanoma, malignant neurylenoma or neurofibrosarcoma. They are associated with neurofibromatosis type 1 (NF1) and are rarely located in the digestive system. Its typical age of presentation is between 20 and 50 years. The tumors are fast growing, exert a mass effect and cause pain.

Keywords: Malignant Schwannoma.

Quetzaltenango, Guatemala

Case Report

Radiology

OPEN ACCESS

A malignant Schwanoma is a tumor that has its origin in the neuroectoderm, affects the adult population and is very rare in the pediatric population. But it is considered extremely aggressive due to the mass effect it produces and the intense pain. In this case, a one-year-old male patient presented with a malignant Shwannoma at the level of the pelvic cavity, where ultrasound, urethrocystogram and abdominopelvic tomography in simple phase and with contrast medium were essential to characterize said tumor, determine its extension and size. Due to this, this report focuses on describing the characteristic imaging findings of this type of tumors.

Case report

A 1-year-old male patient, originally from San Martin Chile Verde, Quetzaltenango, the patient's mother reports that the patient begins with irritability and loss of appetite, so they consult with a pediatrician, who tells him that he has a urinary tract infection and dehydration, gives outpatient treatment and when he does not show improvement, he is referred to this hospital center, where various studies are performed.

Discussion

A malignant Shwannoma is a tumor that originates in the neuroectoderm, with an incidence between 20 and 50 years, they are associated with neurofibromatosis type I, they evolve rapidly due to the mass effect they produce and the intense pain that the patient experiences. Rhabdomyosarcoma is mentioned in the differential diagnosis(1). Ultrasound shows a fusiform mass which is a continuation of a hypoechoic and/or heterogeneous nerve, and may also have a pseudocapsule. MRI in T1 is usually isointense to the muscle (4).

Heterogeneous T1 signal (if present) can be useful to differentiate from a neurofibroma and on T2 it may have low signal due to the high collagen content. The tomography shows an infiltrative mass with a heterogeneous appearance associated with hemorrhagic foci and/or necrosis; the administration of contrast medium shows heterogeneous enhancement (1-2).

Conclusion

Malignant Shwanoma is a rare tumor in pediatric patients that can be diagnosed by ultrasound, tomography and magnetic resonance imaging, which allow the mass, size and extension of the tumor to be identified in order to opt for complete resection since this tumor does not directly invade. to the original nerve can be separated from, recurrence is unlikely in a complete resection (3).

Conflicts of interests

The authors of this article declare no conflicts of interest.

From the Department of Radiology, Hospital regional of Occidente, Quetzaltenango. Received on October 24, 2024. Accepted on November 28, 2024. Published on November 29, 2024.

DOI 10.5281/zenodo.14249478
Copyright 2024 © Unauthorized reproduction of this article is prohibited.

