

# Thymoma in a Patient with Fibromyalgia

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**Disclose and conflicts of interest: none to be declared by all authors**

## ABSTRACT

**Introduction:** Thymoma is the primary neoplasm more frequent of the superior anterior mediastinum and its association with the syndrome Fibromyalgia is uncommon.

**Case Report:** after condition flu due to acquired Covid-19, in chest x-ray requested put decision medical observation revealed a image differentiated from the patient's anterior mediastinum. The tomography computed tomography of the chest also carried out revealed mass solid homogeneous of probable origin thymic.

**Conclusion:** the presence of the thymoma stand up hypotheses as factor trigger of fibromyalgia or interference in patient's quality of life.

**Keywords:** Thymoma; Thymus neoplasms; Neoplasms mediastinal; Fibromyalgia; Fibromyalgia Syndrome.

## Introduction

An abnormality of the thymus is due to an alteration in embryonic development. The thymus endocrine gland originates from the endoderm of the third pharyngeal pouch from the fourth week of gestation<sup>9</sup>. It plays an important role in the production and maturation of T lymphocytes, assisting in the immune system. However, the cells also they ca, in time instead, adopt behavior self-reactive due to the interaction uncontrolled growth of thymomas and becoming the trigger for diseases Autoimmune Systemic (DAIs) or Syndromes Polyautoinflammatory (SPN) that affect numerous organs and tissues of the body human<sup>5</sup>. The thymus atrophies throughout life as sexual maturity occurs, in adulthood it is gradually replaced by adipose tissue<sup>8</sup>.

Thymoma is the primary neoplasm more frequent of the superior anterior mediastinum, also already reported in the middle and later stages, but is less common<sup>1</sup>. The peak occurrence of thymomas is in half age, between 45-55 years old. Represents less than 1% of neoplasms in adults and their. The incidence is one to five cases put million people put year, according to WHO (2004). They encompass three main categories: non-invasive thymomas, invasive thymomas, and thymic carcinoma<sup>4</sup>. The report describes the diagnosis late-onset of this rare neoplasm in one patient what presented Fibromyalgia symptoms and without suspicions initials of thymoma.

## Case report

A 46-year-old white female patient, overweight, with a history of decreased strength and numbness in her limbs and neuropathic pain in her cervical and lumbar spine. History of carpal tunnel syndrome and degenerative and inflammatory changes in her shoulders and knees. Diagnosed with Fibromyalgia in 2020. She did not present clinical signs suggestive of myasthenia gravis, only mild symptoms of dysphagia, fatigue, and weakness in her upper limbs, without facial changes or ptosis. She began using medications for her Fibromyalgia, such as an antidepressant from the class of serotonin and norepinephrine reuptake inhibitors (SSRIs), along with an anticonvulsant, a gamma-aminobutyric acid (GABA) analogue, and opioid analgesics, obtaining significant improvement in pain, but maintaining fatigue and loss of strength.

Following a Covid-19 infection, a chest X-ray was performed, revealing changes in the anterior mediastinum (Figure 1). For further investigation, a chest computed tomography scan was requested (Figure 2), which revealed... A homogeneous solid mass, with a triangular morphology and regular contour, without calcifications or fat, was found in the midline of the pre-vascular space of the anterior mediastinum, measuring 4.4 x 3.2 x 3.5 cm, of probable thymic origin. The anatomopathological examination detected a cystic formation with adherent yellowish and shiny tissue, weighing 62g and measuring 8.0 x 6.0 x 3.5 cm. After evaluation by an oncologist, she was referred for surgical treatment. She underwent video-

assisted thoracoscopic resection of the mediastinal tumor. Post-operative recovery was uneventful, with improvement in fatigue and paresis of the upper limbs.

The relevance of this study stems from the presence of thymoma in fibromyalgia syndrome, raising hypotheses about the existence of a triggering factor and whether, after long-term removal, it will present factors that worsen or improve the patient's quality of life. The rarity of the neoplasm, associated with this scarcity of information causes yet exist several controversies in relationship to the better staging, classification pathological, treatment, factors predictions and how These relate to survival rates<sup>7</sup>. The topic becomes even more challenging when related to fibromyalgia, where there are few discussions and protocols due to the rarity of the case, demonstrating the importance of developing in-depth studies for appropriate clinical application<sup>3</sup>

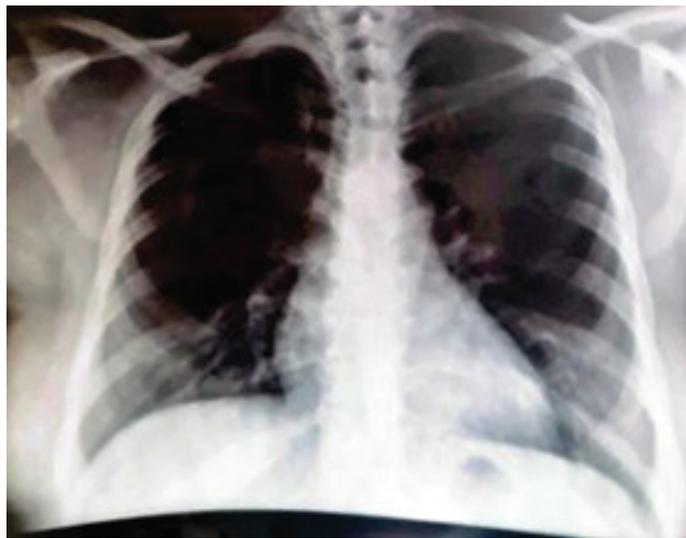


Figure 1. Chest X- ay of the patient.

