SAS Journal of Surgery
Abbreviated Key Title: SAS J Surg
ISSN 2454-5104
Journal homepage: https://www.saspublishers.com

OPEN ACCESS

Visceral Surgery

Primary Retroperitoneal Tumors: A Report of 08 Cases at the General Surgery Department of The Mohamed VI University Hospital in Marrakech

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DOI: 10.36347/sasjs.2024.v10i05.002 | **Received:** 22.03.2024 | **Accepted:** 26.04.2024 | **Published:** 02.05.2024

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Abstract **Original Research Article**

Primary retroperitoneal tumors are a rare and heterogeneous group of neoplasms arising within the retroperitoneal space, excluding the kidneys, urinary tract, adrenal glands, major blood vessels, and adjacent viscera. Treatment involves surgical resection, often requiring sacrifices of adjacent organs, with adjuvant chemotherapy considered in some cases. Histologically, mesodermal tumors were most common, with myxoid liposarcomas being predominant. Long-term outcomes vary, with some cases showing favorable evolution but others experiencing recurrence or mortality post-surgery. This study aims to provide insights into the clinical presentation, diagnostic approach, treatment modalities, and long-term outcomes of primary retroperitoneal tumors based on a retrospective analysis of cases treated at the general surgery department of the Mohamed VI University Hospital in Marrakech. By elucidating the characteristics and management of these tumors, this study seeks to contribute to the understanding of primary retroperitoneal tumors and guide future diagnostic and therapeutic strategies to improve patient outcomes.

Keywords: Primary Retroperitoneal Tumors, Retroperitoneal Neoplasms, Diagnosis, Biopsy, Sarcome, Treatment, Outcomes.

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I. INTRODUCTION

Retroperitoneal tumors encompass all tumors that arise in the retro and sub-peritoneal space independent of the kidney, urinary tract, adrenal gland, major blood vessels, and adjacent viscera [1].

Despite their rarity, these tumors present significant diagnostic and therapeutic challenges due to their late clinical manifestation, complex histological features, and variable treatment responses [2]. The diagnostic delay, uncertainty regarding histological nature, and the difficulty in determining optimal treatment strategies contribute to the morbidity and mortality associated with these tumors [3].

II. PATIENTS AND METHODS

We present a retrospective study of 08 cases of retroperitoneal tumors, collected at the visceral surgery department at the Mohamed VI University Hospital in Marrakech over a period of 8 years (January 2016 to December 2023).

III. RESULTS

Our patients were distributed among 05 females and 03 males with a mean age of 57 years. The diagnostic delay ranged from 30 days to 1 year with an average of 6 months. The main presenting symptoms were abdominal mass (08 cases, 100%) and pain (06 cases, 75%). Diagnosis relied primarily on ultrasound (04 cases, 50%) but especially on computed tomography (CT) scan (08 cases, 100%), which precisely determined the retroperitoneal location and the tumor's relationships with adjacent organs.

Treatment was mainly surgical. The most commonly used approach was the transperitoneal approach, which was chosen in 8 cases (100%): midline in 7 cases (83.5%) and lateral in 1 case (12.5%). (Fig. 1)

The extraperitoneal approach via lumbotomy was not performed in any case.

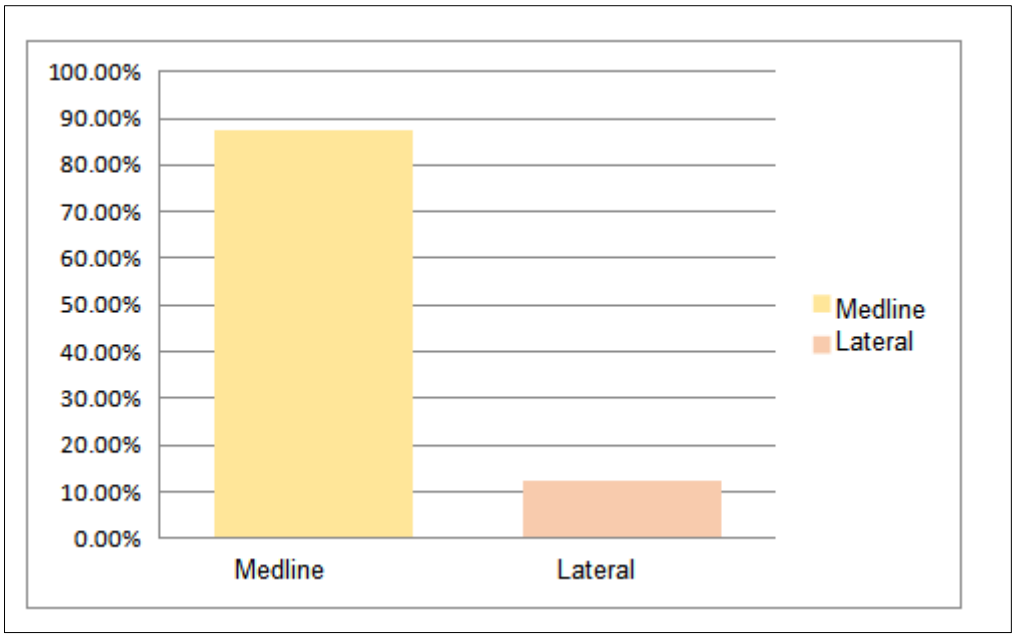

Figure 1: Types of incisions chosen during transperitoneal surgery.

