

*Left testicular tumor. Case reports*  
**Tumor testicular izquierdo. Presentación de caso**

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**ABSTRACT**

The testicular tumor forms in one or several testicles. It is more common in young or middle-aged men. Most testicular tumors begin to form in the germ cells (which become sperm) and are called a testicular germ cell tumor. The appearance of testicular germ cell tumors constitutes more than 90% of these cancers, for which it was decided to report the case of a young patient with a testicular tumor, diagnosed at the Saturnino Lora Provincial Hospital, Santiago de Cuba, in 2022, with the aim of describing it, for which 11 bibliographic references were consulted. The favorable response to oncospecific treatment of these tumors and their appearance in early stages of life require accurate and timely diagnosis. The first line treatment for testicular tumor is surgery to remove the tumor. This is followed by chemotherapy treatment.

**RESUMEN**

El tumor testicular se forma en uno o varios testículos. Es más común en hombres jóvenes o de edad mediana. La mayoría de los tumores testiculares comienzan a formarse en las células germinativas (que se convierten en espermatozoides) y se llaman tumor de células germinativas de testículo. La aparición de tumores de células germinativas de testículo constituye más del 90% de estos cánceres, por lo cual se decidió reportar el caso de un paciente joven con tumor testicular, diagnosticado en el Hospital Provincial Saturnino Lora, Santiago de Cuba, en 2022, con el objetivo de describirlo, para ello se consultaron 11 referencias bibliográficas. La favorable respuesta al tratamiento oncoespecífico de estos tumores y su aparición en etapas tempranas de la vida requiere un diagnóstico preciso y oportuno. El tratamiento de primera línea para el tumor testicular es la cirugía para extirpar el tumor. A esto le sigue un tratamiento de quimioterapia.

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## INTRODUCTION

The term cancer encompasses a large group of diseases characterized by the development of abnormal cells, which divide, grow, and spread uncontrollably throughout any part of the body. Normal cells divide and die during a programmed period of time, however, the cancerous or tumor cell "loses" the ability to die and divides almost without limit. Such multiplication in the number of cells leads to the formation of masses called "tumors" or "neoplasias" that in their expansion can destroy or replace normal tissues. <sup>(1)</sup>

Cancer has afflicted our species throughout its history since there is evidence of cancer in fossilized bones of mummies from ancient Egypt. The origin of this word is attributed to Hippocrates (460 – 370 BC), who used the terms carcinoma and carcinos to refer to tumors that formed and did not form ulcers. <sup>(2)</sup> The etiology of cancer was unknown to physicians. <sup>(3)</sup>

Cancer originating in the testicles is called testicular cancer. Testicular cancer is the most common malignancy in men between 25 and 45 years of age. As a result of therapeutic advances in recent decades and the integration of multimodal treatment, testicular cancer is now one of the most curable neoplasias. Despite favorable long-term survival, diagnosis is usually at a late stage, due to its initial asymptomatic presentation. <sup>(4)</sup>

The testicles are composed of many types of cells, each of which can originate one or more types of cancer. It is important to know the type of cell in which the cancer originated and what type of cancer it is, as they are treated in different ways and have different prognoses. More than 90% of testicular cancer tumors originate in cells called germ cells, which produce sperm. The main types of germ cell tumors in the testicles are: seminomas and non-seminomas. <sup>(4)</sup>

The incidence of this pathology has increased worldwide in recent decades. In 2016, a study that evaluated data from population-based cancer registries worldwide for the period 2000-2005, published that the highest standardized incidence rates are reported in Nordic countries and the lowest in countries in Asia and Africa. In this same study, the incidence of testicular cancer in Chile was the highest among Central and South American countries with 8.8 per 100,000 male inhabitants.

(5)

In Cuba, the results of the mortality estimate are 0.24 per 100,000 inhabitants, ranking 45th in the incidence of cancer in the country. In the province of Santiago de Cuba, this disease is managed with the medical recommendations of testicular self-examination, in addition to the necessary prevention measures to avoid the progress of this cruel disease, which, if detected in time, can be cured in most cases <sup>(6)</sup>. For this reason, the objective is to describe the clinical characteristics of a patient diagnosed with a left testicular tumor at the Saturnino Lora Provincial Hospital in 2021.

