

## A case of laryngeal cancer associated with dermatomyositis

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### Abstract

We experienced a rare case of laryngeal cancer associated with dermatomyositis. The patient was a 63-year-old male and Japanese. He was admitted to our department of Otorhinolaryngology with dysphagia for a day as a chief complaint. He became aware of hoarseness with bloody sputum and then face edema with redness a half year before. At first physical examination, he had bilateral eyelid edema with erythema, finger edema with keratinizing erythema and limb extensor erythema. Serous creatine phosphokinase was 850 IU/mL (normal range: 40-200 IU/mL). Later, he was referred to the rheumatology department and was diagnosed as having dermatomyositis. Fiberscopic examination revealed laryngeal cancer with left laryngeal palsy. We gave priority to the laryngeal treatment. As a result, the symptoms of dermatomyositis were improved.

### Introduction

Dermatomyositis is a skin disease that can be associated with malignant tumors.<sup>1</sup> In Japan, Saito<sup>2</sup> reported that the most common associated malignancies are gastric cancer or colon cancer, but that cases of head and neck cancer were very rare. We experienced a patient with laryngeal carcinoma coexisting with dermatomyositis. We gave priority to the laryngeal treatment. As a result, the symptoms of dermatomyositis were improved. This case report presents the clinical findings, diagnosis and progress after the treatment.

### Case Report and Discussion

The patient was a 63-year-old Japanese male. He was admitted to our department of

otorhinolaryngology with dysphagia for a day as the chief complaint. He became aware of hoarseness with bloody sputum and then facial edema with redness a half year before. At the first physical examination, he had bilateral eyelid edema with erythema, finger edema with keratinizing erythema and limb extensor erythema (Figure 1). Serous creatine phosphokinase (CPK) was 850 IU/mL (normal range: 40-200 IU/mL). Later, he was referred to the rheumatology department and diagnosed as having dermatomyositis. Fiberscopic examination revealed a laryngeal tumor with left laryngeal palsy (Figure 2). We immediately performed tracheotomy to maintain airway patency and obtained a biopsy. The histopathological examination revealed squamous cell carcinoma. Computed tomography scan showed that laryngeal cancer had invaded the thyroid cartilage and metastasized to the bilateral superior deep neck lymph nodes. The stage of this case was classified as T3N2CM0. Gallais<sup>3</sup> reported that the most important prognostic factor for dermatomyositis was malignancy. It has been suggested that treatment of the original malignant disease should be the first priority when a malignancy coexists with dermatomyositis. Dermatomyositis can cause dysphagia leading to death from aspiration pneumonia. Therefore, we performed total laryngectomy with bilateral neck dissection. Postoperatively, the serous CPK was 67 IU/mL. The eyelid edema with erythema and finger edema with keratinizing erythema decreased or disappeared after this operation (Figure 3). Moreover, the aspiration pneumonia, oral intake and performance grade improved from 3 to 1 by the total laryngectomy. A few researchers have reported processes of relationship between dermatomyositis and malignant tumors.<sup>4</sup> Mooney<sup>5</sup> have described explanations about prostate cancer and the occur-

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Contributions: TK, diagnosis and therapy, composition of this case report; HH, YK, AY, therapy; KI, composition of this case report; RW, pathological diagnosis.

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rences of dermatomyositis were described as follows. Their study demonstrated that this patient with prostate cancer presenting as dermatomyositis had autoantibodies to specific proteins, possibly associated with his autoimmune myopathy. Some think that dermatomyositis may be a manifestation of a malignant tumor, which means that dermatomyositis is a kind of paraneoplastic syndrome when they are coexistent. For some patients, successful treatment of the tumor could relieve the dermatomyositis.<sup>6</sup>



Figure 1. His clinical findings showed bilateral eyelid edema with erythema (left) and finger edema with keratinizing erythema (right).



Figure 2. In the fiberscopic findings, a laryngeal tumor occupied the glottic space (asterisk).



Figure 3. Eyelid edema with erythema and finger edema with keratinizing erythema were improved by the total laryngectomy.

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