Complete resection was achieved in 06 cases (75%) and occasionally requiring visceral sacrifices (02 cases, 25%).

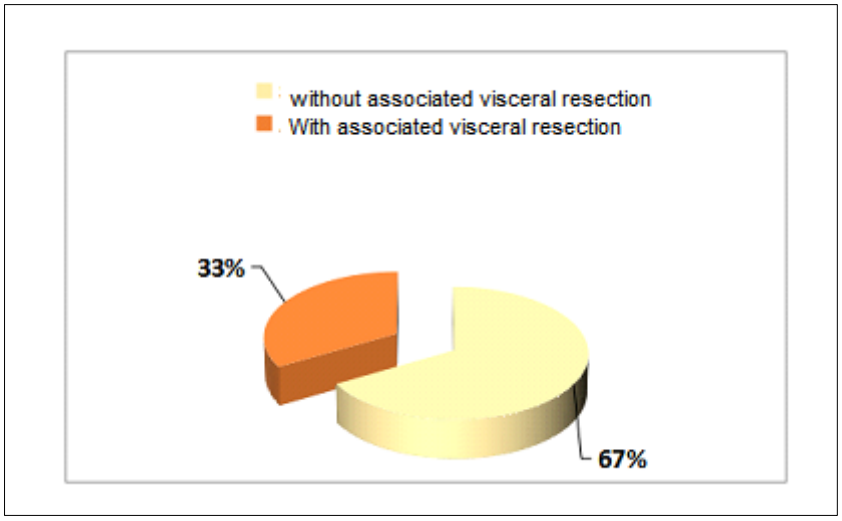

Figure 2: The frequency of associated visceral resections among our patients

Immediate postoperative outcomes were uncomplicated in all patients. Adjuvant chemotherapy was administered in 02 cases. Histologically, the mesodermal variety was the most common (87.5%), comprising 07 malignant tumors including 05 myxoid liposarcomas grade1 (02 cases) grade2 (02 cases) grade3 (01 case) according to the FNCLCC, one moderately differentiated leiomyosarcoma, and one chondrosarcoma. The ectodermal variety was found in only one case (12.5%): a benign schwannoma.

Long-term follow-up was difficult to assess due to irregular patient monitoring; 03 cases were lost to follow-up. In one case, follow-up CT scan revealed recurrence, which underwent a second surgery with incomplete tumor resection, leading to a decision for therapeutic abstention. In 02 cases, the outcomes were deemed favorable with follow-up of 2 years (01 case) and 8 years (01 case). Two patients died within 2 years following surgery.

IV. DISCUSSION

This study presents a retrospective analysis of 8 cases of primary retroperitoneal tumors treated at a single institution over a 8-year period. Retroperitoneal tumors pose significant diagnostic and therapeutic challenges due to their rarity, late presentation, and complex histological nature.

The findings of this study are consistent with existing literature, highlighting the difficulty in diagnosing retroperitoneal tumors promptly [4]. The

delay in diagnosis observed in this study, with an average of 6 months, underscores the need for heightened clinical suspicion and more effective diagnostic strategies to facilitate earlier detection.

Clinically, patients typically presented with abdominal mass and pain, consistent with previous reports [5]. The reliance on imaging modalities, particularly ultrasound and CT scan, for diagnosis is also in line with standard practice. These imaging techniques play a crucial role in localizing tumors and assessing their relationships with adjacent structures, aiding in treatment planning [6].

Surgical resection remains the mainstay of treatment for primary retroperitoneal tumors, with complete resection achieved in the majority of cases in this study. However, the need for visceral sacrifices in some cases highlights the challenging nature of these procedures and the potential impact on patient outcomes [7].

Histologically, mesodermal tumors, particularly myxoid liposarcomas, were the most common findings, consistent with the literature [8]. The presence of malignant tumors underscores the importance of accurate histological diagnosis and grading for determining appropriate treatment strategies.

Long-term outcomes varied, with some patients experiencing favorable evolution while others faced recurrence or mortality post-surgery. The challenges in predicting long-term outcomes highlight the need for continued monitoring and surveillance, particularly given the high recurrence rate associated with these tumors [9].

In conclusion, this study contributes to our understanding of primary retroperitoneal tumors, emphasizing the importance of early diagnosis, accurate histological assessment, and multidisciplinary treatment approaches. Further research is needed to elucidate optimal diagnostic and therapeutic strategies and improve long-term outcomes for patients with these rare and challenging tumors.

V. CONCLUSION

Primary retroperitoneal tumors in adults are rare, and their severity stems from a frequently delayed diagnosis due to the space's complacency in which they develop. Definitive diagnosis relies on surgery, which also remains the most effective treatment and may involve adjacent organ excision. Adjuvant treatment may be considered in cases of incomplete resection. The prognosis remains bleak due to delayed diagnosis and the recurrent evolution of these tumors. Improving the prognosis of these tumors primarily relies on treatment, which is subject to several constraints. The high frequency of recurrences necessitates clinical and radiological surveillance over several years.

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