

only focally positive for desmin⁵. Glomus tumors can be distinguished by tumor cells showing more abundant eosinophilic cytoplasm and distinct cell borders. In addition, glomus tumors lack the concentric orientations of tumor cells around vessels characteristic of MPC⁴.

MPCs typically arise in subcutaneous tissue as single or multiple nodules on the extremities of adults, with only rare cases of multicentricity. MPC presents as a benign, slow-growing nodule, and may occasionally be painful. Tumors rarely exceed 2 cm in size. A rare malignant transformation has been reported as well⁵.

Most MPCs do not recur following excision⁴. Our patient decided to leave her lesion untreated. Involvement of the face in MPC cases is previously undescribed in the Korean dermatologic literature. Presentation of this case of MPC on the cheek will aid others in recognizing this very rare entity.

REFERENCES

1. Requena L, Kutzner H, Hügel H, Rütten A, Furio V. Cutaneous adult myofibroma: a vascular neoplasm. *J Cutan Pathol* 1996;23:445-457.
2. Granter SR, Badizadegan K, Fletcher CD. Myofibromatosis in adults, glomangiopericytoma, and myopericytoma: a spectrum of tumors showing perivascular myoid differentiation. *Am J Surg Pathol* 1998;22:513-525.
3. McMenamin ME. Myopericytoma. In: Fletcher CDM, Unni KK, Mertens F, editors. World Health Organization classification of tumours. Pathology and genetics of tumours of soft tissue and bone. Lyon: IARC Press, 2002:138-139.
4. Dray MS, McCarthy SW, Palmer AA, Bonar SF, Stalley PD, Marjoniemi V, et al. Myopericytoma: a unifying term for a spectrum of tumours that show overlapping features with myofibroma. A review of 14 cases. *J Clin Pathol* 2006;59:67-73.
5. Mentzel T, Dei Tos AP, Sapi Z, Kutzner H. Myopericytoma of skin and soft tissues: clinicopathologic and immunohistochemical study of 54 cases. *Am J Surg Pathol* 2006;30:104-113.

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Localized Involutional Lipoatrophy in a Child

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Dear Editor:

Localized loss of adipose tissue without prior clinical or histologic inflammation is usually termed idiopathic lipoatrophy¹. Localized involutional lipoatrophy (LIL), which was first described by Peters and Winkelmann² in 1986, generally appears asymptomatic well-demarcated, depressed lesion on a single or in several sites³. Most of the reported cases occur in adolescence or in adulthood, but there has been only one reported childhood case of LIL². Thus, we report a rare case of LIL in childhood in which triggering factors are not found and we reviewed the

previously published reports.

A 5-year-old boy presented with an asymptomatic depressed lesion on his right buttock 1 month ago. The patient denied any history of injury or local injection at that site. He had no other medical problems or any associated drug intake. Physical examination revealed a well-demarcated, 3.0×3.5 cm sized hypopigmented, depressed atrophic patch (Fig. 1). Laboratory examination showed no abnormal findings in the patient's complete blood count, blood chemistry, C-reactive protein level, and auto-antibody screening tests for antinuclear, anti-DNA, and

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anticentromere antibodies. Histopathological examination of a biopsy specimen showed epidermal atrophy and a decrease in the size of subcutaneous fat lobules composed of small adipocytes. There was no significant dermal or subcutaneous inflammation (Fig. 2). Immunohistochemical studies revealed CD68 positive macrophages within the fat lobules. We have followed up this patient without any treatments or procedures for 6 months, but there was no spontaneous regression.

Peters and Winkelmann² first reported LIL in 6 patients, most of all patients were adolescence or adult age except one 5-year-old boy. Yamamoto et al.³ reported 6 patients



Fig. 1. Well-demarcated, hypopigmented, and depressed atrophic patch on the right buttock.

with LIL, all of whom were female, while 4 of the 6 patients had a history of local injections. Dahl et al.¹ reported 16 patients with LIL, who had an average age of 32.8 year (range: 13 to 65 year) with female predominance; 9 of 16 patients had a history of antecedent intramuscular or intra-articular injections at the affected sites.

Histological examination presented variable sized fat lobules composed of small fat cells embedded in a well-vascularized and hyalinized background. Each adipocyte that resembles fetal fat tissue may vary in size, but are smaller than the normal fat cell³. LIL is also characterized by the presence of CD68-positive and mucin-positive macrophages scattered between the affected lipocytes. Lesional direct immunofluorescence findings are usually negative^{1,2}.

The pathophysiology of LIL is still unknown. LIL is associated with various immunologic disorders, which may suggest a background of immunologic dysregulation that may predispose for the development of LIL lesions after injection of medications such as antibiotics, insulin, or steroids^{1,3-5}. Ultrastructurally, the activated macrophages were shown in close to fat cells. It is believed that these macrophages are activated after injury and secrete many cytokines, such as tumor necrosis factor- α , interleukin 1, platelet-derived growth factor, transforming growth factor- β 1, and fibroblast growth factor-2, which may then mediate the involution of the adipose tissue⁵. In our case, we could not identify any triggering factors. However, we presumed that the cause of our case was any injury that included injection or trauma; most cases of childhood LIL were triggered after injection.

