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Carcinosarcoma of the Larynx, A Case report

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ABSTRACT

Describe the different therapeutic modalities of Carcinosarcoma of the Larynx.We report the case of a 55-year-old patient who presented with a Carcinosarcoma of the Larynx. Mr. M., 55 years old, chronic smoker, consults for dysphonia and dysphagia associated with dyspnea, which has been evolving for 12 months, progressively worsening, and necessitated an emergency tracheotomy. CT scan showed a well-circumscribed three-stage process of tissue density. Containing hyperdense images, without cartilage lysis. Carcinosarcoma of the larynx is an extraordinarily rare histological type and prone to metastases to the cervical ganglion. A complete surgical procedure of primary laryngeal lesions with wide margins, associated with a well-established bilateral cervical lymph node dissection is the best therapeutic option. Close and frequent monitoring is necessary to detect a local recurrence or a metastatic. It is essential to collect more data on the biological behavior of these tumors to determine the prognostic factors and the appropriate treatment modalities.

Introduction

Carcinosarcoma is an extremely rare malignant tumor, made up of a double carcinomatous and sarcomatous component. The histological development of carcinosarcoma remains controversial, because no formal evidence shows so far, whether this tumor comes from two very distinct clones of carcinoma and sarcoma (the multiclonal hypothesis) or a single malignant clone capable of epithelial differentiation and mesenchymal (the monoclonal hypothesis) [1].

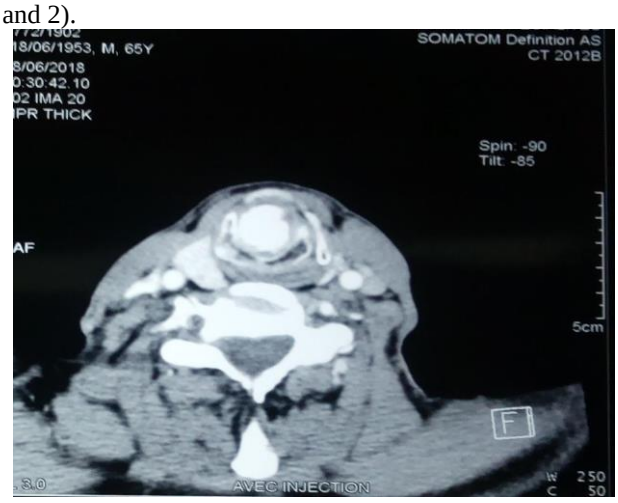
The most frequent locations of carcinosarcoma are more precisely located in the urogenital tract, the gastrointestinal tract, the respiratory tract, and the mammary gland, but the ENT localization of this histological type remains exceptional.

The most common sites affected by carcinosarcoma in the head and neck region are the parotid gland, followed by the submandibular gland [2]. Carcinosarcomas of the salivary glands are aggressive, with a tendency to local recurrence and distant metastases. However, laryngeal localization is extremely rare, so carcinosarcomas occurring in the larynx and hypopharynx represent less than 1% of all malignant tumors [3], and their behavior is not well described, due to the rarity of this type of tumor.

In general, the epithelial components of carcinosarcoma would consist of a focal carcinoma, which can be in the form of any type of squamous cell carcinoma (SCC), either a transitional cell carcinoma or even an adenocarcinoma. On the other hand, the mesenchymal component can consist of either chondrosarcoma, osteosarcoma, rhabdomyosarcoma, or leiomyosarcoma. So far, there have been some literature reports describing cases of laryngeal carcinosarcomas formed by epithelial tumors, such as squamous cell carcinoma, and mesenchymal tumors, such as osteosarcoma and leiomyosarcoma [4].

Case report

Mr. M., 55 years old, chronic smoker, consults for dysphonia and dysphagia associated with dyspnea, which has been evolving for 12 months, progressively worsening, and necessitated an emergency tracheotomy. CT scan showed a well-circumscribed three-stage process of tissue density. Containing hyperdense images, without cartilage lysis (Figure 1 and 2).



