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"NUMMULAR ECZEMA"

A Review, Follow-up and Analysis of a Series of 325 Cases

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Nummular eczema has aroused a great deal of dermatological confusion and controversy during the past one hundred years, with regard to its clinical form, relation to other disorders, aetiology, treatment and even its very existence as an entity. The name was first coined by Devergie (1857) although Rayer (1845) had described and illustrated what, in retrospect, was almost certainly the same condition.

From the descriptions the Neurotic Eczema of Brocq (1907), Recurrent Eczematoid Affection of Pollitzer (1912) and Orbicular Eczema of Ormsby (1915) appear to be identical, as was suggested by Chipman (1935). He attempted a clinical differentiation of sharply defined eczematoid patches, but his published table illustrates the lack of success.

Ehrman, in Jadassohn's Handbuch, considered nummular eczema to be a transitional phase of neurodermatitis circumscripta, Becker (1941) as an example of Exudative Neurodermatitis of Kreibich, and Jessner as a localized form of dermatitis herpetiformis on the basis of positive halogen patch tests. This is unlikely as the two conditions differ in morphology and histopathology; nummular eczema never progresses to dermatitis herpetiformis, or responds to sulphapyridine, and halogens can give positive patch tests in different eczematous conditions (Wilson 1955). On the basis of pH estimations and alkali neutralising of the skin, it has been suggested (Gross *et al.*, 1954), that housewives eczema and nummular eczema are related.

Of several clinical descriptions that of Sulzberger and Wolf, (1952) is probably the best, although nummular eczema is not as sharply defined as has often been put forward.

Many aetiological factors have been advanced, both single and multiple, predisposing and precipitating. Van Studdiford *et al.* (1947) stressed that 'nummular-like dermatoses' occur in hyperactive persons where emotional upset acted as a trigger and the skin as the target organ. They cited the 'eczema personality' of Becker (1932), and that in view of the age incidence 'diminished gonadal function' was important. Gross (1941) found that nummular eczema was often associated with a dry skin and had features similar to asteatotic eczema. He suggested that it may be a metabolic disturbance of skin resulting from defective keratinisation which in turn, impairs the normal activity of sweat glands (Gross, 1951); and treated the condition with a high protein, moderate fat diet and numerous vitamin and mineral supplements.

Bacteria have been incriminated both as a direct cause of eczema (Unna, 1900)

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and through the medium of allergy (Robert, 1935; Storck, 1948). Storck (1954), however, admits that living cultures of surface bacteria only produce 'progressing bacterial eczemas in sensitised individuals' when 'an extremely active strain is used in a highly sensitive subject'. Lane *et al.* (1945) proposed that there was an alteration in the host-bacteria relationship associated with superficial bacterial invasion of the skin with or without sensitization. Other factors which have been mentioned are vaso-motor instability, trauma, the menses, foci of infection, hot and cold weather, soap and water, high carbohydrate diet, vitamin B. deficiency, poor nutrition, allergy to food proteins, varicose veins, wool, oils and zones of diminished resistance as in fixed drug eruptions. In addition to numerous general measures and local applications based on the above factors, it has been advised that foci of infection should be sought out and eradicated (Carpenter *et al.*, 1947; Storck, 1948; Sulzberger & Wolf, 1952; Fowle & Rice, 1953; Krogh, 1960). In view of the above confusion of opinions, it was decided to review a series of cases.

Case Material

Between 1955 and 1960, 325 cases of eczema were seen in the Rupert Hallam Department of Dermatology, Sheffield, in which a diagnosis of nummular eczema was made, or where discoid patches of eczema were the predominant feature. 182 patients were followed up, and in the remaining 143 cases, sex, age, and month of onset where available were the only data considered in clinical and statistical analyses of the total number. No case has been included in the series where nummular patches occurred as a part of the picture in any other clinical pattern of eczema (e. g. atopic eczema, seborrhoeic dermatitis, contact dermatitis).

Results

1. *Sex and Age Incidence*

In this series of 325 cases of nummular eczema there were 195 males and 130 females (i. e., a proportoin of three to two). Its maximum incidence of onset was between 20 and 60 years age (Table I). In general, the incidence for various age groups was the same for either sex (fig. 1), however, apparent differences can be produced by different methods of grouping the data. Analysis of the data taken in conjunction with the findings of other workers (Vickers, 1952; James & Calnan, 1959), confirms the pattern of a peak for females in the middle or late teens).

