BASALOID SQUAMOUS CARCINOMA WITH POSTERIOR LARYNGEAL LOCALIZATION IN A PATIENT WITH BILATERAL VOCAL CORD PARALYSIS

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SUMMARY

Basaloid squamous carcinoma (BSC) is a recently characterized uncommon tumor occuring in tongue, hypopharynx and nasal cavity and may be associated with second primary tumors in the upper gastrointestinal tract and respiratory tract. It manifests a predilection for the supraglottis, pyriform sinus and tongue base. We herein report an interesting case with BSC located in posterior larynx with a history of bilateral vocal cord paralysis.

Key words: *Posterior larynx, basaloid squamous carcinoma, vocal cord paralysis.*

ÖZET

Bazaloid skuamöz karsinom dil, hipofarinks, nazal kavitenin yeni tanımlanmış, ender bir tümörüdür ve üst gastrointestinal sistem ve üst solunum yolunun ikinci primeri ile sık birlikteliği de bildirilmiştir. Bu tümör supraglottis, piriform sinus ve dil tabanında gelişme eğilimi göstermektedir. Burada: ilginç klinik özellikleri ve yerleşimi nedeniyle, bilateral vokal kord paralizisi bulunan bir olguda posterior laringeal yerleşimli bazaloid skuamöz karsinom sunulmuştur.

Anahtar sözcükler: *Posterior larinks, bazaloid skuamöz karsinom, vokal kord paralizisi.*

Basaloid squamous carcinoma (BSC) was first described by Wain et al. (1) in 1986. It is an uncommon tumor exhibiting both basaloid and squamous features with propensity to agressive behaviour and early metastasis. In the upper airway tract, it has been reported in tongue, larynx, hypopharynx and nasal cavity and may be associated with high incidence of second primary tumors in the upper gastrointestinal and respiratory tract (1-6). It manifests predilection for the supraglottis, pyriform sinus and tongue base(7). Although BSC have been reported at the supraglottic larynx more frequently, posterior laryngeal localization has not been reported before (1,4-8). We herein report a case of BSC with an interesting clinical setting and posterior laryngeal localization without evident second primary tumors elsewhere.

CASE REPORT

A 66-year old male patient attended to the outpatient clinic of Otolaryngology and Head and Neck Surgery Department of Dokuz Eylül University in October 1995 suffering from dyspnea, dysphagia and hoarseness. Referring to patient history, it was learned that a tracheotomy had been performed in 1991 because of bilateral vocal cord paralysis of unknown etiology. Persistence of the symptoms during the following period required right arytenoidectomy and left arytenoidopexy. Despite all of the surgical procedure carried out, the patient still had dispnea that indicated tracheotomy again after 2 years. Then after a period of one year from tracheotomy, because of recurrent dyspnea,

a microlaryngoscopic examination was performed. The biopsy revealed an undifferentiated squamous cell carcinoma. The patient refused further treatment. Four months later he attended to the outpatient clinic of Dokuz Eylül University. He still had a tracheotomy. He had a smoking history of 30 package/year for 20 years till 1991. No laryngeal airway was seen in the ENT examination, and posterior laryngeal structures were edematous with an obstruction of the left pyriform sinus also. No mucosal change was detected. Cervical ultrasonography showed bilateral multiple lymph nodules surrounding the major vascular structures. In November 24, 1995 a total laryngectomy with simultaneous left radical and right modified radical neck dissection was performed. The patient was discharged in December 14, 1995 and postoperative radiotherapy was organised.

PATHOLOGY

Macroscopic examination revealed a posterior laryngeal firm, solid unulcerated transglottic mass of 5x4x2,5 cm invading postcricoid region, vocal cords and subglottic region with more than 1 cm at both right and left sides in a symmetric fashion. Extensive destruction of both arythenoid and cricoid cartilage were evident (Figure 1); while epiglottic and thyroid cartilages were spared.

Microscopically, the tumor tissue was composed of lobules, solid masses and cords of basaloid cells with hyperchromatic nuclei, inconspicious nucleoli and scant cytoplasm. There was an intimate association and abrupt transition from the basaloid component to focal squamous component. Three to five mitotic figures were noted per high power field. Comedo necrosis was present (Figure 2,3). Tumor stroma was scant with few inflammatory cells. Immunohistochemically, the tumor cells were S100, chromogranin, synaptophysin, carcinoembryonic antigen (CEA) negative and epithelial membrane antigen (EMA) positive. With neuron specific enolase (NSE), focal staining was noted. Marginal lesions such as dysplasia or carcinoma in situ were not observed. Tumor extended wildly from post cricoid area to interarythenoid area and vocal cords with subglottic extansion at both left and right sides. Cricoid and arythenoid cartilage destruction with extension to post cricoid region was observed. Mucosa overlying the tumor was not identified. All the region was made up of tumor cells. In the left radical neck dissection specimen one jugulodigastric lymph node and in the right modified neck dissection specimen three nodules along the accesory nerve were positive. Two of the latter had perinodal invasion.

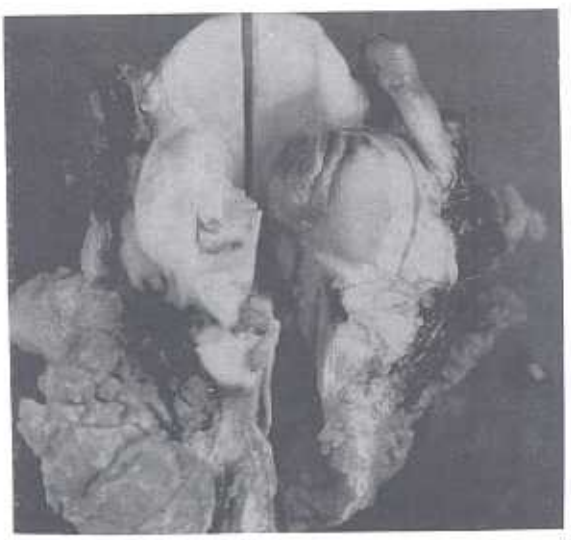

Figure 1: Posterior supraglottic laryngeal tumor invading vocal cords and subglottic region.