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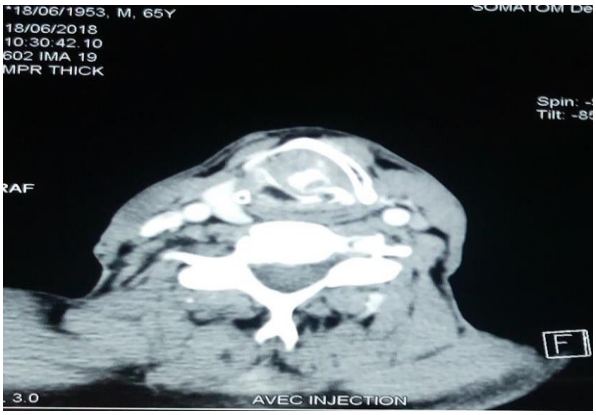

Figure1 and 2: Image 1 and 2: Cervical CT, glottic tumor process centered on the right vocal cord, containing hyperdense images, reducing laryngeal light.

Direct laryngoscopy revealed a whitish process infiltrating the ventricular bands and the vocal cords, the subglottic stage infiltrating the entire esophageal mouth. Two biopsies were performed were inflammatory, median thyrotomy showed squamous cell carcinoma with fusiform cells and sarcoma. The extension assessment for another primary cancer was negative. The tumor was classified T4N0M0. Given the extension of the tumor, the patient was referred to as radiotherapy.

Discussion

Carcinosarcoma is a malignant tumor composed of both malignant epithelial and mesenchymal components. Less than 1% of all malignant tumors of the larynx and hypopharynx are represented by carcinosarcoma[1]. Not only carcinosarcoma is rare in the larynx, but also other mesenchymal tumors are very uncommon. The prognosis of carcinosarcoma is also controversial and it is reported to be worse than that of squamous cell laryngeal carcinoma [2]. A review of the literature showed only a few cases of carcinosarcoma[3]. Carcinosarcoma is a rare tumor and its presentation in the respiratory tract is even rare. We report the case due to its rarity of presentation in the larynx.

Dysphonia is the main symptom of tumors of the larynx, among them carcinosarcoma; however, the appearance of carcinosarcoma is different from that of other typical squamous cell tumors. Carcinosarcoma of the larynx has been reported to have a polypoid appearance [3], while epidermoid tumors tend to have keratinization and an irregular surface even at an early stage.

The prognosis of carcinosarcoma is not clear and elucidated, however, some reports describe that its prognosis is poor compared to that of squamous cell carcinoma of the larynx[10]; and can depend on the type of malignant mesenchymal component[3].

Complete surgical resection, regardless of the anatomical site, is the preferred treatment. No consensus on the best treatment option for carcinosarcoma has been well established; however, wide-margin surgical excision is recommended[11].

Besides, there is no consensus in the literature concerning radiotherapy because the mesenchymal component is known to be resistant to radiation [12]. However, the specific therapeutic approach must be adapted according to the tumor stage, location, and size. In the case of our patient, the tumor was T4N0M0.

If surgical treatment is chosen, resection of the cartilage may be necessary due to the invasion potential of the cartilage even in the early stages of development. Thus, the gesture consists either of a partial resection, as in the frontal-anterior laryngectomy, or a complete resection, as in the supracricoid partial laryngectomy [14]. Since lymph node metastases are frequent and cervical lymph node dissection is then indicated.

Conclusion

Carcinosarcoma of the larynx is an extraordinarily rare histological type and prone to metastases to the cervical ganglion. The term carcinosarcoma appropriately describes tumors with both carcinomatous and sarcomatous differentiation, which could represent divergent differentiation of a totipotent precursor cell. Thorough histological and immunohistochemical evaluation is the key to a well-established diagnosis. A complete surgical procedure of primary laryngeal lesions with wide margins, associated with a well-established bilateral cervical lymph node dissection is the best therapeutic option. Close and frequent monitoring is necessary to detect a local recurrence or a metastatic.

It is essential to collect more data on the biological behavior of these tumors to determine the prognostic factors and the appropriate treatment modalities.

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