

SUPRAGLOTTIC LARYNGEAL SQUAMOUS CELL CARCINOMA IN A POSTMENOPAUSAL WOMAN : A Case Report

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ABSTRACT :

Laryngeal squamous cell carcinoma (LSCC) predominantly affects men and is strongly associated with tobacco and alcohol consumption. Its occurrence in women, particularly in postmenopausal non-smokers, is rare and poorly documented. We report the case of a 52-year-old postmenopausal woman from Southern Algeria with no history of smoking or alcohol use, who presented with chronic dysphonia evolving over eight months. Endoscopic examination revealed a supraglottic exophytic lesion involving the right ventricular band with extension to the laryngeal surface of the epiglottis. Computed tomography showed paraglottic space involvement without cartilage invasion or cervical lymphadenopathy. Histopathological analysis confirmed supraglottic laryngeal squamous cell carcinoma in situ. The patient underwent supraglottic partial laryngectomy using the cricohyoidoepiglottopexy (CHEP) technique combined with functional cervical lymph node dissection. Postoperative recovery was uneventful, with favorable clinical evolution. Conclusion, this case highlights the rarity of supraglottic LSCC in women and suggests the involvement of non-classical risk factors. Early diagnosis enables conservative surgical management and satisfactory outcomes. Greater awareness of laryngeal cancer in women is essential to reduce diagnostic delay and optimize functional and psychosocial care.

Key words : Laryngeal cancer, Squamous cell carcinoma, Supraglottic larynx, Women, Postmenopausal.

RESUME : CARCINOME EPIDERMOÏDE SUPRAGLOTTIQUE DU LARYNX CHEZ UNE FEMME POSTMENO-PAUSEE : À propos d'un cas.

Le carcinome épidermoïde du larynx (CEL) touche majoritairement les hommes et est fortement associé à la consommation de tabac et d'alcool. Sa survenue chez la femme, en particulier chez les patientes ménopausées non fumeuses, est rare et peu documentée. Nous rapportons le cas d'une patiente ménopausée de 52 ans, originaire du Sud algérien, sans antécédent de tabagisme ni de consommation d'alcool, présentant une dysphonie chronique évoluant depuis huit mois. L'examen endoscopique a mis en évidence une lésion exophytique supraglottique intéressant la bande ventriculaire droite avec extension à la face laryngée de l'épiglotte. La tomodensitométrie a montré une atteinte de l'espace paraglottique sans invasion cartilagineuse ni adénopathie cervicale. L'analyse anatomopathologique a confirmé un carcinome épidermoïde in situ de la région supraglottique. La patiente a bénéficié d'une laryngectomie partielle supraglottique avec cricohyoïdoépiglottopexie (CHEP), associée à un curage ganglionnaire cervical fonctionnel. Les suites postopératoires ont été simples avec une évolution clinique favorable. Conclusion, ce cas illustre la rareté du CEL supraglottique chez la femme et suggère l'implication de facteurs de risque non classiques. Un diagnostic précoce permet une prise en charge chirurgicale conservatrice avec des résultats fonctionnels satisfaisants. Une meilleure sensibilisation au cancer laryngé chez la femme est essentielle afin de réduire les délais diagnostiques et d'optimiser la prise en charge fonctionnelle et psychosociale.

Mots clés : Cancer du larynx, Carcinome épidermoïde, Larynx supraglottique, Femme, Postménopause.

INTRODUCTION

Laryngeal squamous cell carcinoma (LSCC) is the most common malignant tumor of the larynx and one of the major cancers of the upper aerodigestive tract worldwide per year, with a marked male predominance and peak occurrence in the sixth and seventh decades of life [1,2].

Among head and neck malignancies, laryngeal cancer shows one of the greatest sex-related disparities, with historically reported male-to-female ratios ranging from 20:1 to 30:1. This difference is largely explained by higher exposure to tobacco and alcohol among men [3,4]. While a narrowing of this gap has been observed in several Western countries, this trend has not been consistently reported in North African populations, where laryngeal cancer in women remains rare [5,6].