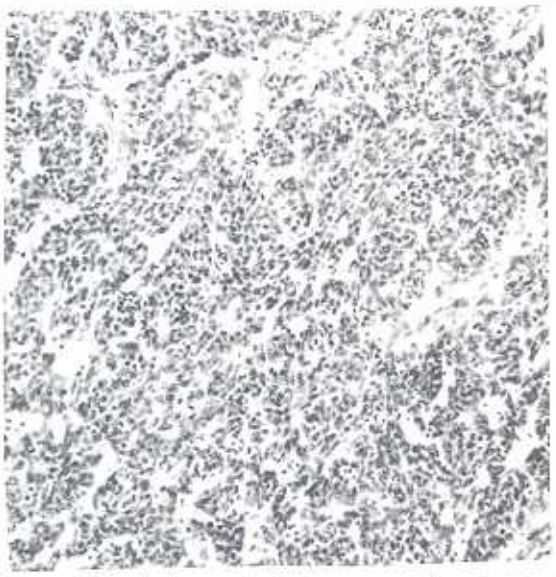

Figure 2: Lobules and solid masses of basaloid cells with hyperchromatic nuclei and scant cytoplasm (H&Ex100).

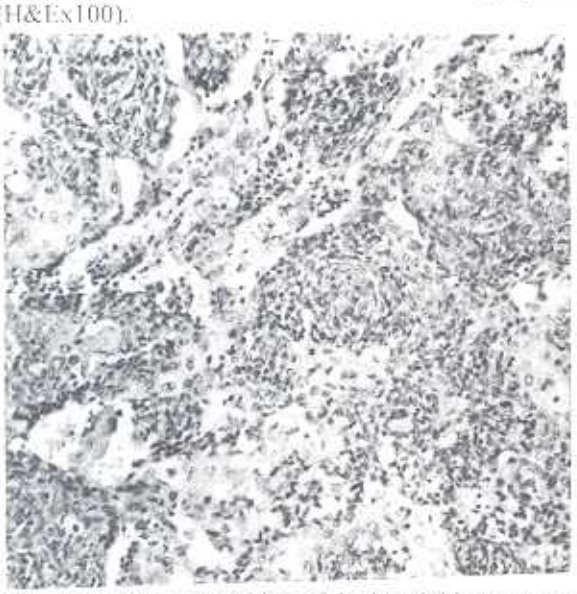

Figure 3: Abrupt transition of the basaloid component with squamous component (H&Ex200).

The histopathologic diagnosis was transglottic bilateral posterior laryngeal basaloid squamous cell carcinoma pT4N2c (Union Internationale Contre le Cancer, UICC 1992).

For excluding second primary tumors, mediastinal tomography, upper abdominal ultrasonography, computerised tomography were performed; all were within normal limits. Patient received radioteraphy to the neck region. He is disease free at 18 months after operation.

DISCUSSION

Basaloid squamous cell carcinoma has some similarities with tumors described at a number of body sites. Among these, cloacogenic carcinoma of the anal canal is the best example (2), and new sites such as trachea were described (8). As described by Wain et al. (1), the main morphologic feature of BSC is squamous cell carcinoma in intimate relationship with a basaloid component. The basaloid component comprise of cells with hyperchromatic nuclei and scant cytoplasm disposed in cords and lobules associated with intercellular gland-like cystic spaces and comedo necrosis.

The cell of origin of tumor is unknown. It is suggested that the BSC may be a collision tumor with two distinct malignant populations. Another hypothesis is a malignant change in a pleuripotential parent cell that leads to the biphasic proliferative pattern of the tumor (2). Regarding the etiology an interesting case of Wan et al. (3) with intranasal location was associated with the previous history of radiation therapy. This led to the possibility that BSC might be a representation of radiation-associated neoplasm. But none of the other reported cases associated with this tumor has shown an association with prior radiation to the site where the tumor originated.

Basaloid squamous carcinoma should be distinguished from other types of basaloid neoplasms. Differential diagnosis includes adenoid cystic carcinoma (especially the solid type),neuroendocrine carcinoma, adenosquamous carcinoma, high grade mucoepidermoid

carcinoma, spindle cell carcinoma and conventional squamous cell carcinoma (4,5,7). The presence of both basaloid and squamous components makes it easier to be differentiated from solid adenoid cystic carcinoma, high grade mucoepidermiod carcinoma and neuroendocrine carcinoma (4). Immunohistochemistry may reveal positivity for neuron specific enolase in both neuroendocrine carcinoma and BSC but chromogranin and synaptophysin are negative in BSC (6) as in our case. A neoplastic spindle cell carcinomatous component may be seen in association with the basaloid-squamous components (5). In order to exclude spindle carcinoma multiple sectioning may be helpful for the identification of biphasic pattern of BSC. But in small biopsy specimens BSC may be difficult to distinguish from other above mentioned carcinomas.

The diagnosis of this specific histopathologic variant of squamous cell carcinomas is important because it is regarded as a biologically high-grade malignancy. The present case with aggressive properties, such as large tumor mass, wide invasion, perinodal invasion correlate closely with the features of BSC. But tracheostomy for the bilateral vocal cord paralysis might have been a reason for the delayed clinical presentation. Also the posterior localization of the tumor, a rare presentation of laryngeal carcinoma, is interesting, which, according to our knowledge, has not been described before for BSC.

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