Focal Eosinophilic Myositis

– *A case report* –

Mi Woo Lee, M.D., Ho Seok Suh, M.D., Dae Hun Suh, M.D.,
Jee Ho Choi, M.D., Kyung Jeh Sung, M.D., Jai Kyoung Koh, M.D.

Department of Dermatology, Asan Medical Center, College of Medicine, University of Ulsan, Seoul, Korea

We report a case of focal eosinophilic myositis of the frontalis muscle in a 38-year-old man. The skin lesion was a single firm flesh-colored swollen lesion measuring 1×1.5 cm in size on the right forehead. The biopsy revealed inflammatory infiltrates composed of mainly eosinophils and a few lymphocytes in the muscles. The skin lesion subsided with intralesional injections of triamcinolone acetonide, 5 mg/ml.
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Key Words: Focal eosinophilic myositis

Eosinophilic myositis is a rare disorder which is characterized by eosinophilic infiltrations in the muscles. It can be seen as a secondary condition to parasitic infestation, eosinophilic polymyositis, hypereosinophilic syndrome, eosinophilia myalgia syndrome, and eosinophilic fasciitis[1]. We describe a patient with unique focal eosinophilic myositis on the frontalis muscle. There were no systemic symptoms. So far as we know, this illness has not been previously reported in the dermatologic literatures in Korea.

REPORT OF A CASE

A 38-year-old man was seen because of a painless swollen lesion on the right forehead, which appeared one week prior to his visit. There was no history of an insect bite, trauma, or ingestion of Ltryptophan. He had treated his Graves' disease for 6 years with propylthiouracil or metimazole. On skin examination, a firm flesh-colored swollen lesion measuring 1.0×1.5 cm was noted on the right forehead (Fig. 1). Otherwise, the results of physical exanination were completely normal. The laboratory tests including complete blood cell count, erythrocyte sedimentation rate, urinalysis, liver function test, chest PA, CK/LDH, stool examination, FANA, anti-Scl-70 antibody, anti-Ro/La antibody were negative or within the normal limits. The thyroid funtion test revealed increased level of T_3 (444 ng/dl, normal range; 85-185 ng/dl), T_4 (14.9 μg/dl, normal range; 5.5-11.5μg/dl) and decreased level of TSH (0.05 μIU/ml, normal range; 0.34-3.5 μIU/ml). The thyroid stimulating immunoglobulin and antimicrosomal antibody were positive. A biopsy showed an inflammatory infiltrate consisting mainly of eosinophils with occasional lymphocytes in the perimysium, endomysium and perineural area (Fig. 2, 3). There were no specific changes in the epidermis, dermis and subcutaneous tissue. The findings seemed to be compatible with focal eosinophilic myositis. The lesion subsided with intralesional injections of triamcinolone acetonide, 5 mg/ml.

DISCUSSION

Focal eosinophilic myositis was first described by Agrawal and Giesen[2] in a 17-year-old boy who had a 2×3cm pseudotumor of the sternocleidomastoid muscle. A peripheral blood eosinophilia

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Reprint request to: Mi Woo Lee, M.D., Department of Dermatology, Asan Medical Center, College of Medicine, University of Ulsan, Seoul, Korea

Table 1. Case reports of focal eosinophilic myositis

Age, Sex, (Ref.)	Muscle Weakness	Location	Eosinophilia (cells/mm^3)	CPK	EMG	ESR (mm/h)	Treatment
14, M, (2)	-	Neck	+	165 IU/L	N/D	N/D	Observation
30, F, (6)	-	Distal legs	-	Normal	Normal	32	Prednisolone
47, M, (1)	-	Proximal, distal legs	1,960	Normal	Myositis	25	Indomethacin
70, M, (3)	-	Distal arm	255	Normal	N/D	58	Prednisolone
38, M, (our case)	-	Forehead	280	Normal	N/D	3	T.A. intralesional injection

* N/D : Not done

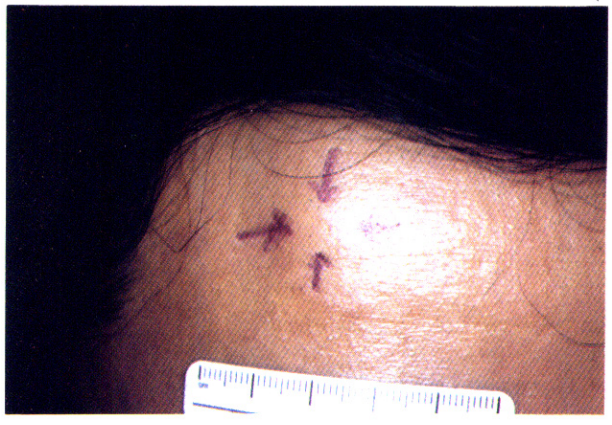

Fig. 1. A flesh-colored swollen lesion on the right forehead

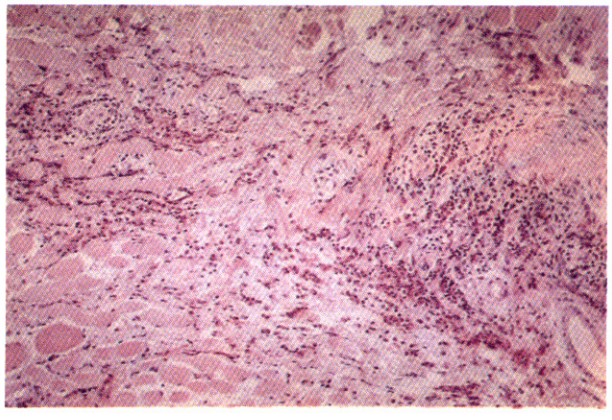

Fig. 2. The infiltrates composed of eosinophils and lymphocytes in the endomysium, perimysium and perineural area.