Recent studies, however, have identified an increasing proportion of female patients diagnosed with LSCC in the absence of classical risk factors, suggesting the involvement of alternative etiological mechanisms such as gastroesophageal reflux disease, occupational exposure, viral infections, and hormonal influences [7–9]. The presence of estrogen and androgen receptors in laryngeal epithelium further supports a potential role of sex hormones in tumor development and subsite distribution [10,11].

Supraglottic involvement has been reported more frequently in women in some series and is often associated with delayed diagnosis due to nonspecific early symptoms [12]. Given the rarity of supraglottic LSCC in postmenopausal women, we report a case from Southern Algeria, highlighting its clinical presentation, management, and the importance of considering laryngeal cancer in women presenting with persistent dysphonia.

CLINICAL CASE

A 52-year-old postmenopausal woman, originating from and living in Southern Algeria, with no significant past medical history and no history of smoking or alcohol consumption, presented with chronic dysphonia evolving over eight months, associated with progressive throat discomfort.

Flexible nasofibroscope revealed a supraglottic exophytic lesion, involving the right ventricular band with extension to the laryngeal surface of the epiglottis, without impairment of laryngeal mobility or hemilaryngeal fixation.

Contrast-enhanced computed tomography (CT scan) of the larynx (Figure 1) demonstrated a right-sided supraglottic mass with paraglottic space involvement, without cartilage destruction or suspicious cervical lymphadenopathy.

Direct suspension laryngoscopy with biopsy was performed. Histopathological examination confirmed a diagnosis of supraglottic laryngeal squamous cell carcinoma in situ.

Surgical management was indicated, and the patient underwent a supraglottic partial laryngectomy using the CHEP technique (cricohyoido-epiglottic pexy) combined with a functional cervical lymph node dissection (Figures 2, 3, 4 and 5).

Postoperative recovery was uneventful, with a favorable clinical outcome.

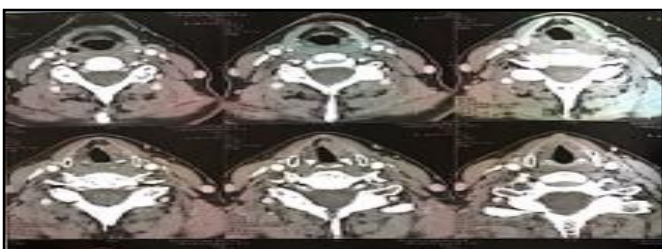


Figure 1. Cervical CT scan showing the supraglottic lesion.

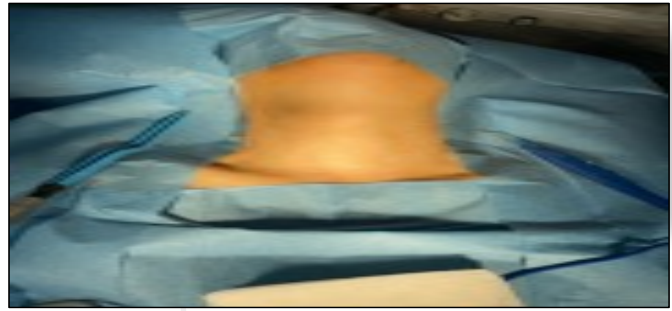


Figure 2. Surgical exposure of the larynx.

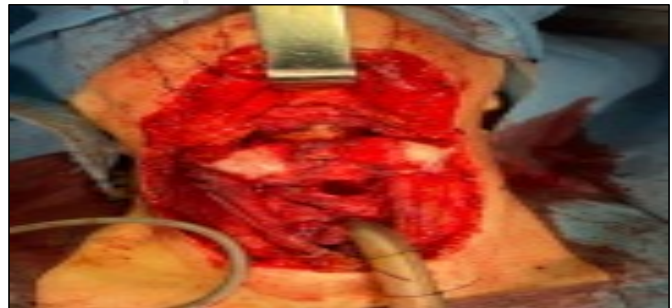


Figure 3. Release of laryngeal attachments.



Figure 4. Resected tumor specimen.



Figure 5. Cervical lymph node dissection.

