

이하선으로 직접 전이한 피부 편평상피세포암

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A Case of Direct Invasion of the Parotid Gland by Cutaneous Squamous Cell Carcinoma

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Cutaneous squamous cell carcinoma is the second-most common skin cancer and represents 20% of all skin cancers. Cutaneous squamous cell carcinoma often spreads to the parotid gland through lymph nodes, but, direct invasion of an adjacent organ may also occur. We present the case of 78-year-old man with ulcerated mass on the right infra-auricular area. The histopathologic finding was squamous cell carcinoma. There was no evidence of distant metastasis, but the mass was found to invade the superficial lobe of the right parotid gland. The mass was widely excised and superficial parotidectomy was performed while preserving the facial nerve. The defect was covered by primary closure. Postoperative radiotherapy was performed. At 20 months after surgery, our patient had no facial palsy, local recurrence, or metastasis. Cutaneous squamous cell carcinoma involving the parotid gland is an aggressive, rapidly advancing lesion, which if not recognized and treated early will result in high morbidity and mortality. Squamous cell carcinoma of the parotid gland has shown that patients who receive adjuvant radiotherapy have a lower recurrence rate and a higher survival rate than patients treated with surgery alone. The role of elective neck dissection remains controversial.

Keywords: Carcinoma / Squamous cell / Parotid gland / Neoplasm metastasis

Introduction

Cutaneous squamous cell carcinoma is the second-most common skin cancer and comprises 20% of all skin cancers. It is an age-related disease and its incidence is well associated with the mutagenic and immunosuppressive effects of chronic exposure to solar ultraviolet radiation [1]. Cutaneous squamous cell carcinoma of the face often spreads to the parotid gland through lymph nodes, because several areas of the face drain by efferent lymphatics to the

periparotid group of nodes. However, direct invasion to an adjacent organ also occurs rarely [2]. Here, we report a case of direct invasion of the parotid gland without lymph node involvement.

Case Report

A 78-year-old man visited us with a chief complaint of a mass on the right infra-auricular area. The mass began to appear about a year previously, and gradually enlarged and ulcerated (Fig. 1). He had no specific underlying disease excepting a diagnosis of asthma 16 years before presentation. On physical examination, a round, 3.0 × 3.0 cm sized ulcerated mass was evident on the right infra-auricular area. The patient did not complain of pain, and no tenderness was noted. There was no focal infection sign, no regional or cervical

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lymph node enlargement, and no facial palsy.

The result of biopsy was squamous cell carcinoma. There was no evidence of distant metastasis or regional lymph node involvement by head and neck enhanced computed tomography, neck ultrasonography, chest enhanced computed tomography, gastrofiberscopy, or liver ultrasonography. However, head and neck enhanced computed tomography revealed a well lobulated mass from the su-



Fig. 1. Photograph showing a 3.0x3.0cm sized ulcerated mass on the right infra-auricular area.

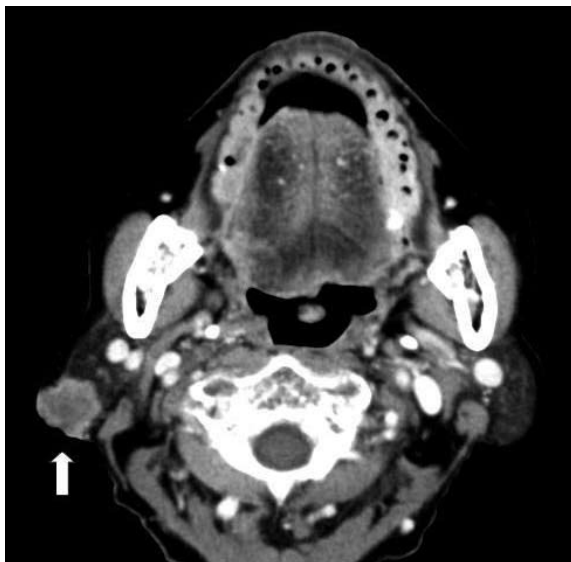


Fig. 2. Head and neck computed tomography image showing invasion of the superficial lobe of the right parotid gland by the mass (white arrow) with subcutaneous fat layer extension.

perficial lobe of the right parotid gland with subcutaneous fat layer extension (Fig. 2). It was suspected that the primary site was cutaneous squamous cell carcinoma.

Under general anesthesia, the mass was widely excised and superficial parotidectomy was performed with facial nerve preservation (Figs. 3, 4). Because there was no evidence of lymph nodes involvement, radical neck dissection was not performed. The patient had good skin redundancy, and thus, defect was covered by primary closure with silastic drain insertion (Fig. 5).

The histopathologic examination of the excised mass showed squamous cell carcinoma invading the superficial lobe of the parotid gland with a clear resection margin (Fig. 6).



Fig. 3. Photograph of the 4.5x3.5x.5cm sized mass with superficial lobe of parotid gland and overlying skin and subcutaneous fat tissue.