In conclusion, most reported cases have occurred in

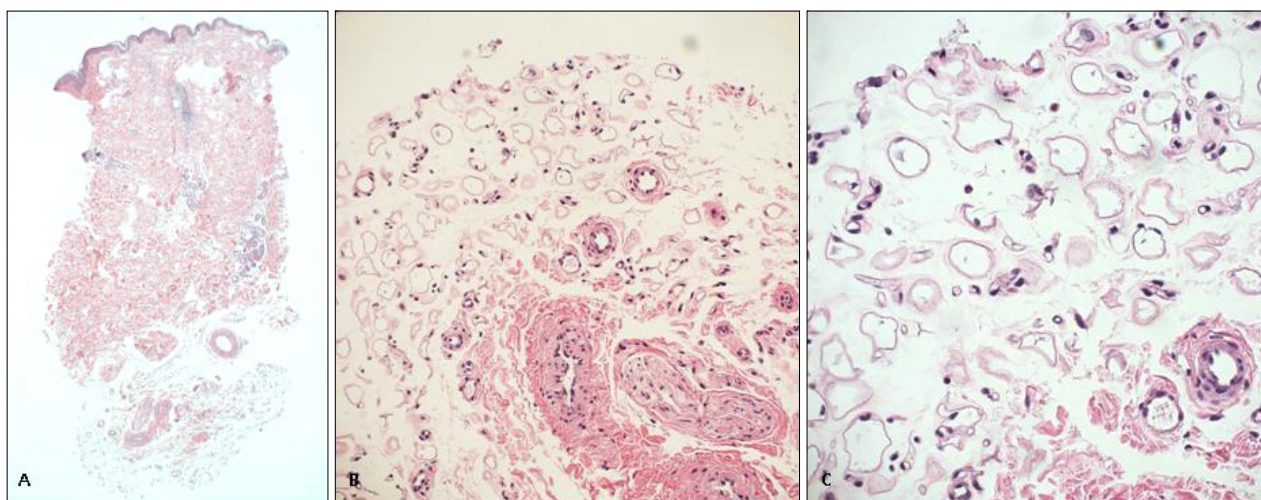


Fig. 2. Histological examination of the skin biopsy specimen shows. (A) Epidermal atrophy, compaction of collagen bundle in the dermis without inflammation (H&E, $\times 40$). (B) Diminutive fat lobules composed of variable sizes adipocytes (H&E, $\times 200$). (C) Immature adipocytes resembling fetal fat tissue (H&E, $\times 400$).

females of adolescent or adult age with a local injection history, but there has been only one report on childhood LIL². Thus, we think that this case is very interesting in terms of age of onset, gender, and unidentified triggering factor.

REFERENCES

1. Dahl PR, Zalla MJ, Winkelmann RK. Localized involutinal lipoatrophy: a clinicopathologic study of 16 patients. *J Am Acad Dermatol* 1996;35:523-528.
2. Peters MS, Winkelmann RK. The histopathology of localized

lipoatrophy. *Br J Dermatol* 1986;114:27-36.

3. Yamamoto T, Yokozeki H, Nishioka K. Localized involutinal lipoatrophy: report of six cases. *J Dermatol* 2002;29:638-643.
4. Abbas O, Salman S, Kibbi AG, Chedraoui A, Ghosn S. Localized involutinal lipoatrophy with epidermal and dermal changes. *J Am Acad Dermatol* 2008;58:490-493.
5. Ahmed I. Post-injection involutinal lipoatrophy: ultrastructural evidence for an activated macrophage phenotype and macrophage related involution of adipocytes. *Am J Dermatopathol* 2006;28:334-337.

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Stamp-Form Contact Plate: A Simple and Useful Culture Method for Microorganisms of the Skin

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Dear Editor:

The distribution, type and density of cutaneous microflora are variable depending on the anatomical regions involved, and this diversity may affect the pathogenesis and progress of skin disorders. In particular, atopic dermatitis (AD) has been known to be closely related with *Staphylococcus aureus* colonization. *S. aureus* affects AD by producing exotoxins with superantigenic properties¹. Therefore, the dynamics of cutaneous microbial population is important in AD. Several methods have been developed to quantify the microflora of the skin, including the scrub method, swab method, tape method, and contact plate method. Apart from the contact plate method, all of these

techniques require two steps: sampling and inoculation. If the contact plate method is used, sampling and inoculation can be performed in one step by inoculating bacteria directly from skin to the agar plate. Furthermore, distribution of bacteria in the tested area can be observed by direct contact. The purpose of this study was to quantitatively analyze *S. aureus* in AD and a normal control using a self manufactured stamp-form contact-plate.

Nine AD patients (two male, seven female, mean age of 12.3 years old) and ten normal controls (three male, seven

Table 1. Demographics of atopic dermatitis patients

	Age (yr)	Sex	The most severe area	SCORAD
1	24	Female	Left wrist	9.56
2	26	Female	Right popliteal fossa	9.81
3	23	Female	Left cubital fossa	42.26
4	6	Female	Neck	60.41
5	11	Male	Right popliteal fossa	18.16
6	8	Female	Left popliteal fossa	52.10
7	10	Female	Left cubital fossa	12.74
8	8	Male	Left popliteal fossa	24.97
9	6	Female	Right popliteal fossa	18.26

SCORAD: SCORing atopic dermatitis.

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