DISCUSSION

Laryngeal squamous cell carcinoma (LSCC) is the most common malignant tumor of the larynx and one of the leading cancers of the upper aerodigestive tract worldwide. The global incidence is estimated at approximately 5–7 cases per 100,000 population per year, with a strong male predominance, typically affecting men aged between 55 and 65 years [1,2].

Laryngeal cancer remains one of the malignancies with the greatest sex-related disparities, with historically reported male-to-female ratios ranging from 20:1 to 30:1, although this gap has narrowed in some Western countries [3,4]. In North African countries, however, this disparity remains pronounced. Cancer registry data from Morocco reported an incidence of 0.4 per 100,000 women compared with 4.6 per 100,000 men, reflecting markedly different exposure levels to established risk factors [5].

Tobacco smoking and alcohol consumption are the main etiological factors for LSCC. Nevertheless, an increasing proportion of female patients with laryngeal cancer have no history of tobacco or alcohol exposure, suggesting the involvement of alternative carcinogenic mechanisms [6–8]. These include gastroesophageal reflux disease, occupational exposures, human papillomavirus infection, and hormonal and genetic factors. Experimental and clinical studies have demonstrated the expression of estrogen and androgen receptors in laryngeal epithelium, supporting a potential role of sex hormones in laryngeal carcinogenesis and tumor progression [9,10].

Regarding anatomical subsite distribution, several studies have reported a higher prevalence of supraglottic tumors in women, whereas men more frequently present with glottic involvement [11]. The underlying mechanisms remain unclear but may be related to anatomical, hormonal, or exposure-related differences. The supraglottic localization observed in our postmenopausal patient supports the hypothesis of a distinct epidemiological and biological profile of laryngeal cancer in women.

Prognostic differences between sexes remain controversial. Some authors have reported better overall survival in women, particularly in early-stage disease, potentially related to biological tumor behavior or earlier diagnosis [12]. In contrast, other studies found no significant survival difference after adjustment for stage and comorbidities [13]. Kokoska et al. demonstrated that in women, survival was mainly influenced by age, comorbidities, and symptom severity, whereas anatomical subsite played a more significant prognostic role in men [14].

Treatment strategies for laryngeal cancer are similar in men and women and are based on surgery, radiotherapy, and chemotherapy depending on tumor stage. However, the functional and psychosocial impact of treatment may be more pronounced in female patients. Following total laryngectomy, female patients often experience loss of sex-specific vocal characteristics, which can negatively affect social identity and self-esteem [15]. Even after organ-preserving approaches, residual dysphonia may have a greater social and psychological impact in women than in men [16].

Furthermore, psychosocial studies have shown that women treated for head and neck cancers exhibit higher levels of psychological distress, anxiety, and depression, with post-treatment adaptation closely linked to social support [17]. These findings highlight the importance of a multidisciplinary and gender-sensitive approach in the management of female patients with laryngeal cancer.

CONCLUSION

Laryngeal squamous cell carcinoma in women remains an uncommon entity, particularly in postmenopausal patients without exposure to traditional risk factors such as tobacco and alcohol. This case of supraglottic laryngeal carcinoma highlights the possibility of alternative etiological pathways and supports the hypothesis of sex-specific biological and epidemiological differences. Early recognition of persistent dysphonia in women is essential to avoid diagnostic delay and to allow conservative surgical management with satisfactory oncological and functional outcomes. A multidisciplinary and gender-sensitive approach is crucial to address not only tumor control but also the functional and psychosocial consequences of treatment in female patients.

Ethics Approval and Consent to Participate:

Ethical approval was obtained from the Ethics Committee of university of Kasdi Merbah, Ouargla, Algeria, which reviewed and approved the clinical and scientific aspects of this case re-

port. Written informed consent was obtained from the patient for participation in this study.

Consent for Publication :

Written informed consent was obtained from the patient for the publication of this case report and any accompanying images.

Conflict of Interest :

The authors declare that they have no conflict of interest Funding. The authors received no specific funding for this work.

Authors' Contributions :

All authors contributed to the clinical management of the patient, data collection, literature review, and manuscript preparation. All authors read and approved the final manuscript.

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