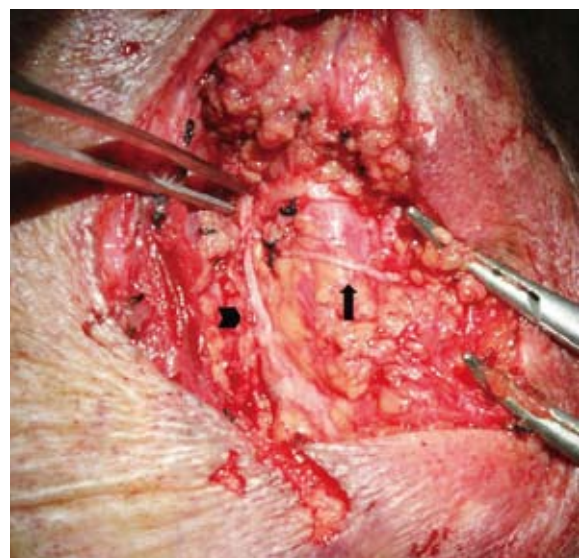


Fig. 4. Wide excision was performed and the buccal branch (black arrow) and marginal mandibular branch (black arrowhead) of the facial nerve were preserved.



Fig. 5. Primary closure was performed.



Fig. 7. Follow-up view at 20 months after surgery.

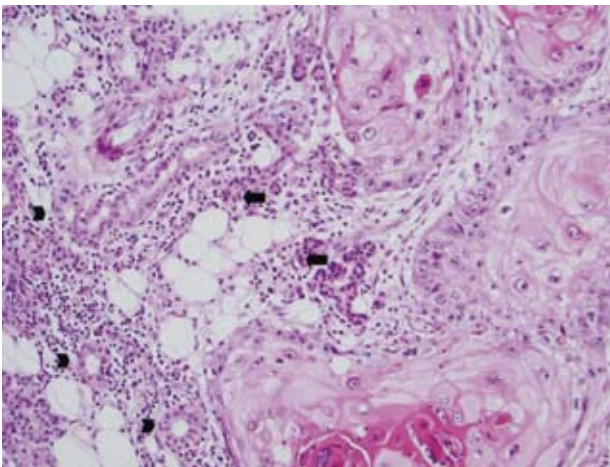


Fig. 6. Showing the histopathologic finding of squamous cell carcinoma infiltrating into the superficial parotid gland (black arrow). Parotid ductal epithelium was intact (black arrowhead) (H&E, $\times 200$).

Postoperative radiotherapy (60 Gy in 30 daily fractions) was started 6 weeks after surgery. At 20 months after surgery, he had no facial palsy, local recurrence, or metastasis (Fig. 7). The only side effect of radiation therapy was temporary xerostomia.

Discussion

Squamous cell carcinoma of the parotid gland is classified into

two groups by primary site. Primary squamous cell carcinoma originating in the parotid gland is rare, whereas squamous cell carcinoma usually occurs in the parotid gland due to nodal metastases from areas that drain to the parotid lymph nodes. Furthermore, the parotid lymph nodes are the most common site for metastatic spread from head and neck cutaneous squamous cell carcinoma. Several areas of the face drain via efferent lymphatics to the periparotid group of nodes. These include the frontal and temporal regions, upper and lower eyelids, posterior cheek, anterior ear, external ear canal, and the preauricular and postauricular areas. However, direct invasion of the parotid gland from cutaneous squamous cell carcinoma can rarely occur [3,4].

If squamous cell carcinoma is found in a parotid gland, efforts must be made to find the primary site. Histologic examination can differentiate primary squamous cell carcinoma and metastatic squamous cell carcinoma of the parotid gland. Primary squamous cell carcinoma of the salivary gland is believed to arise from ductal epithelium secondary to chronic inflammation, with resultant metaplasia that subsequently becomes invasive squamous cell carcinoma, and thus, squamous metaplasia is found within ductal epithelium adjacent to invasive carcinoma [5]. In the current case, squamous cell carcinoma infiltrated a superficial parotid gland but adjacent ductal epithelium was intact, which confirmed that tumor invasion had occurred from overlying skin.

The majority of cutaneous squamous cell carcinomas are relatively easy to treat, and have a higher probability of local control than other neoplasms [1]. However, cutaneous squamous cell carcinoma involving the parotid gland is an aggressive, rapidly advancing lesion, which if not recognized and treated early will result in high morbidity and mortality [4]. Treatment of cutaneous squamous cell carcinoma with invasion of a parotid gland primarily involves radical excision and parotidectomy, with or without facial nerve preservation, and adjuvant radiotherapy. In the past, radical surgery including sacrifice of the facial nerve was advocated, even when the nerve was not grossly involved. However, according to a recent study, sacrifice of the facial nerve, when it is not directly involved, does not improve outcome or result cause facial deformity [5,6]. In our case, the patient had no facial palsy initially, the tumor did not exceed the superficial lobe of the parotid gland grossly, and we were able to preserve the facial nerve. In the early literature, the usefulness of adjuvant radiotherapy was questioned, but evidence at the time was lacking. On the other hand, recent evidence from large series, of primary tumor and metastatic tumors, has shown that patients who receive adjuvant radiotherapy have a lower recurrence rate and a higher survival rate than patients treated with surgery alone. In many studies, prophylactic neck dissection was performed without evidence of cervical lymph node involvement. However, the role of elective neck dissection remains controversial [7,8]. Our patient had no clinical and radiological evidence of lymph node involvement, and the tumor did not exceed the superficial lobe of the parotid gland, and thus, the risk of cervical lymph node involvement was considered to be low. Accordingly, neck dissection was not performed, but the patient was regularly followed, and at 20 months after surgery, he had no evidence of local recurrence or lymph

node involvement.

This report describes a rare case of direct invasion of the parotid gland by cutaneous squamous cell carcinoma, which resulted in a good treatment outcome, and provides a review of relevant literature.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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