2. *Duration and Cure Rate*

Of 182 patients re-examined, 41 (22 %) were eczema-free, 45 (25 %) had had periods of freedom varying from weeks to years, and 96 (53 %) had never been free of eczema except when using local therapy. The sex incidence was similar in all groups. Once initiated nummular eczema can occur in attacks or persist indefinitely. Table II shows the duration of the first attack in the group

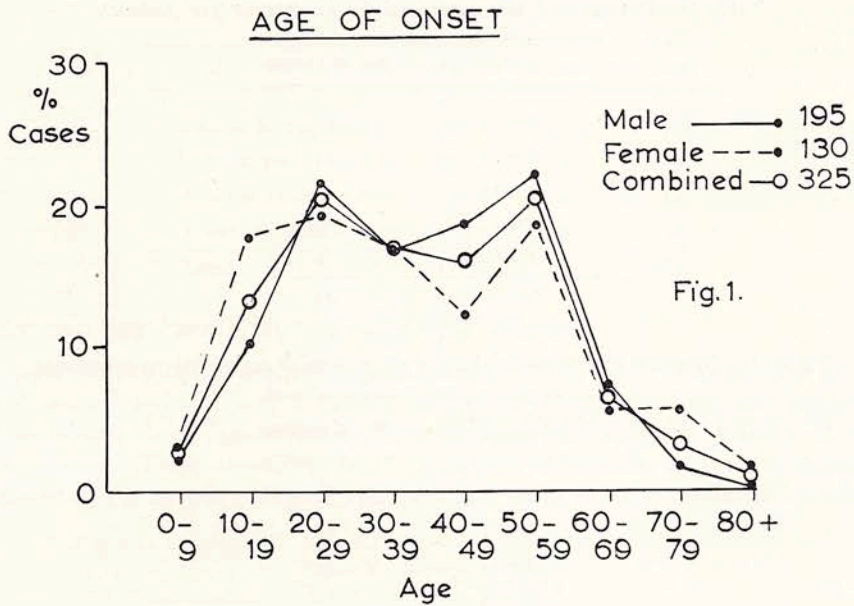

Fig. 1.

Table I.

Age	Male	Female	Total
0—4	1	2	3
5—9	3	2	5
10—14	11	3	14
15—19	9	19*	28*
20—24	25	13	38
25—29	16*	12	28*
30—34	16	9	25
35—39	17	13	30
40—44	14	8	22
45—49	22	8	30
50—54	23	12	35
55—59	18	12	30
60—64	6	4	10
65—69	8	3	11
70—74	0	5	5
75—79	3	2	5
80+	0	2	2
Total	195	130	325

* indicates 2 patients whose precise age was not known.

Table II. *Duration of first attack in the 41 eczema-free patients.*

Months	No. of Patients
0— 5	24
6—11	11
12—17	3
18—23	1
Over 24	2
Total	41

Table III. *Duration of eczema in the 141 patients with active lesions when seen.*

Duration of eczema (years)	No. of patients
0— 1	30
1— 2	31
2— 3	14
3— 4	12
4— 5	13
5—10	16
10—20	16
20—30	4
30—40	4
40—50	0
50+	1
Total	141

of patients who were eczema-free when seen, and Table III the duration of eczema in the remaining patients who had active eczema, ignoring periods of freedom. If nummular eczema is to clear, it will usually do so within a year of on-set; after that, it tends to persist or recur, often for many years. A falsely optimistic view of prognosis is often obtained because patients become dispirited, fail to reattend hospital and learn to live with their disability.

3. *Site of On-set and Distribution of the Eruption*

There was a highly significant difference in the site of on-set between the two sexes (Table IV). The legs and hands were equally important sites in men, whereas the legs were not often affected in women. Other regions were infrequently the sites of initial lesions. Nummular eczema commenced as one lesion or several. Further spread was usual in periods varying from days to months, and was often preceded by irritation of the initial lesions by the use of unsuitable topical remedies. The pattern of spread was common to all cases and varied only in degree. Recurrence of lesions was frequently, but not always, on previously involved sites; and subsequent attacks conformed to the distribution of fully developed earlier ones.

Table IV. *Site of onset of eczema.*

Site	Male	Female	Total
Hands & forearms	50	47	97
Legs & feet	47	12	59
Arms & thighs	9	4	13
Trunk & head	8	4	12
Total	114	67	181

4. *Personal and Family History of 'Atopic' Disease*

A past history of infantile eczema, asthma or hay-fever was present in only five cases, all female; and a family history of these disorders was present in five male and three female cases. Two patients had a family history of nummular eczema. Thus, according to the previous definition, nummular eczema is unrelated to the atopic group of disorders and there is not an inherited tendency.

