

# Malignant Mesothelioma, Unusual Presentation

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## ABSTRACT

Malignant mesothelioma is a rare tumor related to asbestos exposure. We present the case of a 76-year-old male patient with a history of being a smoker and a fisherman by profession who began with shortness of breath at exertion, chest pain on the right side, loss of weight and cough. A pleural puncture was performed with a cytochemical study of the pleural fluid, diagnosing malignant mesothelioma. Mesothelioma is a diagnosis to be taken into account in a patient with pleural effusion and respiratory symptoms, even if predisposing risk factors for it are not included.

**Key words:** Mesothelioma, asbestos disease, pleural effusion.

## INTRODUCTION

**M**alignant mesothelioma is a rare tumor disease. It arises from mesothelial cells on the pleural or peritoneal surfaces. It may arise from the pleura (pleural mesothelioma), the peritoneum (peritoneal mesothelioma), or the tunica vaginalis (testicular mesothelioma). [1,2]

The world incidence of mesothelioma in the year 2020, in relation to the standardized rate by age according to sex (100,000) has been 0.5 in men and 0.3 in women, while the world mortality of mesothelioma in relation to the rate standardized by age for men has been 0.4 and in women 0.1.[1] About 3,000 new cases are reported in the United States each year. About 80% of these occur as pleural mesothelioma.[2]

It most commonly affects people exposed to asbestos.[1-5] The proven latency period between the onset of asbestos exposure time and the development of mesothelioma ranges from 20 to 40 years.[6]

The most common clinical signs at presentation of malignant pleural mesothelioma include dyspnea and shortness of breath on exertion,[2,3] usually related to the development of pleural effusion, and also very commonly accompanied by pleural pain, which it is not usually clearly related to respiratory movements.[3,5]

Median survival from the onset of symptoms without treatment is generally 6 months, with one treatment modality it increases from 9 to 12 months and with multimodal treatment, depending on the stage and histological type, survivals of between 2 and 5 years are described. [5]

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### Presentation of The Case

76 years old man, black, history of HTN, former heavy smoker, came to clinic complaining of shortness of breath at exertion, chest pain right side for two weeks. Lost of weight approximately 8 kg in the last month, he denies fever, cough.

### On Examination

Remarkable Dullness right side, not rales.

### Complementary Exams

Hemoglobin 12.4g/dL

White Blood Cell 9x10<sup>9</sup>

Platelets 168 mmol/l

CRActive Protein 30

Chest radiography: Moderate pleural effusion on right lung. (Figure 1)

Chest CT Scan moderate pleural effusion.



**Figure 1.** Chest x ray: Moderate pleural effusion

The patient was tapped being drained 2 liters yellowish fluid AFB smear genexpert and culture for Tuberculosis of the fluid negative

Bacteriological of the fluid negative

Bacteriological culture negative

### Cytology Report

Smear showshypercellularity with a mixture of clusters of atypical cells of which the nuclear details cannot be distinguished and other isolated cells with atypical features, some of them are multi-nucleated consistent with neoplastic and reactive mesothelial cells.

### Diagnosis

Malignan pleuralmesothelioma.

Treatment with chemotherapy and radiotherapy is indicated.

## DISCUSSION

Mesothelioma is a malignant neoplasm of the serous membranes, which can generally be found affecting the pleura, [2] which corresponds to the case presented.

About 80% of patients who develop mesothelioma are men who have worked in asbestos-using industries. [2,3,5] The latter does not apply to the present case. The patient studied worked as a fisherman, never worked in construction nor had a history of direct or indirect contact with asbestos. Although the patient is a heavy smoker and this habit is associated with most lung neoplasms, this is not the case with pleural mesotheliomas. [2,6]

The typical presentation picture consisted of the presence of dyspnea and chest pain, related to unilateral pleural effusion, invariant in these cases, which coincides with what was found in the literature. [1, 2, 4,6]

