

Symptom flares of atopic dermatitis during the Japanese cedar pollen season – a Website questionnaire study

Japanese cedar (JC) pollinosis is a common disease in Japan, and the prevalence is increasing dramatically [1]. The influence of pollen on atopic dermatitis (AD) has been much studied and it is reported that many AD patients can have symptom flares from February to May [2, 3], when the airborne JC pollen reaches a high level in Japan.

In addition, a symptom flare is likely to be seen among AD patients who also have JC pollinosis [2]. However, to the best of our knowledge, there have only been a few reports discussing precisely this point. Thus, we examined the frequency of symptom flares of AD during the JC pollen season through a questionnaire on our Website.

We put out a questionnaire for AD patients with the title, “About changes in atopic dermatitis symptoms during the Japanese cedar pollen season”, for 2 months from March 1st to April 30th 2007, which was maintained by our department (<http://www.kyudai-derm.org/atopy/>). The list of questions and details of the results are shown in *table 1*.

Table 1. A questionnaire shown on our Website and details of the answers

Q1. How old are you?								
n = 188	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71≤
	20	38	67	46	12	3	2	0
	10.6%	20.2%	35.6%	24.5%	6.4%	1.6%	1.1%	0%
Q2. What is your gender?								
n = 188					Male	Female		
					75	113		
					39.9%	60.1%		
Q3. Do you have Japanese cedar pollinosis?								
n = 188					Yes	No		
					137	51		
					72.9%	27.1%		
Q4. Do your atopic dermatitis symptoms change during the Japanese cedar pollen season <i>i.e.</i> about from February to May? (Only for the patients who answered “Yes” on Q3)								
n = 137					Yes	No		
					130	7		
					94.9%	5.1%		
Q5. How does your erythema change during that season? (Only for the patients who answered “Yes” on Q4)								
n = 130	Better		No Change		Worse			
	0		8		122			
	0%		6.2%		93.8%			
Q6. Where do you have worse erythema? You can choose more than one answer. (Only for the patients who answered “Worse” on Q5)								
n = 122	Face and Neck		Extremities		Trunk			
	95		61		54			
	77.9%		50.0%		44.3%			
Q7. How does your itch change during that season? (Only for the patients who answered “Yes” on Q4)								
n = 130	More		No Change		Less			
	124		6		0			
	95.4%		4.6%		0%			
Q8. Where do you have more itch? You can choose more than one answer. (Only for the patients who answered “More” on Q7)								
n = 124	Face and Neck		Extremities		Trunk			
	93		70		63			
	75.0%		56.5%		50.8%			
Q9. Do you have asthma?								
n = 188	Yes		No					
	34		154					
	18.1%		81.9%					
Q10. Do your asthma symptoms change during the Japanese cedar pollen season <i>i.e.</i> about from February to May? (Only for the patients who answered “Yes” on Q9)								
n = 34	Better		No Change		Worse			
	1		24		9			
	2.9%		70.6%		26.5%			

“Q” means an abbreviation of “question”.

We obtained 188 responders. Of the 188 AD patients, 137 (72.9%) had also JC pollinosis. Based on our Website questionnaire, most of the patients with JC pollinosis (130 of 137, 94.9%) had experienced symptom flares of AD during the JC pollen season, and the symptom flares tended to occur on uncovered areas such as the face and neck, with frequencies as high as 77.9% (95 of 122) for erythema and 75.0% (93 of 124) for itch. These results suggest a close correlation between the exacerbation of AD and JC pollinosis and/or pollen.

Because the barrier function of the skin is damaged, AD patients can be sensitized more easily, and eczematous lesions can arise quickly due to attached allergens. This theory can explain not only the high complication rate associated with JC pollinosis but also the symptom flares, which occur mainly on uncovered areas during the pollen season.

In our study, 18.1% of AD patients also had asthma, and 26.5% of these had experienced symptom flares of asthma during the pollen season while 70.6% had symptoms that did not change. Although the questions were not limited to the patients with JC pollinosis, these results may suggest a closer correlation between AD and JC pollinosis than between AD and asthma or asthma and JC pollinosis. There are limitations in our Website study. Responders were considered to be AD patients by self-reporting, and we cannot prove that all of them were doctor-diagnosed. The theme of the questionnaire may have made the responder population biased towards patients with JC pollinosis and against patients without JC pollinosis. We did not evaluate the presence of symptom flares in AD patients without JC pollinosis, and the presence of symptom flares in asthma patients was evaluated without being limited to the asthma patients with JC pollinosis.

In conclusion, JC pollen can be an exacerbating factor in AD, and it may make symptoms worse, especially on uncovered areas directly exposed to pollen. The relationship of JC pollinosis with AD may be closer than with asthma, which should be examined further through future studies. ■

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Multiple eruptive dermatofibromas associated with Hashimoto's thyroiditis and myasthenia gravis

A 32-year-old woman was referred to our department, having multiple painful pigmented lesions on her buttocks and lower legs, which she had noticed 2 years earlier. She had been suffering from Hashimoto's thyroiditis and myasthenia gravis for 6 years and 2 years, respectively. Myasthenia gravis was well controlled by 45 mg prednisolone and 75 mg cyclosporine and no treatment was required for Hashimoto's thyroiditis at that time. Physical examination revealed multiple well-circumscribed, painful, pigmented, firm nodules measuring 2-10 mm in diameter on both sides of the buttocks and legs. Our careful examination detected twelve similar tumors (*figure 1*). Laboratory examination showed the presence of anti-thyroid peroxidase, and anti-thyroglobulin antibodies were positive, but the levels of triiodothyronine, thyroxine and thyroid-stimulating hormone were within normal limits. Anti-acetylcholine receptor antibodies indicative of myasthenia gravis were also present. As part of the pathologic examination, we performed an excision biopsy of one nodule on the left leg. Histopathological examination showed that the tumor cells had spread to the entire dermis (*figure 1*). The cells were fibrohistiocytic and arranged in a compact storiform pattern, and no mitotic figures were found. An increase in the basal pigmentation and elongated rete ridges were found in the overlying epidermis. The histological findings were consistent with dermatofibroma.

Dermatofibroma is a common benign fibrohistiocytic tumor. Most often, it occurs as a solitary lesion in a healthy individual. Multiple dermatofibromas are rare, usually painful as compared to the single lesion, and have been reported to be associated with autoimmune diseases, including systemic lupus erythematosus (SLE),

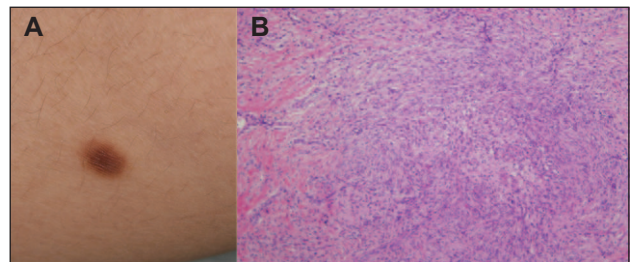


Figure 1. A) Clinical findings: Well-circumscribed, firm, painful, pigmented, firm nodule on the left leg was excised. B) Proliferation of tumor cells located in the entire dermis. The cells were fibrohistiocytic and arranged in a compact storiform pattern.