Concurrent Well-Differentiated Liposarcoma Of The Larynx and Ductal Carcinoma-in-Situ In a Young Female: A Possible Case of Genetic Cancer Pre-disposition

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Background

Liposarcoma are rare malignant mesenchymal tumors that occur in the lower limbs, retroperitoneum and upper extremities. Only 3-8% have been reported to originate in the head and neck. There have been less than 40 confirmed cases of laryngeal liposarcoma reported in literature. As it is rare, these may easily be mistaken for a benign lesion on outpatient endoscopy. A missed or delayed diagnosis may consequently lead to poor outcomes for a disease that has otherwise good prognosis given timely management.

Case Description

- 39-year-old female
- Two-month history of globus sensation
- No cough, no haemoptysis, no obvious changes in voice, no dyspnea, and no constitutional symptoms pointing to malignancy
- Flexible laryngoscopy with videostroboscopy revealed a fleshy, smooth, non-pedunculated, benign-appearing mass with its bulk centered on the left aryepiglottic fold.

Intervention

- Patient underwent direct laryngoscopy under general anesthesia, which showed the mass to be firmly attached to the left aryepiglottic fold.
- Complete excision of the 2.5x1.5x1.1 cm mass with 2 mm margins was performed using a CO2 LASER.

Outcome and Follow-up

- Histopathology with immunohistochemical stains revealed a well-differentiated liposarcoma.
- 3 months post-excision, a left breast mass was detected, which was revealed to be mammary carcinoma on ultrasound-guided aspiration.
- Modified radical mastectomy was performed on the left side combined with prophylactic mastectomy for the right, with final histopathologic diagnosis of ductal carcinoma in situ and fibroadenoma, respectively.
- After one year of close follow-up, no clinical signs of recurrence have been detected for both the supraglottic larynx and the breast.

Discussion

- Li-Fraumeni syndrome (LFS) is an autosomal-dominant disorder characterized by a germline pathogenic variant of TP53, conferring loss-of-function to the tumor-suppressor gene.
- Demonstrate increased risk for developing soft tissue sarcomas, pre-menopausal breast cancer, osteosarcomas, adrenocortical carcinoma, leukemias and brain tumors.
- An individual presenting with at least two tumors belonging to the LFS spectrum, with one detected before 46 years old as in our patient, fulfills the Chompret criteria for TP53 genetic testing and has a 20% chance of possessing a detectable mutated variant.
- To our knowledge this case represents the first account of laryngeal liposarcoma in a potential case of LFS.
- Establishing the diagnosis will allow vigilance in monitoring for new malignancies and facilitate screening of immediate family members as well.

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Selected References