

STUDIES ON PORPHYRIN EXCRETION IN CASES OF LUPUS ERYTHEMATOSUS

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Summary

1 out of 3 cases of discoid lupus erythematosus and 4 out of 6 cases of systemic lupus erythematosus showed marginal increase in porphyrin excretion either in urine or faeces or both.

Lupus erythematosus (LE) is a symptom complex with involvement of single or multiple systems. While some are of opinion that discoid lupus erythematosus (DLE) and systemic lupus erythematosus (SLE) represent one single condition in different stages of evolution, certain others feel that they are altogether different conditions. However it has been observed by most authors that while in certain individuals discoid lupus erythematosus continues to be purely a cutaneous condition, in some it develops insidiously into a systemic condition with leucopenia and even positive L.E. cell phenomenon. In systemic lupus erythematosus systemic features generally predominate with or without cutaneous manifestations.

As regards the aetiology of this complex condition many hypotheses are postulated. Photosensitivity plays a significant role in precipitating the manifestations of the disease. It is a known fact that in many cases of photosensitivity there is increased porphyrin excretion. Mofty et al¹ reported increased porphyrin excretion in L.E. Sneddon², Harris et al³ reported cases of

porphyria cutanea tarda with clinical features similar to lupus erythematosus. The present work has been undertaken to study the pattern of porphyrin excretion in cases of L.E.

Materials and Methods

Nine patients with clinical diagnosis of discoid lupus erythematosus were investigated.

In all the cases, blood counts, urine analysis, routine examination of the stools, liver function tests, skin biopsy and L.E. cell phenomenon were carried out.

Any patient with constitutional symptoms such as fever and joint pains or leucopenia, raised E.S.R., reversed A/G ratio or a positive L.E. cell phenomenon was classified as a case of systemic lupus erythematosus. The case material thus classified comprised of:—

- (A) Discoid lupus erythematosus 3
- (B) Systemic lupus erythematosus 6

Porphobilinogen was qualitatively assessed by Schwartz-Watson test.

Quantitative estimation of urinary and faecal porphyrins were done according to Rimington's⁴ method.

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TABLE

Type	No.	Age	Sex	Urine		Faeces		
				Porphyrins in Micrograms per day		Porphyrins in Micrograms per gram of dry weight		
				Uroporphyrin	Coproporphyrin	Uroporphyrin	Coproporphyrin	Protoporphyrin
Discoid lupus erythematosus								
	1	10	F	4.16	20.9	0	1.5	0.77
	2	37	M	1.4	90	0	3.2	6.2
	3	50	M	4.3	36	0	3.2	4.2
Systemic lupus erythematosus								
	4	35	F	1.3	83	0	4.6	10.8
	5	35	F	6.7	100.91	0	3.4	13.8
	6	40	F	3.99	194.32	0	1.8	4.2
	7	45	F	6.4	141	0	3.2	6.32
	8	18	F	4.1	67.5	0	1.8	3.14
	9	31	F	0	116.64	0	2	4.5
Normals :								
Children				0-1.3	12-23.8	0	0-1.3	0.382-2.1
Adults				0-7.8	61.7-121	0	0-3.4	1.32-7.9

Observations and Discussion

Porphyrin levels along with relevant findings and normal porphyrin values⁶ are given in table.

In one case of discoid lupus erythematosus (case 1) there was a marginal increase in urinary uroporphyrin and faecal coproporphyrin.

Marginal but insignificant increase in urinary (cases 6 & 7) and faecal (cases 4 & 5) porphyrins was seen in four patients with systemic lupus erythematosus.

References

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