was present, but there was no evidence of systemic involvement. The biopsy of the lesion revealed eosinophilic infiltrates in the muscle and it subsided without treatment. As far as we know there have been described only a few cases of this entity since the first report (Table 1). None had muscle

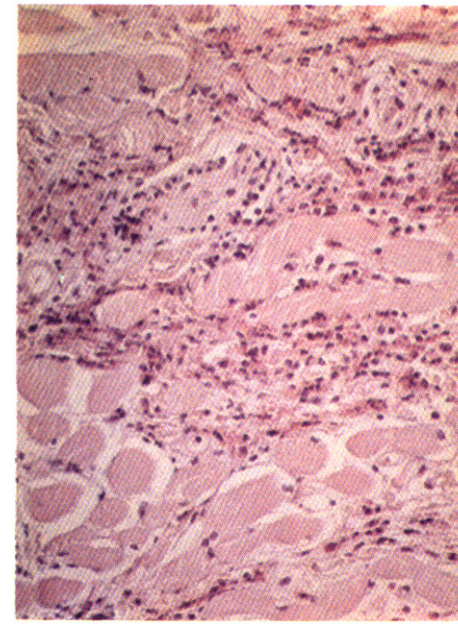

Fig. 3. The infitrates composed of numerous eosinophils with a slight admixture of lymphocytes in the endomysium.

tenderness. Focal eosinophilic myositis has been treated with a variety of modalities, including observations, nonsteroidal antiinflammatory drug, and corticosteroid[3]. Regardless of the treatment, all patients with this disease ultimately improved with complete resolution of the lesion and the peripheral eosinophilia.

Other entities must be considered before idiopathic focal eosinophilic myositis is diagnosed. It can be seen as a secondary manifestations to parasitic infestation such as cysticercosis, trichinosis and echinococcus, eosinophilic polymyositis, hypereosinophilic syndrome, eosinophilia myalgia syndrome and eosinophilic fasciitis[1,3,4]. Muscle involvement has also been described in the hypere-

osinophilic syndrome and eosinophilia myalgia syndrome[4]. There was no evidence of parasitic infestation, muscle involvement, and systemic involvement in our case. Thus our case seems to be compatible with focal eosinophilic myositis.

Of interest in focal eosinophilic myositis, is the entity of eosinophilic myositis in animal[4, 5, 6]. This entity has been acknowledged by veterinary pathologists in dogs and called "masticator myopathy"[2,6]. The disease in dogs may be fatal, since the animal is unable to open its mouth to eat or drink. In sheep and cow, the disease is usually identified by meat inspectors as tan or greenish masses in skeletal muscle. There are eosinophilic infiltrates in muscles and peripheral blood eosinophilia. Investigations for parasites such as trichinosis were negative in these animal cases. Histopathologically, the present case seems to resemble closely animal eosinophilic myositis, but it is not certain that the two disease are the same entity.

The pathophysiology of eosinophilic myositis remains unknown. But the association with Graves' disease in our case may support the concept of an underlying immunologic mechanism. Also, the entity of the focal eosinophilic myositis is not clearly defined. However, Serratrice et al[6] classified eosinophilic fasciitis into 4 groups such as classical eosinophilic fasciitis, eosinophilic perimyositis, eosinophilic myositis and eosinophilic polymyositis. Our case may be classified into eosinophilic myositis as a focal form. This disease entity needs more study.

REFERENCES

1. Sladek GD, Vasey FB, Sieger B, Behnke DA, Germain BF, Espinoza ER: Relapsing eosinophilic myositis. J Rheumatol 101:467-469, 1983.
2. Agrawal BL, Giesen PC: Eosinophilic myositis, an unusual cause of pseudotumor and eosinophilia. JAMA 246:70-71, 1981.
3. Yonker RA, Panush RS: Idiopathic eosinophilic myositis with preexisting fibromyalgia. J Rheumatol 12:165-167, 1985.
4. Estrada CA, Harrington DW, Glaberg MR: Eosinohpilic myositis an expression of L-tryptophan toxicity? J Rheumatol 17:1554-1555, 1990.
5. Bjelle A, Henriksson KG, Hofer PA: Polymyositis in eosinophilic fasciitis. Eur Neurol 19:128-137, 1980.
6. Serratrice G, Pellissior JF, Roux H, Quilichini P: Fasciitis, perimyositis, myositis, polymyositis and eosinophilia. Muscle & Nerve 13:385-395, 1990.