**CASE REPORT**

**The well-differentiated liposarcoma of the hypopharynx**

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**Summary**

**Introduction:** The aim of this article is to describe the clinical, radiological, and therapeutic aspects of well-differentiated liposarcomas of the hypopharynx.

**Case presentation:** We report the case of a 34-year-old woman seen for dysphonia and dyspnea. The nasal endoscopy found a well-delimited ovoid tumefaction, attached at the right lateral wall of the hypopharynx. The diagnosis of a well-differentiated liposarcoma was made based on the histopathology of the surgical specimen.

**Discussion/conclusion:** The incidence of well-differentiated liposarcoma of the head and neck is extremely low. The imaging is not specific. Wide surgical resection is sufficient. Histopathological review confirms the diagnosis.

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**Introduction**

Liposarcomas of the head and neck account for 3–8% of all cases of liposarcoma. Pharyngolaryngeal liposarcomas are unusual tumors, and only a few cases have been reported [1–3]. Dysphonia and dysphagia constitute the clinical picture of this condition [2,3]. Histologically, there are several types of liposarcomas, including the well-differentiated liposarcoma. The histological diagnostic criteria according to the Enzinger and Weiss classification can be difficult to apply, particularly for differentiating lipomas from well-differentiated liposarcomas [1,3]. An understanding of the characteristics and behaviours of the various subtypes is necessary to guide decisions about treatment and follow-up of these tumors. The many principles that govern diagnosis and management of other types of soft-tissue sarcomas are also valid for liposarcomas. The main prognostic factor is the histological grade, but early diagnosis combined with complete, wide surgical resection can decrease the incidence of local recurrence and increase survival [2,3].

**Case study**

A 34-year-old woman with no prior medical history was seen for an 18-month history of progressive dysphonia, subsequently accompanied by upper dysphagia with a foreign body sensation on swallowing and moderate dyspnea, worsening especially at bedtime. The clinical nasal endoscopic examination revealed an ovoid mass measuring 5 cm by 3 cm in diameter, which appeared to be attached at the region of the right three folds and the right lateral wall of the hypopharynx (Fig. 1). Her general health was not affected, and the
cervical lymph node areas were clear. Direct hypopharyngoscopy and laryngoscopy showed that this was a firm, mobile, non-reducible mass that did not increase in volume with respiration. The mass was attached at the right lateral wall of the hypopharynx, came in contact with the right pharyngolaryngeal wall, and rested on the homolateral piriform sinus. The cervical CT scan with contrast showed a hypodense tumor measuring 5 cm in diameter, occupying the upper right lateral part of the hypopharynx, with heterogeneous contrast enhancement (Fig. 2). We decided to perform an endoscopic surgical resection. The surgery consisted of a complete, wide resection of the tumor pedicle by bipolar forceps. Due to the macroscopic fatty appearance, no immediate pathological examination was done.

The histopathology and immunohistochemistry concluded that this was a well-differentiated liposarcoma (Fig. 3). We decided against any adjunctive therapy. The general oncological workup for a second primary cancer was normal. There were no complications. There was no local relapse after 12 months of monitoring.

Discussion

Liposarcomas are malignant soft-tissue tumors that are relatively common in adults. They constitute a group of heterogeneous tumors that have signs of adipocyte differentiation in common [1,2]. Contrary to lipomas, liposarcomas are rarely found in subcutaneous fat. Their development mainly affects deep soft tissues, and the intermuscular fascia in particular [1,3]. Liposarcomas account for 15–18% of all sarcomas. The most common sites are the deep regions of the limbs (50%) and the retroperitoneum (25%). Liposarcomas of the head and neck account for 3–8% of all liposarcomas. Hypopharyngeal localization is rarely described in the literature [1,2,4]. There are four main histological types of liposarcomas: well-differentiated, myxoid or round cell, pleomorphic, and dedifferentiated liposarcomas. The well-differentiated liposarcoma is a low-grade lesion. It is divided into three subtypes, with the lipoma-like liposarcoma — the most common — mimicking the lipoma both macroscopically and microscopically. The other two subtypes are inflammatory and sclerosing liposarcomas, which are less common and found mainly in the retroperitoneum [1,4]. On CT scans and MRIs, liposarcomas generally appear very well-delimited, since they have a tendency to grow by expansion rather than by infiltration, contrary to intramuscular liposarcomas, which usually have a multinodular form. The appearance of the liposarcoma on these images depends on its degree of differentiation. The more differentiated the tumor, the more intense the fat signal. However, well-differentiated liposarcomas often have thick linear or nodular septa that are hypointense in T1- and T2-weighted images and enhanced after intravenous gadolinium injection. The fat in the other types of
The well-differentiated liposarcoma of the hypopharynx is arranged in a mesh-like pattern or in linear or nodular clusters [2,5]. Surgery is the treatment of choice for liposarcomas. It should be as wide as possible, with large surgical margins of healthy tissue. The most reliable method is wide radical resection. There are two possible approaches: the cervical approach (lateral pharyngotomy) and endoscopic surgery. The endoscopic approach with suspension microsurgery and CO₂ laser resection plays an important role in management [2,3,6,7]. Local recurrence is common, even in the long term (after 5 years), while the risk of lymph node or distant metastasis is very low. Treatment of lymph node areas is therefore not indicated. In cases of frequent recurrence, tumor differentiation should be suspected [2,3,8]. In well-differentiated liposarcomas, in cases of complete surgical resection, no adjuvant treatment is recommended [3,9]. Postoperative radiation therapy is considered unnecessary by most authors [3,6,9], this being a tumor of low-grade malignancy, and is even considered dangerous, since there is a risk that it might lead to tumor dedifferentiation. Radiation therapy could play a role in inoperable progressive forms and in the event of incomplete resection [4,6].

Conclusion

This case study indicates that liposarcoma of the hypopharynx is rare. The “well-differentiated” type is the most common. The clinical signs and imaging are not specific. The treatment of choice is tumor surgery with large safety margins, but with no treatment of the lymph node areas. In cases of complete resection, radiation therapy is not recommended. Long-term clinical monitoring is necessary.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.

References