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LETTER TO EDITOR

Cutaneous leiomyosarcoma of the Scalp in a Middle-aged man: A Case Report

Mohmmadreza Hafeziahmadi [1], Milad Rashidbeygi [2*], Sajjad Alizadeh [2], Malek Alimohmmadi [1], Ali Delpisheh [3]

[1] Imam Khomeini Hospital, Ilam University of Medical Sciences, Ilam, IR Iran

[2] Research Committee, Ilam University of Medical Sciences, Ilam, IR Iran

[3] Department of Clinical Epidemiology, Ilam University of Medical Sciences, Ilam, IR Iran

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Dear Editor,

Sarcoma of the soft tissue is a rare condition, comprising approximately one percent of malignant tumors. Leiomyosarcoma is a rare malignant neoplasm of smooth muscle cells. The most common locations of leiomyosarcoma are uterus, gastrointestinal tract, and retroperitoneum (1).The etiology of leiomyosarcoma is unknown; some relationship has been established with radiation, chemical exposure, chromosomal defects and trauma (2). Cutaneous tumors tend to be slow-growing and smaller (< 2 cm) and subcutaneous type are usually larger and faster growing. Hereby we report a case of leiomyosarcoma of scalp.

A 56-year-old Iranian village man presented with an enlarging subcutaneous mass of the scalp without any pain and itching since last year and no family history of malignancy, internal disorder or skin disease. Patient's daily was labored in front of direct sunlight without helmet for an average of ten hours. The patient with increasing size of mass was visited by a doctor. He did not mention headache, dizziness, feeling of pressure or mass in the head, early fatigue, weakness, anorexia, respiratory distress, chest pain and heart problems, hematuria, history of radiation and skin diseases such as lupus vulgaris. On physical examination, the patient has a diameter of 1.3 cm light brown solid mass in the anterior-external right side of case. The patient had no lymphadenopathy. The patient was referred to a surgeon for removal of the mass. The lesion was surgically excised completely and the mass was removed, its margins have been clean and the lesion was surgically excided completely and submitted for histological examination. Final histological examination after surgery showed a histological diagnosis of cutaneous leiomyosarcoma was made. The histological examination was as follows: The individual tumor cells showing eosinophilic cytoplasm and blunt-ended nuclei. On occasion, the cells have paranuclear vacuoles. Mitosis including atypical ones is easily identified. The immunohistological examination was as follows: Immunohistochemistry showed positive smooth muscle actin. S100 was weakly positive and CD34 was negative.

The pathological examination showed that microscopically, the pattern of growth was predominantly fascicular, with the tumor bundles intersecting each other at wide angles. Merging of tumor cells with blood vessel walls is an important diagnostic clue. The individual cells have elongated, blunt ended nuclei and acidophilic fibrillary cytoplasm. The degree of nuclear atypical is highly variable (moderate) in an MFH-like picture. The most commonly demonstrable pattern of differentiation of soft tissue sarcomas with the morphologic appearance of MFH was toward smooth muscle lines. Cytoplasmic vacuoles located at both ends of the nucleus, sometimes indenting them; represents another diagnostic clue *(Figures 1)*.

The histological features of leiomyosarcomas are well known. The tumors are cellular and infiltrative, and most often have a fascicular pattern of growth. The cells are moderate sized and spindle shaped. The nuclei are elongated with blunt ends and contain perinuclear vacuoles and eosinophilic cytoplasm. Cutaneous lesions present a grey zone between them and overlying epidermis (3). There are two histopathologic growth patterns in cutaneous leiomyosarcoma: nodular (the most common type) and diffuse (4). People at any age could be affected by leiomyosarcoma. Some studies have shown preponderance

* *Corresponding author at:* Milad Rashidbeygi, Ilam University of Medical Sciences, Ilam, IR Iran, Tel: +98-8413332142, Fax: +98-8412235700, *Email:* miladrashidbeygi@yahoo.com

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for women, other studies have proved preponderance for men, so there is no certain gender-based prevalence pattern. The metastatic potential is differ: a 5-10% risk in cutaneous type and 30-40% in subcutaneous tumors. The most common site of metastasis is the lung (4). But Vandergriff et al have shown that the scalp is the most common cutaneous site of involvement of metastatic leiomyosarcoma, occurring in half (8/16, 50%) of all patients with skin metastases. This trend is likely accounted for the dense vascularity of the scalp and the tendency of leiomyosarcoma to spread via hematogenous routes. The second most common site of skin metastasis is the trunk (7/16, 44%). Conversely, only a few cases involved the extremities (2/16, 12%). In the majority of reported cases (11/16, 69%), cutaneous metastases were accompanied by metastases to internal organs, most frequently to the lungs (5). Surgical excision is the primary treatment for superficial leiomyosarcoma. Narrow margin excision is better than wide local excision (6).

We have presented a rare case of cutaneous leiomyosarcoma tumor. The particularities of this case were the uncommon localization (7). The exactly incidence of this pathology is unknown, frequently being misdiagnosed. Surgical excision is the unique and most effective way to treat this condition and avoid local recurrence. Leiomyosarcoma usually does not create superficial ulcer, but as shown in figure 1 it has been done.

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