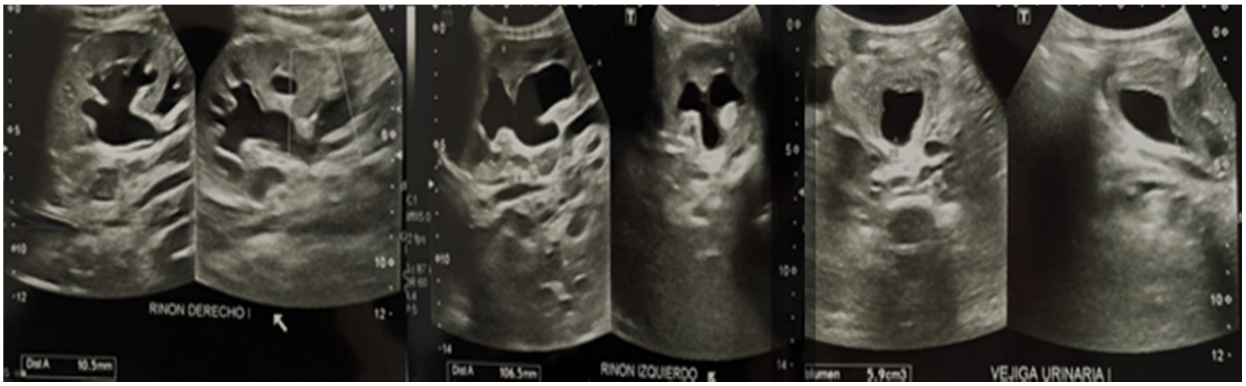

Figure 1. Both kidneys are observed to have lost their normal configuration and are enlarged, with the presence of bilateral grade II hydronephrosis. The urinary bladder is seen displaced superiorly and with loss of its configuration.

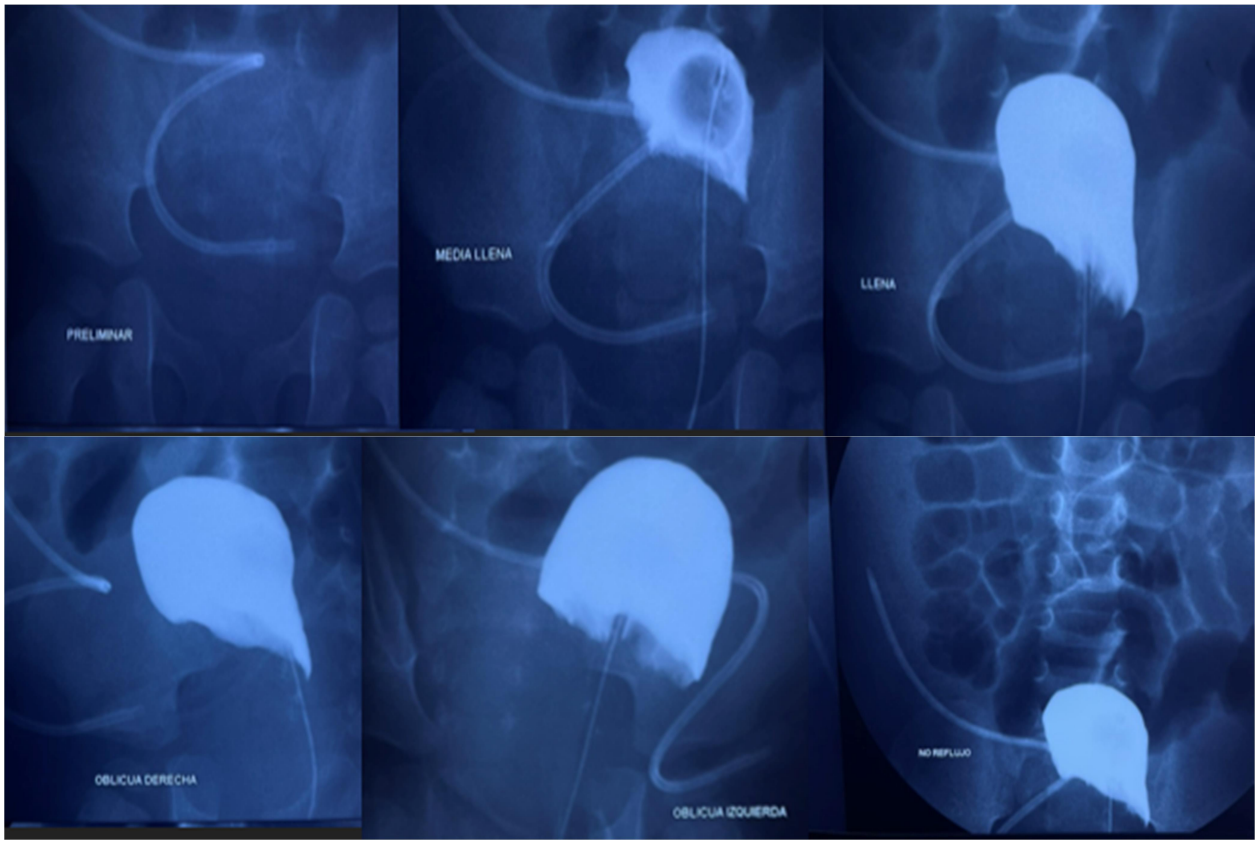

Figure 2. Urethrocystogram, which shows loss of the normal configuration of the urinary bladder and superior displacement of it.

