

# Granuloma de colesterol no pescoço - Um caso de paralisia da corda vocal

## Cholesterol granuloma in the neck - A case of vocal fold paralysis

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### RESUMO

**Introdução:** O objetivo principal deste estudo foi reportar um caso de paralisia da corda vocal causada por um granuloma de colesterol no pescoço.

**Relato de caso:** Paciente do sexo masculino, 75 anos, seguido em consulta de Otorrinolaringologia, com queixas de rouquidão de início recente. Objetivou-se paralisia da corda vocal esquerda na nasofaringolaringoscopia flexível. A tomografia computorizada do pescoço mostrou a presença de uma lesão nodular sólida no espaço vascular esquerdo do pescoço. Procedeu-se à sua remoção cirúrgica, com posterior diagnóstico histológico de granuloma de colesterol tímico.

**Discussão:** Um granuloma de colesterol forma-se em resposta a cristais de colesterol e células gigantes multinucleadas. Trata-se de uma patologia benigna que afeta, na maioria das vezes, o ouvido médio. Já descrito em outros órgãos, mas, raramente, no pescoço. A remoção cirúrgica e o diagnóstico histológico são essenciais para o tratamento e diagnóstico.

**Palavras-chave:** granuloma; colesterol; paralisia; corda vocal; voz

### ABSTRACT

**Introduction:** The aim of this study was to report a case of cholesterol granuloma in the neck with vocal cord paralysis.

**Case report:** A 75-year-old male patient with recent onset of hoarseness complaints followed on Otorhinolaryngology appointment. Objective examination with flexible nasopharyngolaryngoscopy showed a paralysis of the left vocal cord. Neck CT scan showed a solid nodular lesion in the left vascular space of the neck. Surgical excision was performed and histological diagnosis showed a thymic granuloma of cholesterol.

**Discussion:** Cholesterol granuloma develops in response to cholesterol crystals and foreign body giantcells. It is described as a benign condition affecting the middle ear mostly. It has already been described in other organs but is rarely described affecting the neck. Surgical excision and histological examination are essential to treatment and diagnosis.

**Keywords:** granuloma; cholesterol; paralysis; vocal fold; voice

### INTRODUCTION

Cholesterol Granuloma is a benign mass that occurs because of a foreign-body giant cell reaction that forms in response to the presence of cholesterol crystals. Cholesterol granuloma in the mediastinum is an extremely uncommon finding, although it is a regular finding in the mastoid antrum and air cells of the temporal bone.

The aim of this study was to report a case of cholesterol granuloma in the neck with a vocal cord paralysis and how it should be managed in clinical practice. With this case report the authors pretend to document a rare but possible pathology that may present with vocal cord paralysis.

### CASE REPORT

A 75-year-old male patient with paramyloidosis, followed on Otorhinolaryngology appointment for chronic otitis media, presented with fluctuating hoarseness complaints starting three months ago. Examination by flexible nasopharyngolaryngoscopy shown a left vocal cord paralysis. There was no history of neck or chest trauma or previous surgery.

Neck and chest Computed Tomography (CT) shown a solid nodular lesion in the left vascular space of the neck with extension to the mediastinal pre vascular space. The lesion had an oval morphology and regular contours and

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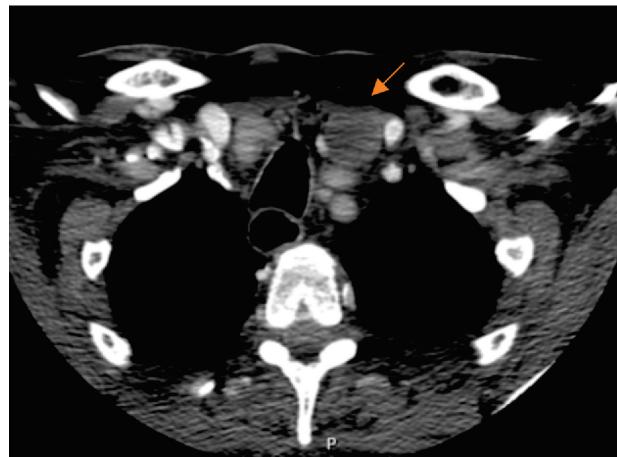
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measured 27x22mm in longitudinal and anterosuperior diameters, presenting a central area of lower density, which may correspond to liquid component (Figure 1 and 2). An excisional biopsy was recommended to establish the histological diagnosis. During surgery, it was identified a yellowish, micronodular, hard and well-

**FIGURE 1**

Neck CT axial plane showing a solid nodular lesion measuring 27x22mm.