Table V. *Season of onset.*

Season	Male	Female	Total
Winter (Dec.—Feb.)	50	41	91
Spring (March—May)	32	20	52
Summer (June—Aug.)	35	29	64
Autumn (Sept.—Nov.)	34	15	49
Total	151	105	256

Table VI. *Seasonal exacerbation.*

	Male	Female	Total
Winter	26	22	48
Spring	0	1	1
Summer	16	5	21
Autumn	3	1	4
Total	45	29	74

Both spring & autumn in 1 female. No seasonal exacerbation or insufficient follow up in 109 cases.

5. *Relation of Season (Table V and VI)*

Winter was the commonest season of on-set, particularly in women, and exacerbations occurred to an equal degree in both sexes at this time of year. Many complained of chapping of the hands in winter or after using washing agents, and this is probably an important factor rendering the skin liable to eczematous change or exacerbation by lowering local resistance. Of patients who were worse in summer men predominated, and they often stressed that

exacerbations took place in warm weather, after strenuous exertion, or in association with hot, humid occupations. Sweat retention and irritation would seem to be important in these cases, and would probably be so in others under the same conditions.

6. *Factors which Precipitated Nummular Eczema*

These were present in broadly similar proportions in both sexes (33 % in males and 40 % in females) and included local trauma, burns, insect bites, traumatic or contact dermatitis and emotional upset. It is of interest that one man and four women had previously suffered from nickel dermatitis in different sites.

7. *Factors causing Exacerbation*

These included washing agents and emotional stress in addition to season and occupation which have been previously discussed. A greater proportion of women than men found that washing agents made their condition worse, and this is presumably due to greater exposure.

8. *Treatment*

The basis of treatment was the use of tar preparations, although local hydrocortisone and superficial X-ray were also prescribed. The topical remedies usually succeeded in suppressing the lesions, but recurrence was common when treatment was stopped. Superficial X-rays were employed in 107 cases, and although irradiated lesions generally healed completely, there was no significant effect on the total cure rate. Irradiated lesions did not tend to relapse.

Discussion

Findings in this series of cases support the view that nummular eczema is a pattern of eczema common to the middle age groups rather than a clinical entity. The late teen-age peak of female cases, which was more apparent than real in this series, has never been explained satisfactorily. Possible factors which have been cited are the increased use of washing agents, hormonal changes and emotional stresses of adolescence. These results are in agreement with the findings of other workers (Weidman and Sawicky, 1956), that nummular eczema cannot be established as a form of atopic eczema. It bears in common with other forms of eczema similar precipitating and exacerbating factors which are non-specific in character. It is possible that the nickel sensitivity preceding nummular eczema in five cases can be regarded as a transitory phase in the course of a series of eczematous reactions as suggested by Morgan (1953). There is no satisfactory explanation for the high incidence of involvement of the legs which occurs in older men, and this is contrary to other workers' findings. The old remedy tar paste was most efficient in suppressing the condition, although topical hydrocortisone was also effective. At follow-up, less than one quarter of the patients under review were eczema-free, indicating that the prognosis of nummular eczema is worse than is generally accepted.

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SUMMARY

The case notes of 325 patients with nummular eczema were perused, and 182 patients were followed-up.

The findings suggest that nummular eczema is the pattern of 'endogenous eczema' which occurs in the middle years of life rather than a distinct clinical entity. It seems certain that the solution of its many problems will only come with increased fundamental knowledge of the eczematous process as a whole.

RÉSUMÉ

Dans cet article, les notes concernant les cas de 325 patients atteints d'eczéma nummulaire ont été étudiées, et 182 patients ont été suivis.

Des constatations qui ont été faites, il ressort que l'eczéma nummulaire est plutôt l'expression d'un eczéma endogène apparaissant dans l'âge moyen, qu'une entité clinique bien définie. Il semble certain que la solution des nombreux problèmes qu'il pose n'interviendra que lorsque les bases du processus eczémateux dans son ensemble seront mieux connues.

ZUSAMMENFASSUNG

Fallbeschreibungen von 325 Patienten mit nummulärem Ekzem wurden ausgewertet und 182 Patienten wurden selbst beobachtet. Die Befunde lassen die Vermutung aufkommen, dass das nummuläre Ekzem dem endogenen Ekzem, welches in der Lebensmitte auftritt, eher entspricht, als dass es eine bestimmte klinische Einheit darstellt. Es erscheint sicher, dass die Lösung vieler Probleme des nummulären Ekzems erst mit wachsender Kenntnis des ekzematischen Geschehens als Ganzem zu erwarten ist.

RESUMEN

Se revisan las historias de 325 enfermos de eczema nummular, y 182 enfermos fueron seguidos.

Los hallazgos sugieren que el eczema nummular es análogo al «eczema endógeno» que aparece en los años medios de la vida, más bien que una entidad clínica diferente. Parece cierto que la solución de muchos de sus problemas sólo se alcanzará con el mejor conocimiento del proceso fundamental del eczema en total.

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