E10 Cutaneous Lesions of Sarcoidosis in Japan

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Background: The cutaneous manifestations of sarcoidosis often enable the dermatologist to be the first physician to make the diagnosis. The predominance of any particular type of cutaneous lesions of sarcoidosis is known to be influenced by race.

Methods: We conducted a retrospective chart review in our institution. Dermatological data were obtained by using a standardized protocol, including the medical history and type of cutaneous manifestation that was evaluated by clinical features and histopathological findings.

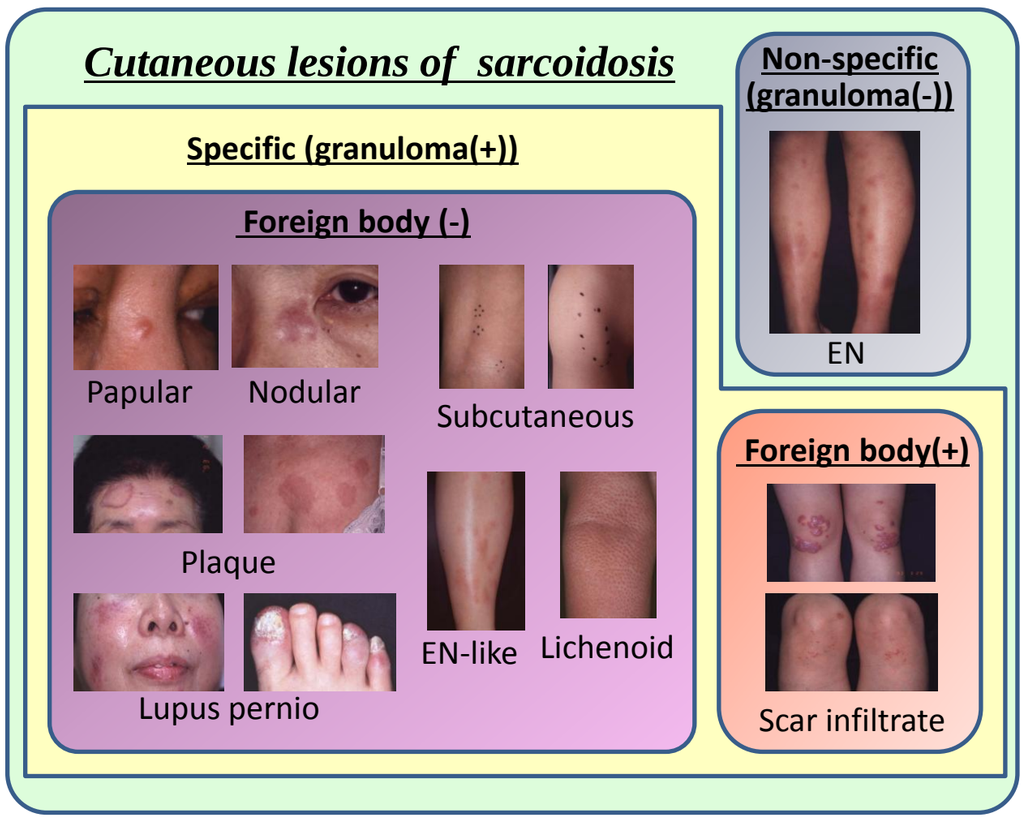

Figure 1. The cutaneous manifestations of sarcoidosis can be divided into nonspecific and specific categories. Non specific lesions do not exhibit granulomas microscopically and the most common lesion of this type is erythema nodosum (EN). Specific lesions show histologically non-caseating epithelioid cell granulomas, and included papules, nodules, plaques, lupus pernio, subcutaneous lesions, EN-like lesions, lichenoid type and other rare cutaneous manifestations. Scar infiltrate also belongs to the specific lesions, but is distinguished from other specific lesions by the presence of foreign body, histologically.