Pleural fluid cytology is only positive 30% to 50% of the time; however, it continues to be performed because it is the first maneuver indicated when a patient presents with pleural effusion.[7] Histologically, pleural mesothelioma may show an epithelial morphology (epithelioid type), a predominant fibrous component (sarcomatoid type), or a combination of both characteristics (biphasic type). Most are of the epithelioid type (50-60%) and 10% are sarcomatoid. There are also poorly differentiated variants, impossible to categorize into any of the aforementioned histological types. [2,6] In the case studied, cytology made the diagnosis of mesothelioma possible; the biopsy performed shows hypercellularity with a mixture of clusters of atypical cells of which the nuclear details cannot be distinguished and other isolated cells with atypical features, so it was impossible to determine the morphological type.

There is no standard treatment for malignant pleural mesothelioma; an individualized approach is recommended, combining surgery, chemotherapy, and radiation therapy on a case-by-case basis. [2,6,7] The response to chemotherapy and radiation therapy for these tumors is poor, and surgery is rarely curative. [7] The patient was treated with chemotherapy and radiotherapy.

## CONCLUSION

Mesothelioma is a diagnosis to be taken into account in a patient with pleural effusion and respiratory symptoms, even if predisposing risk factors for it are not included.

## REFERENCES

1. StolovasNurit, Pintos Javier, Luaces Ma. Eugenia, Lorenzo Claudia Pérez, de Ben Stella, Tomasina Fernando. Mesotelioma y ocupación. (2021). Revisión de casos en Uruguay: 2002-2014. *Anfamed.* 8(2): e202. [http://www.scielo.edu.uy/scielo.php?script=sci\\_arttext&pid=S2301-12542021000201202&lng=es](http://www.scielo.edu.uy/scielo.php?script=sci_arttext&pid=S2301-12542021000201202&lng=es).
2. Concepción M, Chang P. (2022). Mesotelioma pleural maligno. Presentación de un caso. In *V Jornada Científica Provincial en*

- Imagenología*.<https://imagenologiaholguin2022.sld.cu/index.php/imagenologiaholguin/2022/paper/view/61/30>
- Palma M, de-León J, Arreola J. (2021). Mesotelioma pleural maligno. *Revista médica (Colegio de Médicos y Cirujanos de Guatemala)*. 160(1): 94-96.<https://www.revistamedicagt.org/index.php/RevMedGuatemala/article/view/245/342>
  - Betancourt J, Hernández JC, Rodríguez CA, Quintana-Castillo, JC, Rojas, CA. (2021). Mesotelioma en paciente colombiano con sobrevida mayor a tres años: presentación de caso. *RevCienc Salud*. 19(1):1-10. [http://www.scielo.org.co/scielo.php?script=sci\\_arttext&pid=S1692-72732021000100159](http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S1692-72732021000100159)
  - Masleidy VV. (2021). MESOTELIOMAPLEURAL MALIGNO VARIANTE EPITELIOIDE. PRESENTACIÓN DE CASO. In *Enfoque multidisciplinario paciente oncológico*. <https://oncocienfuegos2021.sld.cu/index.php/oncocfg/conferencias/paper/view/539/166>
  - Sánchez Sánchez S, Calvo Díaz LM, Navarro Baldellot AL. (2020). Mesotelioma pleural maligno. Presentación de un caso y revisión de la literatura. *Revista Finlay*. 10(4): 432-439. [http://scielo.sld.cu/scielo.php?script=sci\\_pdf&pid=S2221-24342020000400432&lng=es&tlng=es](http://scielo.sld.cu/scielo.php?script=sci_pdf&pid=S2221-24342020000400432&lng=es&tlng=es)
  - Gómez Trueba G, Collado Otero JC. (2020). Mesotelioma pleural maligno. Actualización sobre diagnóstico y tratamiento. *Revista cubana de Cirugía*. 59(1):e831.[http://scielo.sld.cu/scielo.php?script=sci\\_pdf&pid=S0034-74932020000100009&lng=es&tlng=es](http://scielo.sld.cu/scielo.php?script=sci_pdf&pid=S0034-74932020000100009&lng=es&tlng=es)

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