### **CASE PRESENTATION**

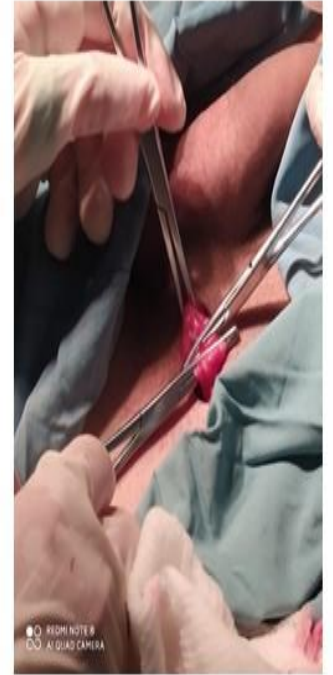
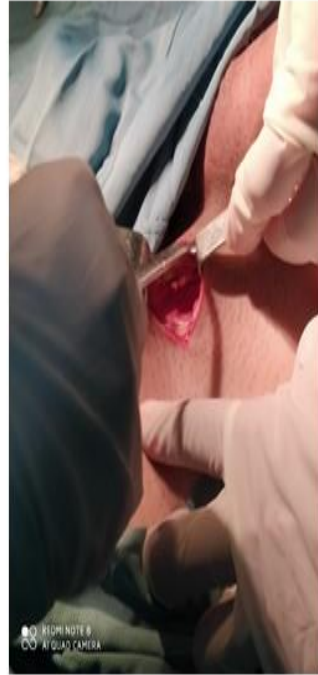
A 19-year-old male patient, mestizo, skilled worker, from a rural background, with a history of apparent health. He came to the Urology consultation due to an increase in the volume of the left testicle that began a month ago, hard, fixed, not painful to palpation, small in size. The physical examination of the genitourinary system confirmed said increase in volume.

Among the complementary tests performed was the complete blood count where hematocrit was observed at 0.45 L/L, leukocytes at 7.4 per 10<sup>9</sup>/L, polysaccharides at 0.56 and lymphocytes at 0.44; coagulogram where bleeding time of 2', coagulation time of 7', retractile clot and platelet count of 170 per 10<sup>9</sup>/L were observed; blood sugar of 4.0 mmol/L, creatinine of 75 mmol/L and positive alpha-fetoprotein.

Imaging studies included an abdominal ultrasound with normal results, and a scrotal ultrasound with Doppler revealed an enlarged left testicle, a complex irregular image with increased vascularization and little fluid inside.

The definitive diagnosis was a classic seminoma-type testicular tumor, 2 by 1.2 cm multifocal, with marked necrosis, hemorrhage, lymphatic vascular invasion, no blood vascular invasion, adipose tissue invasion, severe lymphocytic reaction, and no granulomatous reaction. A left orchiectomy was performed and the patient was referred to the Oncology service for treatment (See Image #1).

## Orquictomía izquierda. Paciente RMA, 19 años. Tumor Testicular Izquierdo



**Image #1:** Left orchietomy.

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## DISCUSSION

The study of this case is of great relevance because it refers to a disease that affects men between 25 and 45 years of age, even though the case in question is 19 years old, which is rare, generating a strong clinical and emotional impact on the patient and those around him.

It is important for men to know their genitals in order to detect any abnormality early. Some professionals recommend that, just as women perform a breast self-examination, men also perform a testicular self-examination, so the decision is personal to each man.

In the present case, it is of scientific interest that the alpha-fetoprotein gave a positive result, however, the pathological tests determined a classic seminoma and not an embryonal carcinoma as commonly occurs in these cases. This provides medical sciences with a new way of studying this type of pathology.

Scientifically, testicular cancers encompass a varied morphological and clinical group of neoplasias. Almost all of them are primitive testicular tumors and the majority are germ cell tumors. <sup>(7, 8, 9)</sup>

Silverio and Vera <sup>(10)</sup> present the case of a 23-year-old male patient who was admitted to an emergency room in Chile due to a tumor in the right testicle. The patient reported having perceived a small, hard mass in the testicle 3 years ago. In the opinion of the author of this research, the case described above was a consequence of the patient not being diagnosed in time, leading to an aggressive outcome of the tumor, corroborating once again the importance of testicular self-examination for an early diagnosis.

Valderrama Gómez <sup>(11)</sup> presents the case of a 21-year-old male patient who was admitted to the Urology outpatient clinic with a clinical picture of 2 years' evolution, characterized by a painless left testicular mass that progressively increased in volume. The position taken by the author of this research is that testicular surveillance and self-examination is of utmost importance not only in men aged 25-45, but also in infants, adolescents and older adults, because testicular tumors have several faces that can confuse patients when there is not enough information about them, and this is a tumor that has a high rate of remission and survival, which responds favorably to chemotherapy, as long as it is detected in time.

## CONCLUSIONS

The patient's evolution was favorable after the surgical treatment. It would be beneficial to implement self-examination campaigns for testicles, for an early diagnosis, and to modify the idiosyncrasy of the male population, so that tumors would not behave so aggressively, and also prevent metastasis. The acquisition of knowledge by everyone on various topics related to health care is invaluable, since preserving health as a state of general well-being helps prevent the development of diseases, access the proper diagnosis of certain conditions and initiate the treatment that the health professional suggests and agrees with the patient.

#### **DECLARATION OF CONFLICT OF INETEREST**

The authors declare that they have no conflict of interest.

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