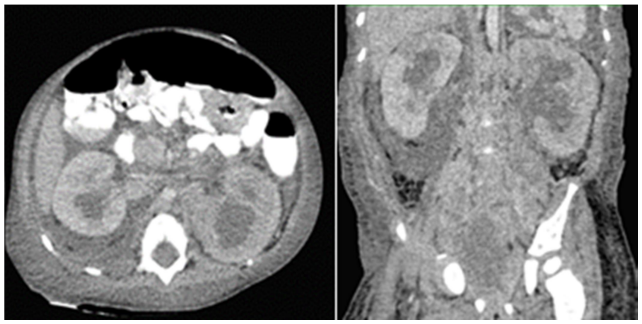

Figure 3. In the axial, coronal and sagittal sections of the pelvic tomography in contrast phase, a large, amorphous image with a heterogeneous appearance is documented with non-uniform enhancement after the administration of contrast medium, which displaces the urinary bladder and the adjacent structures due to the mass effect it produces.

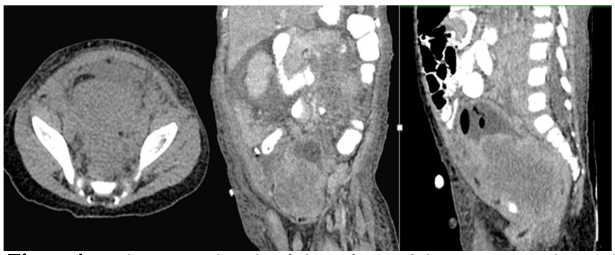

Figure 4. In the coronal and axial sections of the contrast-enhanced abdominal tomography, the kidneys are enlarged and have an edematous appearance associated with dilation of the pyelocalyceal system.

DOI 10.5281/zenodo.14249478
Copyright 2024 © Unauthorized reproduction of this article is prohibited.

Acknowledgements

We thank Dr. Jose Carlos and Dra. Mary Coti and Dra. Sindy Sosafor their support in the diagnosis of this case.

References

1. Maulik S Patel. Schwannoma. 2023 . [Cited 20 september 2024]. Reference Article. Available at: https://radiopaedia.org/articles/schwannoma
2. María José Rodríguez Muñoz, Carlos Pastor Sánchez, María Rojo Trujillo, Beatriz Leiva Pomacahua, Beatriz Sánchez Neila, Ludmila Protti. Schwannoma typical and atypical locations. 2021. [Cited 20 de september 2024]. Reference Rticle Available at: https://piper.espacio-seram.com/index.php/seram/article/view/4534
3. Hernández-Castellanos VA, Merayo-Chalico C, Sánchez-Turati JG, Intrarenal schwannoma. [Cited 30 de september 2024]. Reference Article. Available at. https://www.elsevier.es/es-revista-revista-mexicana-urologia-302-articulo-schwannoma-intrarrenal-presentacion-dos-casos-X200740850949535X
4. Susan C. Shelmerdine , Armando J. Lorenzo , Abha A. Gupta , Govind B. Chavhan. Pearls and errors in the diagnosis of masses in the pediatric urinary bladder. 2017. [Cited 30 de september 2024]. Reference Article. Available at: https://pubs.rsna.org/doi/10.1148/rg.2017170031.

Glendy Maricela Orozco
Department of Radiology
Hospital Regional de Occidente
Quetzaltenango, Guatemala

 DOI 10.5281/zenodo.14249478
Copyright 2024 © Unauthorized reproduction of this article is prohibited.