Frequency of cutaneous lesions of sarcoidosis in our hospital (n=180)

Type	EN	Lupus pernio	Papular Nodular	Plaques	Sub-cutaneous	EN-like	Lichenoid	Scar infiltrate
No. (%)	4 (2.2)	4 (2.2)	81 (45)	47 (26)	31 (17)	6 (3.3)	4 (2.2)	90 (50)

male:female=49:131 Age range: 23-83 years average: 53.1 years

Summary 1

1) Scar infiltrate was the most common lesion, followed by papular and nodular lesions.
2) Lupus pernio and EN were rare.
3) There were six patients with EN-like lesions, which are clinically similar to EN but show granuloma pathologically.

Frequency of cutaneous lesions of sarcoidosis over the world (%)

Type	Our cases	Veien *Denmark*	Rodionov *Russia*	Mana *Spain*	Sharma *USA*	Olumide *Nigeria*	Jacyk *South Africa*	Khaled *Tunisia*	Mahajan *India*	Chong *Singapore*	Jung *Korea*
EN	2.2	13.3	-	-	34	8	0	1.6	4	0	0
Lupus pernio	2.2	11.7	7.3	5.4	15	0	11	13.6	0	0	0
Papular Nodular	45	47.9	68.3	37.8	24	23	36	57.6	52	72	23.5
Plaques	26	17.0	12.2	37.8	22	0	29	16.9	35	32	41.2
Sub-cutaneous	17	-	7.3	13.5	4.7	0	0	4.2	4	-	11.8
EN-like	3.3	-	-	-	-	-	-	-	-	-	5.9
Lichenoid	2.2	-	-	-	-	-	-	-	-	-	-
Scar infiltrate	50	13.8	2.4	5.4	5	100	2	3.4	9	0	17.6

Summary 2

1) Papular and nodular lesions were universally common specific cutaneous manifestations of sarcoidosis.
2) The incidence of EN varied between 0% and 34%.
3) Lupus pernio was extremely rare in Asian countries.
4) Subcutaneous lesion was rare in Africa.
5) Scar infiltrate was most common in Nigeria and our hospital.

Relationship between skin type and other organ lesions or laboratory findings

		Ocular	Intra-thoracic	BHL	Cardiac	LN	Others	ACE↑
Skin sarcoid (type)	Nodular	85.7	30.8	57.1	21.4	92.9	14.3	50.0
	Plaque	77.7	12.5	55.6	37.5	77.8	11.1	33.3
	Subcutaneous	50	0	33.3	25	66.7	25	25
	EN-like	100	0	66.7	0	100	66.7	33.3
	Licheoid	50	50	50	0	50	100	100
	Pernio	0	0	100	0	100	0	0
		71.4	24	59.3	26.9	81.5	21.4	50
Scar infiltrate		46.7	33.7	57.1	21.4	100	26.7	46.7
EN		0	0	100	0	100	100	100
All skin lesion		68.8	21.4	53.3	24.1	83.3	21.9	46.9

Summary 3

1) All patients with EN-like lesions had ocular lesions but not cardiac lesions.
2) Cardiac lesions were observed most commonly in patients with plaque-type lesions.
3) Intrathoracic lesions were less common in patients with subcutaneous lesions.

Relationship between the number of skin lesion type and other organ lesions or laboratory findings

	Ocular	Intra-thoracic	BHL	Cardiac	LN	Others	ACE↑
one type	77.7	6.7	37.5	21.4	68.6	16.7	44.4
> 2 types	57.1	38.5	71.4	28.6	100	21.4	50

Summary 4

1) Intrathoracic lesions, BHL and LN lesions were observed more commonly in patients with more than two types of skin sarcoidosis.
2) On the other hand, ocular lesions were observed more commonly in patients with only one type of skin sarcoidosis.

Conclusion

1. Papular/nodular skin lesions were most common in our cases as previously reported from other countries.
2. Genetic influences may contribute to the finding that EN and lupus pernio were rare in our cases as well as in other Asian countries.
3. Scar infiltrate was seen in 50% of patients. Careful examination is important not to overlook the sarcoidal skin lesions.
4. Further investigation on the relationship between skin type and other organ involvement is needed to better understant the importance of skin lesions in sarcoidosis.