**Conclusion**

The highlight of that This case is due to the coexistence of thymoma with fibromyalgia, differing from previous reports. existing related to myasthenia gravis, which

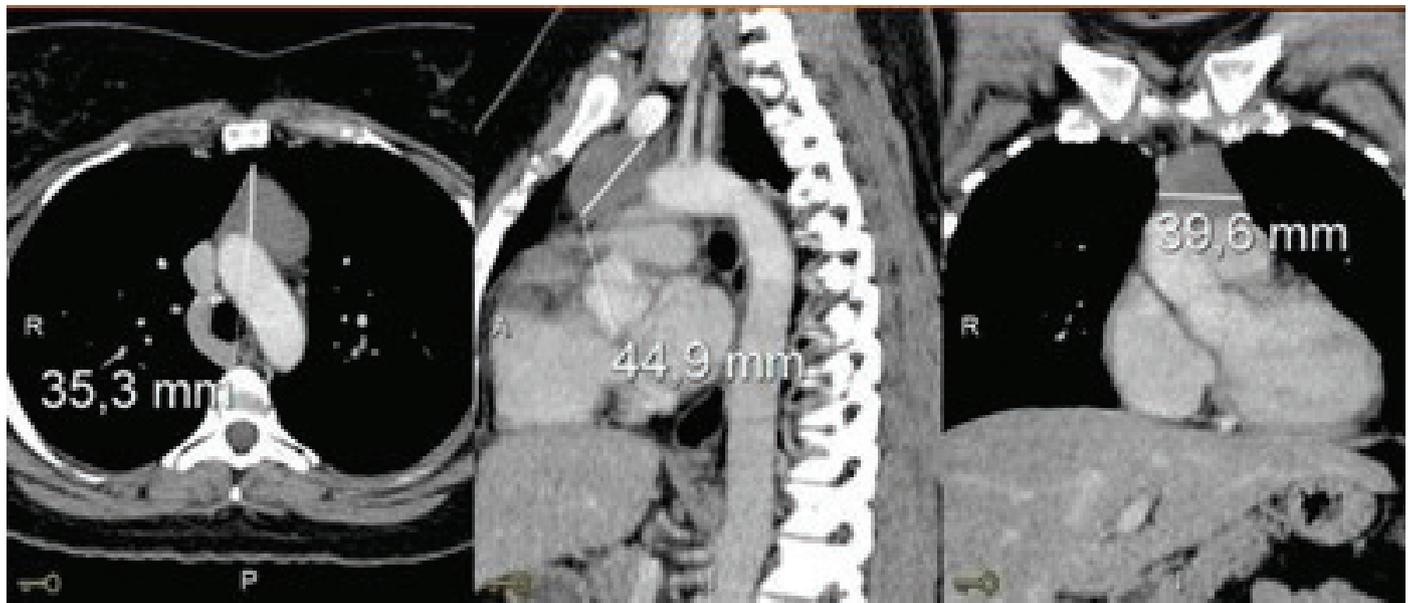


Figure 2. Tomography computed tomography of the thorax evaluating Mass in the anterior mediastinum of the patient .

**Discussion**

The thymoma classification suffered updates to the over the years, the most recent he was published by the WHO in 2021, integrating neoplasms epithelial thymic primary. The thymomes have others divisions, being able to can also be categorized in two large groups: compounds put small cells ovals or fusiform and those compounds put cells epithelioids larger and rounded. However, neither all the information they were The question of which has been answered, due to the rarity of the tumor and the scarcity of studies. related<sup>2</sup>. Timoma is a rare condition representing only 0.2-1.5% of all neoplasms malignant, with a incidence Estimated at 0.13/100,000/ year N° there is evidence of sex predominance<sup>3</sup>.

They cover one third of the cases<sup>6</sup>. A importance of that found within the scope anatomical and clinical stems from its location intimate with structures vital organs, including the heart, lungs, and large organs vases. It is crucial to identification of the composition thymic, differentiation from others masses, such as lymphomas or teratomas in the anterior mediastinum and assessment of the length and growth of the neoplasm to avoid repercussions in structures neighbors and complications systemic. A is expected. approach less dogmatics of the area scientific study to increase the rate of data collection on the condition and a look more careful of the class medical specialist for neoplasms silent .

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Received: June 13, 2025  
Accepted: November 4, 2025

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