Primary Cutaneous Diffuse Large B-Cell Lymphoma with Tongue Involvement
Satoshi Kayukawa1, Takae Kataoka1, Tomoko Nishio1, Takashi Kanamori1, Takaki Kikuchi1, Ryuichi Furuta3 and Kenji Ina3*
1Department of Clinical Oncology, Nagoya Memorial Hospital, Nagoya, Japan
2Department of Pathology, Nagoya Memorial Hospital, Nagoya, Japan
3Department of Medical Oncology, Nagoya Memorial Hospital, Nagoya, Japan
*Corresponding author: Kenji Ina, Department of Medical Oncology, Nagoya Memorial Hospital, 4-305 Hiraibari, Tenpaku-ku, Nagoya 468-8520, Japan, Tel: +81-52-804-1111; Fax: +81-52-803-8830; E-mail: kina@hospy.or.jp
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Abstract
We report a case of diffuse large B-cell lymphoma involving the thigh skin and tongue in an 85-year-old woman. No systemic symptoms or other lesions were observed at diagnosis. Local radiotherapy was effective, but cutaneous recurrence occurred 6 months after the treatment. The patient died of old age with no macroscopically distinguishable nodal or systemic lesions. A postmortem examination revealed intravascular invasion into the tongue, lung, and lymph nodes around the pancreas. To our knowledge, this is the first report of primary cutaneous diffuse large B-cell lymphoma with tongue involvement.

Keywords: Primary cutaneous lymphoma; Diffuse large B-cell lymphoma; Tongue

Introduction
A variety of T- and B-cell neoplasm can involve the skin and the term “primary cutaneous lymphoma” refers to the disorder that present in the skin with no evidence of extracutaneous disease at the time of diagnosis [1,2]. Among them, primary cutaneous diffuse large B-cell lymphoma, leg type (PCDLBCL, LT) is characterized with skin lesions on one or both legs. In patients presenting with a single small skin tumor, radiotherapy should be considered [2,3]. Although non-Hodgkin’sB-cell lymphoma represents the second leading malignancy of oral cavity, lymphoma involving the tongue is very rare [4,5].

We herein describe a case of PCDLBCL, LT with tongue involvement successfully treated with local radiotherapy.

Case Report
An 85-year-old woman was admitted with pruritic, erythematous, and scaly plaques on her left thigh. This lesion diagnosed as diffuse large B-cell lymphoma (DLBCL) by skin biopsy (Figure 1) was slowly progressing during 3 months without systemic signs or symptoms. Staging evaluation for systemic disease by peripheral blood examination, bone marrow aspiration, and computed tomography (CT) scan was negative. Gallium scintigraphy suggested a nasopharynx lesion (Figure 2); however, otolaryngologists did not find any abnormality in the patient’s oral cavity. The provisional diagnosis was PCDLBCL, LT.

Because the patient had already been bedridden at the time of initial diagnosis, systemic chemotherapy was not chosen, and local radiotherapy for the thigh tumor was started. Subsequently, we recognized an indurated submucosal nodule on the lingual apex, suggesting a nasopharynx lesion (upper arrow).

**Figure 1:** Cutaneous tumor of the thigh. Diffuse subcutaneous infiltration of atypical lymphoid cells with evident nucleoli was observed in the punch biopsy sample. These cells were positive for cell surface CD20 immunostaining. HE: Hematoxylin and Eosin Staining

**Figure 2:** Gallium scintigraphy showing a cutaneous tumor (lower arrow) and suggesting a nasopharynx lesion (upper arrow).
which grew up to 2 cm during the first two weeks of radiation and caused difficulty in mastication. Biopsy specimens obtained from the tongue tumor had similar histological findings to the cutaneous lesion (Figure 3). The atypical lymphoid cells were positive for CD19, CD20, CD25 and negative for CD3 by immunohistochemistry. Radiation therapy was also initiated for the tongue lesion. Both skin and tongue lesions responded well to local radiotherapy with 40 Gy and 36 Gy, respectively, and subsequently disappeared. The patient developed a subcutaneous tumor in the left inguinal region within 6 months after the treatment. The recurrent skin lesion was treated with fractionated subcutaneous tumor in the left inguinal region within 6 months after the treatment. The recurrent skin lesion was treated with fractionated radiation therapy and resolved completely.

Ten months after the initial diagnosis, the patient was readmitted to the hospital due to dysphagia. No relapse was observed in the oral cavity or pharynx; however, the patient became weak and eventually died of old age. A postmortem examination revealed no evidence of lymphadenopathy or any other macroscopic lesions. However, microscopic examination revealed invasion into the tongue, lung, and lymph nodes around the pancreas. Small round cells were localized in the subepithelial layer of lymphadenopathy or any other macroscopic lesions. However, microscopic examination revealed invasion into the tongue, lung, and lymph nodes around the pancreas. Small round cells were localized in the subepithelial layer.

Figure 3: Biopsy specimens obtained from the tongue tumor had similar histological findings to the cutaneous lesion. Diffuse CD20-expressing lymphoma cells infiltrated the subepithelial layer.

Figure 4: CD20-positive small round cells were localized to the intravascular space in the areas of invasion.

Discussion

Primary cutaneous B-cell lymphoma belongs to a group of B-cell lympho-proliferative disorders that are localized to the skin and show no evidence of extracutaneous manifestation at the time of initial diagnosis [1]. PCDLBCL, LT is an aggressive B-cell lymphoma that accounts for only 1-3% of all cutaneous lymphoma cases and approximately 10-20% of PCBCL cases [2]. Skin lesions are either solitary or multiple, with a predilection for the lower extremities and/or trunk. This disorder predominantly affects elderly patients, particularly women, often disseminates to extracutaneous sites, and has less favorable prognosis [3].

In conclusion, we believe that this was a case of PCDLBCL, LT, which initially grew relatively slowly and responded well to the local therapy and resolved completely. PCDLBCL: Primary Cutaneous Diffuse Large B-Cell Lymphoma

Table 1: Cases of lymphoma with both tongue and cutaneous involvement.

<table>
<thead>
<tr>
<th>Age</th>
<th>Gender</th>
<th>Diagnosis</th>
<th>Tongue</th>
<th>Skin involvement</th>
<th>Outcome</th>
<th>References</th>
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<tbody>
<tr>
<td>40</td>
<td>F</td>
<td>T-cell lymphoma</td>
<td>ventrolateral side</td>
<td>left third finger</td>
<td>alive</td>
<td>[10]</td>
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<tr>
<td>40</td>
<td>M</td>
<td>T-cell lymphoma</td>
<td>dorsum</td>
<td>finger right foot</td>
<td>alive</td>
<td>[10]</td>
</tr>
<tr>
<td>72</td>
<td>F</td>
<td>Cutaneous T-cell lymphoma</td>
<td>dorsum</td>
<td>trunk</td>
<td>12 months</td>
<td>[11]</td>
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<tr>
<td>85</td>
<td>F</td>
<td>PCDLBCL</td>
<td>apex</td>
<td>thigh</td>
<td>11 months</td>
<td>Our case</td>
</tr>
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PCDLBCL: Primary Cutaneous Diffuse Large B-Cell Lymphoma
radiotherapy. The relapsed tumor in the left inguinal region progressed more rapidly but, again, regressed in response to radiotherapy.

References