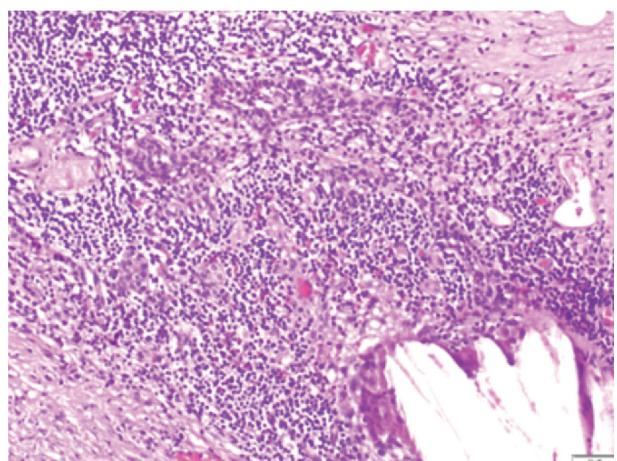
**FIGURE 2**

Chest CT coronal plane



**FIGURE 3 AND 4**

Microscopically, the nodule consists of a numerous multinucleated giant cell accompanied by small nests of spindle cells with nuclear atypia and thymic component.



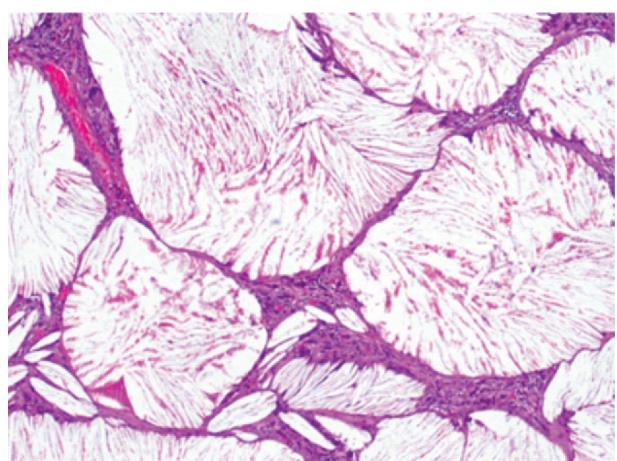
defined consistent mass in the level IV of the neck on the left side. The histological examination shown a numerous multinucleated giant cell accompanied by small nests of spindle cells with nuclear atypia (Figure 3 and 4). These findings were consistent with a thymic granuloma of cholesterol.

## DISCUSSION

Cholesterol granuloma is a lesion that develops in response to cholesterol crystals and foreign body giantcells. It is a commonly described benign condition affecting the middle ear, the mastoid bone and the petrous apex<sup>1,2</sup>. It can present as a space occupying lesion and mimic a malignant neoplasm.<sup>3</sup> Radiologically, it appears as a benign mass and is characterized by slow growth<sup>2,4</sup>. It have been described with less frequency in the kidneys, breast, peritoneum, mediastinum, parotid gland, testis, lung, liver and spleen<sup>1</sup>. It was rarely described affecting the neck. There are a lot of theories about the formation of cholesterol granuloma, but none of them is widely accept. However, it has been thought to be a consequence of chronic inflammation<sup>1</sup>.

Surgical excision is indicated to give the diagnosis and to exclude malignancy, because the radiological characteristics do not allow to differentiate cholesterol granuloma from other pathologies<sup>4,5</sup>.

We report a rare presentation of cholesterol granuloma in vascular space of the neck with extension to the mediastinal vascular space and inducing a vocal cord paralysis by compression of the vagus nerve. Cholesterol granuloma is responsible for 1% of all mediastinum tumors and there is only a few reports on the literature<sup>4</sup>. Although rare, this pathology should be considered in the differential diagnosis of unilateral vocal fold paralysis. Pathology of cholesterol granuloma is still unknown. Surgical excision and histological examination are essential to diagnosis, treatment, and the best choice to patients.



**Conflito de Interesses**

Os autores declaram que não têm qualquer conflito de interesse relativo a este artigo.

**Confidencialidade dos dados**

Os autores declaram que seguiram os protocolos do seu trabalho na publicação dos dados de pacientes.

**Proteção de pessoas e animais**

Os autores declaram que os procedimentos seguidos estão de acordo com os regulamentos estabelecidos pelos diretores da Comissão para Investigação Clínica e Ética e de acordo com a Declaração de Helsínquia da Associação Médica Mundial.

**Política de privacidade, consentimento informado e Autorização do Comité de Ética**

Os autores declaram que têm o consentimento por escrito para o uso de fotografias dos pacientes neste artigo.

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**Disponibilidade dos Dados científicos**

Não existem conjuntos de dados disponíveis publicamente relacionados com este trabalho.

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